

**SOIL**

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	5 YR 3/4	90	5 YR 3/1	5	C	M	Sandy loam	Uniform soil stratum.
			10 YR 5/2	5	D	M		
12" =								
Bottom								

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Hardpan layer</u> Depth (inches): <u>12"</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Red Parent Material (TF2) indicator present, as red layer entirely within top 12" of test pit. Hardpan layer at 12" prevented deeper excavation and evaluation. Some depletion visible in this sample.	

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth satellite imagery dated 6/13/2011.	

Remarks: Sample point taken at a high point. No wetland hydrology indicators were present at this location.

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

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP4  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: 182, San Joaquin-Cometa sandy loams, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland?	Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Wetland Hydrology Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>		
Remarks: <u>Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. The red parent material of the soil is naturally problematic, but red parent indicator hydric soil indicator (TF2) is present. This sample point appeared to be in a wetland, but contains borderline upland vegetation.</u>			

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50.0</u> % (A/B)
4. _____				Prevalence Index worksheet:	
Total Cover: <u>0</u> %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = <u>0</u>
1. <u>N/A</u>				FACW species	x 2 = <u>0</u>
2. _____				FAC species	<u>60</u> x 3 = <u>180</u>
3. _____				FACU species	x 4 = <u>0</u>
4. _____				UPL species	<u>40</u> x 5 = <u>200</u>
5. _____				Column Totals:	<u>100</u> (A) <u>380</u> (B)
Total Cover: <u>0</u> %				Prevalence Index = B/A = <u>3.80</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Lolium multiflorum</u>	<u>60</u>	Yes	FAC	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Avena fatua</u>	<u>37</u>	Yes	Not Listed	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Croton setigerus</u>	<u>2</u>	No	Not Listed	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Hemizonia congesta</u>	<u>1</u>	No	Not Listed	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
5. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____				Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
7. _____					
8. _____					
Total Cover: <u>100</u> %					
Woody Vine Stratum					
1. <u>N/A</u>					
2. _____					
Total Cover: <u>0</u> %					
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust <u>0</u> %			
Remarks: <u>The vegetation in this sample point comes close to, but does not, satisfy the dominance test. The property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices.</u>					

**SOIL**

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-4"	5 YR 3/4	74	5 YR 5/8	25	C	M	Loam
			10 YR 2/2	1	C	M	
4-6"	10 YR 4/3	65	10 YR 2/2	5	C	M	
			10 YR 5/3	30	D	M	
6-8"	5 YR 4/3	74	10 YR 2/1	25	C	M	
			7.5 YR 5/8	1	C	M	
8" =							
Bottom							
<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"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input checked="" type="checkbox"/> Red Parent Material (TF2)	<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Depleted Dark Surface (A11)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)			
							<sup>4</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present.
<b>Restrictive Layer (if present):</b>							
Type: <u>Hardpan layer</u>							
Depth (inches): <u>8"</u>				Hydric Soil Present?    Yes <input checked="" type="radio"/> No <input type="radio"/>			
Remarks: Red Parent Material (TF2) indicator present, as first red layer entirely within top 12" of test pit. Hardpan layer at 8" prevented deeper excavation and evaluation. Distinct stratification with some depletion visible at this sample pit.							

**HYDROLOGY**

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" 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)
<b>Field Observations:</b>					
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>		
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____			
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth satellite imagery dated 6/13/2011.					
Remarks: Sample point taken at a depression visible in Google Earth satellite imagery.					

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

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011

Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP5

Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0%

Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83

Soil Map Unit Name: 182, San Joaquin-Cometa sandy loams, 1 to 5 percent slopes NWI classification: Hydric

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"/>	<b>Is the Sampled Area within a Wetland?</b>
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: Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. None of the wetland indicators, including the red parent material soil indicator, were present at this sample point.

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50.0</u> % (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
Total Cover: _____ %				Total % Cover of:	Multiply by:
Sapling/Shrub Stratum				OBL species	x 1 = <u>0</u>
1. <u>N/A</u>				FACW species	x 2 = <u>0</u>
2. _____				FAC species	<u>25</u> x 3 = <u>75</u>
3. _____				FACU species	x 4 = <u>0</u>
4. _____				UPL species	<u>75</u> x 5 = <u>375</u>
5. _____				Column Totals:	<u>100</u> (A) <u>450</u> (B)
Total Cover: _____ %				Prevalence Index = B/A = <u>4.50</u>	
Herb Stratum				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Avena fatua</u>				<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Lolium multiflorum</u>				<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. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____				<b>Hydrophytic Vegetation Present?</b>	
7. _____				Yes <input type="radio"/>	No <input checked="" type="radio"/>
8. _____					
Total Cover: <u>100</u> %					
Woody Vine Stratum					
1. <u>N/A</u>					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>0</u> %					
% Cover of Biotic Crust <u>0</u> %					

Remarks: The property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices.

**SOIL**

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14"	7.5 YR 3/4	98	7.5 YR 2/1	2	C	M	Loam	Uniform stratum.
14" =								
Bottom								

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

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

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks: The Red Parent Material (TF2) soil indicator is not present, as the red layer extends deeper than the first 12" of the test pit.

**HYDROLOGY**

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

**Field Observations:**

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

**Wetland Hydrology Present?** Yes  No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Google Earth satellite imagery dated 6/13/2011.

Remarks: This sample point was taken at a high point adjacent to the TIP4 sample point. No wetland hydrology was present.

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP6  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: <u>0</u> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td align="center">x 2 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td align="center">x 3 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td align="center">x 5 =</td> <td align="center"><u>50</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td></td> <td align="center"><u>50</u> (A)</td> <td align="center"><u>250</u> (B)</td> </tr> <tr> <td align="center" colspan="2">Prevalence Index = B/A =</td> <td align="center" colspan="2"><u>5.00</u></td> </tr> </table>	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>50</u>		Column Totals:		<u>50</u> (A)	<u>250</u> (B)	Prevalence Index = B/A =		<u>5.00</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>50</u>																																		
Column Totals:		<u>50</u> (A)	<u>250</u> (B)																																	
Prevalence Index = B/A =		<u>5.00</u>																																		
<b>Sapling/Shrub Stratum</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: <u>0</u> %																																				
<b>Herb Stratum</b>																																				
1. <u>Croton setiger</u>	30		Not Listed																																	
2. <u>Avena sp.</u>	20		Not Listed																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>50</u> %																																				
<b>Woody Vine Stratum</b>																																				
1. _____																																				
2. _____																																				
Total Cover: <u>0</u> %																																				
% Bare Ground in Herb Stratum <u>50</u> %		% Cover of Biotic Crust <u>40</u> %																																		
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																																				
Remarks: <u>Hemizonia fitchii (Not Listed) was present outside the sample point elsewhere in the feature. Oat in the field had been recently mowed.</u>																																				

**SOIL**

Sampling Point: SP6

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	50	5YR 4/6	50	D	M	Clay Loam	
6	10YR 3/1	50	7.5YR 4/6	50	D	M	Clay	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: Clay pan Depth (inches): 6	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
---	---

Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks:

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP7  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec 17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymont complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</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)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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>300</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>60</u> (A)      <u>300</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table>	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>300</u>	Column Totals:	<u>60</u> (A) <u>300</u> (B)	Prevalence Index = B/A = <u>5.00</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>300</u>																			
Column Totals:	<u>60</u> (A) <u>300</u> (B)																			
Prevalence Index = B/A = <u>5.00</u>																				
<b>Sapling/Shrub Stratum</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
<b>Herb Stratum</b>																				
1. <u>Avena sp.</u>	<u>60</u>		Not Listed																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>60</u> %																				
<b>Woody Vine Stratum</b>																				
1. _____																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>40</u> %      % Cover of Biotic Crust _____ %																				

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Oat in the field had been recently mowed.



**SOIL**

Sampling Point: SP7

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 4/3	95	7.5YR 4/6	5	D	M	Sandy Clay Loam	
6	7.5YR 3/4	100					Clay 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.

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

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

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>6</u>	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
---	---

Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks:

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP8  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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>80</u></td> </tr> <tr> <td>UPL species</td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>20</u> (A) <u>80</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	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>80</u>	UPL species	x 5 = <u>0</u>	Column Totals:	<u>20</u> (A) <u>80</u> (B)	Prevalence Index = B/A = <u>4.00</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>80</u>																			
UPL species	x 5 = <u>0</u>																			
Column Totals:	<u>20</u> (A) <u>80</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
<b>Sapling/Shrub Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
<b>Herb Stratum</b>																				
1. <u>Centromadia fitchii</u>	20		FACU																	
2. <u>Avena sp.</u>			Not Listed																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>20</u> %																				
<b>Woody Vine Stratum</b>																				
1. _____																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>65</u> %		% Cover of Biotic Crust <u>20</u> %																		
<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																				
Remarks: <u>Oat in the field had been recently mowed.</u>																				

**SOIL**

Sampling Point: SP8

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 4/1	20	7.5YR 4/4	80	D	M	Sandy Clay Loam	Red parent material
6	7.5YR 3/2	20	7.5YR 4/6	80	D	M	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>6</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
---	---

Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks:

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP9  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
Herb Stratum				
1. <u>Avena sp.</u>	80		Not Listed	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>80</u> %				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>20</u> %		% Cover of Biotic Crust _____ %		

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
 Total Number of Dominant Species Across All Strata: 0 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 = <u>0</u>
FACW species	x 2 = <u>0</u>
FAC species	x 3 = <u>0</u>
FACU species	x 4 = <u>0</u>
UPL species	x 5 = <u>400</u>
Column Totals:	<u>80</u> (A) <u>400</u> (B)
Prevalence Index = B/A = <u>5.00</u>	

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Oat in the field had been recently mowed.

**SOIL**

Sampling Point: SP9

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	7.5YR 3/4	80	7.5YR 4/6	20	D	M	Sandy Clay Loam	
10	7.5YR 3/4	60	7.5YR 4/6	40	D	M	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>10</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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Remarks:

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	<b>Secondary Indicators (2 or more required)</b>																												
Primary Indicators (any one indicator is sufficient) <table border="0"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Salt Crust (B11)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Biotic Crust (B12)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Aquatic Invertebrates (B13)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1) (<b>Nonriverine</b>)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2) (<b>Nonriverine</b>)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3) (<b>Nonriverine</b>)</td> <td><input checked="" type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Surface Soil Cracks (B6)</td> <td><input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<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 checked="" 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)		<table border="0"> <tr> <td><input type="checkbox"/> Water Marks (B1) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3) (<b>Riverine</b>)</td> </tr> <tr> <td><input type="checkbox"/> Drainage Patterns (B10)</td> </tr> <tr> <td><input type="checkbox"/> Dry-Season Water Table (C2)</td> </tr> <tr> <td><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td><input type="checkbox"/> Crayfish Burrows (C8)</td> </tr> <tr> <td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td> </tr> <tr> <td><input type="checkbox"/> Shallow Aquitard (D3)</td> </tr> <tr> <td><input type="checkbox"/> FAC-Neutral Test (D5)</td> </tr> </table>	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)																												
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<input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																												
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<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)																													
<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )																													
<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )																													
<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )																													
<input type="checkbox"/> Drainage Patterns (B10)																													
<input type="checkbox"/> Dry-Season Water Table (C2)																													
<input type="checkbox"/> Thin Muck Surface (C7)																													
<input type="checkbox"/> Crayfish Burrows (C8)																													
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																													
<input type="checkbox"/> Shallow Aquitard (D3)																													
<input type="checkbox"/> FAC-Neutral Test (D5)																													

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks: Feature is a topographic depression

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP10  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymont complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b>	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata:	<u>0</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> % (A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
Total Cover: <u>0</u> %				Total % Cover of: _____ Multiply by: _____	
<b>Sapling/Shrub Stratum</b>				OBL species	x 1 = <u>0</u>
1. _____				FACW species	x 2 = <u>0</u>
2. _____				FAC species	x 3 = <u>0</u>
3. _____				FACU species	<u>10</u> x 4 = <u>40</u>
4. _____				UPL species	<u>40</u> x 5 = <u>200</u>
5. _____				Column Totals:	<u>50</u> (A) <u>240</u> (B)
Total Cover: <u>0</u> %				Prevalence Index = B/A = <u>4.80</u>	
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Avena sp.</u>	30		Not Listed	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Centromadia fitchii</u>	10		FACU	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>	
3. <u>Croton setiger</u>	10		Not Listed	<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. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____					
7. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
8. _____					
Total Cover: <u>50</u> %					
<b>Woody Vine Stratum</b>					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>50</u> %		% Cover of Biotic Crust _____ %			
Remarks: <u>Trichostema lanceolatum present outside of the sample point, elsewhere in the feature. Oat in the field had been recently mowed.</u>					

**SOIL**

Sampling Point: SP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	50	7.5YR 4/6	50	D	M	Sandy Clay Loam	
8	10YR 3/3	60	7.5YR 4/6	40	D	RC	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: Clay pan Depth (inches): 8	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" 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 checked="" 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 type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
<b>Wetland Hydrology Present?</b>			Yes <input checked="" type="radio"/> No <input type="radio"/>

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

Remarks: Feature is a topographic depression

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP11  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____ %				
<b>Sapling/Shrub Stratum</b>				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____ %				
<b>Herb Stratum</b>				
1. <u>Avena sp.</u>	60		Not Listed	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>60</u> %				
<b>Woody Vine Stratum</b>				
1. _____				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>40</u> %		% Cover of Biotic Crust _____ %		

**Dominance Test worksheet:**  
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
 Total Number of Dominant Species Across All Strata: 0 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 % (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 = 300  
 Column Totals:                      60 (A)                      300 (B)  
 Prevalence Index = B/A = 5.00

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Oat in the field had been recently mowed.



SOIL

Sampling Point: SPII

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 3/3	60	7.5YR 4/6	40	D	M	Sandy Clay Loam	
6	7.5YR 2.5/3	90	7.5YR 4/6	10	D	M	Clay 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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<b>Indicators for Problematic Hydric Soils:</b>	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)		<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" 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):**  
 Type: Clay pan  
 Depth (inches): 8

**Hydric Soil Present?** Yes  No

Remarks: Dark concretions at 6 inches

HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

**Field Observations:**

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

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

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

(includes capillary fringe)

**Wetland Hydrology Present?** Yes  No

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

Remarks: Feature is a topographic depression

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP12  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8836 Long: -121.3216 Datum: NAD 83  
 Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Basin adjacent to Auburn ravine, separated by berm.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____%				
Sapling/Shrub Stratum				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____%				
Herb Stratum				
1. <i>Polypogonum aviculare</i>	40	Yes	FACW	
2. <i>Typha latifolia</i>	10	Yes	OBL	
3. <i>Cyperus sp.</i>	30	Yes	FACW	
4. <i>Paspalum distichum</i>	10	No	FAC	
5. <i>Cirsium vulgare</i>	10	No	FACU	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100%</u>				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____%				
% Bare Ground in Herb Stratum <u>0 %</u>		% Cover of Biotic Crust <u>0 %</u>		
Remarks: Associate species: <i>Quercus lobata</i> , <i>Juglans hindsii</i> , <i>Rubus armeniacus</i>				

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:		
OBL species	<u>10</u>	x 1 =	<u>10</u>	
FACW species	<u>70</u>	x 2 =	<u>140</u>	
FAC species	<u>10</u>	x 3 =	<u>30</u>	
FACU species	<u>10</u>	x 4 =	<u>40</u>	
UPL species	<u>0</u>	x 5 =	<u>0</u>	
Column Totals:	<u>100</u>	(A)	<u>220</u>	(B)
Prevalence Index = B/A =			<u>2.20</u>	

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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

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

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

**Hydrophytic Vegetation Present?** Yes  No

**SOIL**

Sampling Point: SP12

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

Depth (Inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/1	60	7.5YR 4/6	40	RM	M	Silty Clay	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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 checked="" 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):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?**    Yes     No

Remarks:

**HYDROLOGY**

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

**Field Observations:**

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>16</u>

**Wetland Hydrology Present?**    Yes     No

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

Remarks: Marshy basin adjacent to Auburn Ravine, separated from creek by a levee. Marshy area and reservoir or stock pond within the basin.

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP13  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8836 Long: -121.3216 Datum: NAD 83  
 Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Upland berm adjacent to marsh and Auburn Ravine</u>	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Valley Oak</u>	40	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0</u> % (A/B)																
2. <u>Juglans hindsii</u>	30	Yes	FAC																	
3. _____																				
4. _____																				
Total Cover: <u>70</u> %				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species</td> <td style="text-align: right;">x 1 = <u>0</u></td> </tr> <tr> <td>FACW species</td> <td style="text-align: right;">x 2 = <u>0</u></td> </tr> <tr> <td>FAC species</td> <td style="text-align: right;">x 3 = <u>90</u></td> </tr> <tr> <td>FACU species</td> <td style="text-align: right;">x 4 = <u>160</u></td> </tr> <tr> <td>UPL species</td> <td style="text-align: right;">x 5 = <u>275</u></td> </tr> <tr> <td>Column Totals:</td> <td style="text-align: right;"><u>125</u> (A) <u>525</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: right;">Prevalence Index = B/A = <u>4.20</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	x 3 = <u>90</u>	FACU species	x 4 = <u>160</u>	UPL species	x 5 = <u>275</u>	Column Totals:	<u>125</u> (A) <u>525</u> (B)	Prevalence Index = B/A = <u>4.20</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>90</u>																			
FACU species	x 4 = <u>160</u>																			
UPL species	x 5 = <u>275</u>																			
Column Totals:	<u>125</u> (A) <u>525</u> (B)																			
Prevalence Index = B/A = <u>4.20</u>																				
<b>Sapling/Shrub Stratum</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____ %																				
<b>Herb Stratum</b> 1. <u>Avena fatua</u> 25 Yes Not Listed 2. <u>Bromus diandrus</u> 20 Yes Not Listed 3. <u>Foeniculum vulgare</u> 10 No Not Listed 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>55</u> %																				
<b>Woody Vine Stratum</b> 1. _____ 2. _____ Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>45</u> %      % Cover of Biotic Crust <u>0</u> %																				
Remarks: _____																				

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

**SOIL**

Sampling Point: SP13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
6	7.5YR 4/4	100					Silty 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.

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

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

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

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

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

SUD-B Northeast Quadrant Specific Plan

APPENDIX

C

2012-2013 REPORT OF FINDINGS  
REGARDING BRANCHIOPOD  
SURVEYS – PEERY PROPERTY



# 90-Day Report of Findings Regarding Branchiopod Surveys Peery Property

August 2013

Project No. 34036001.00

Prepared For  
Peery-Arrillaga

# 90-Day Report of Findings Regarding Branchiopod Surveys

Peery Property

---

August 2013

Project No. 34036001.00

*Prepared for*

Richard Peery  
Peery-Arrillaga  
2450 Watson Court  
Palo Alto, CA 94303

*Prepared by*

**Cardno ENTRIX**  
701 University Avenue, Suite 200, Sacramento, CA 95825  
Tel 916 923 1097 Fax 916 923 6251  
[www.cardnoentrix.com](http://www.cardnoentrix.com)



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## Acronyms

CNDDDB	California Natural Diversity Database
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

## Chapter 1

# Introduction

---

Ammon Rice and Sam Bacchini conducted protocol-level wet season branchiopod surveys at Peery Property (Study Area) on behalf of Richard Peery of Peery-Arrillaga, in Lincoln, Placer County, California (Figure 1). Wet season surveys were authorized by Mr. David Kelly of the U.S. Fish and Wildlife Service (USFWS) on December 18, 2012, reference no. 2013-TA-0145 (USFWS, Appendix A). The purpose of these surveys was to determine the presence/absence of vernal pool branchiopod species listed as endangered or threatened by the USFWS [i.e., vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*)] within seasonally inundated depressions at the property. These surveys were conducted under the authority of Federal Fish and Wildlife Permit TE-175385-1 and TE-795938-7 and in compliance with the *19 April 1996 Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (Guidelines) (USFWS, 1996). This document is the 90-Day Report of Findings for the Peery Property (as required by Item VII of the Guidelines), which summarizes the results of 2013 wet season survey work for this site.

Ammon Rice and Sam Bacchini, Cardno ENTRIX biologists, sampled 33 seasonally inundated depressions within the Study Area (Appendix B). Mr. Rice documented the presence and abundance of both California fairy shrimp (*Lindneriella occidentalis*) and federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) in the Study Area.

## Chapter 2

# Background and Site Description

---

As requested by the Richard Peery of Peery-Arrillaga, Cardno ENTRIX conducted routine wetland delineation for the Peery Property in an attempt to identify the boundaries of potential wetlands and other waters of the U.S. Seasonal wetlands and swales were identified that could provide habitat for listed branchiopods.

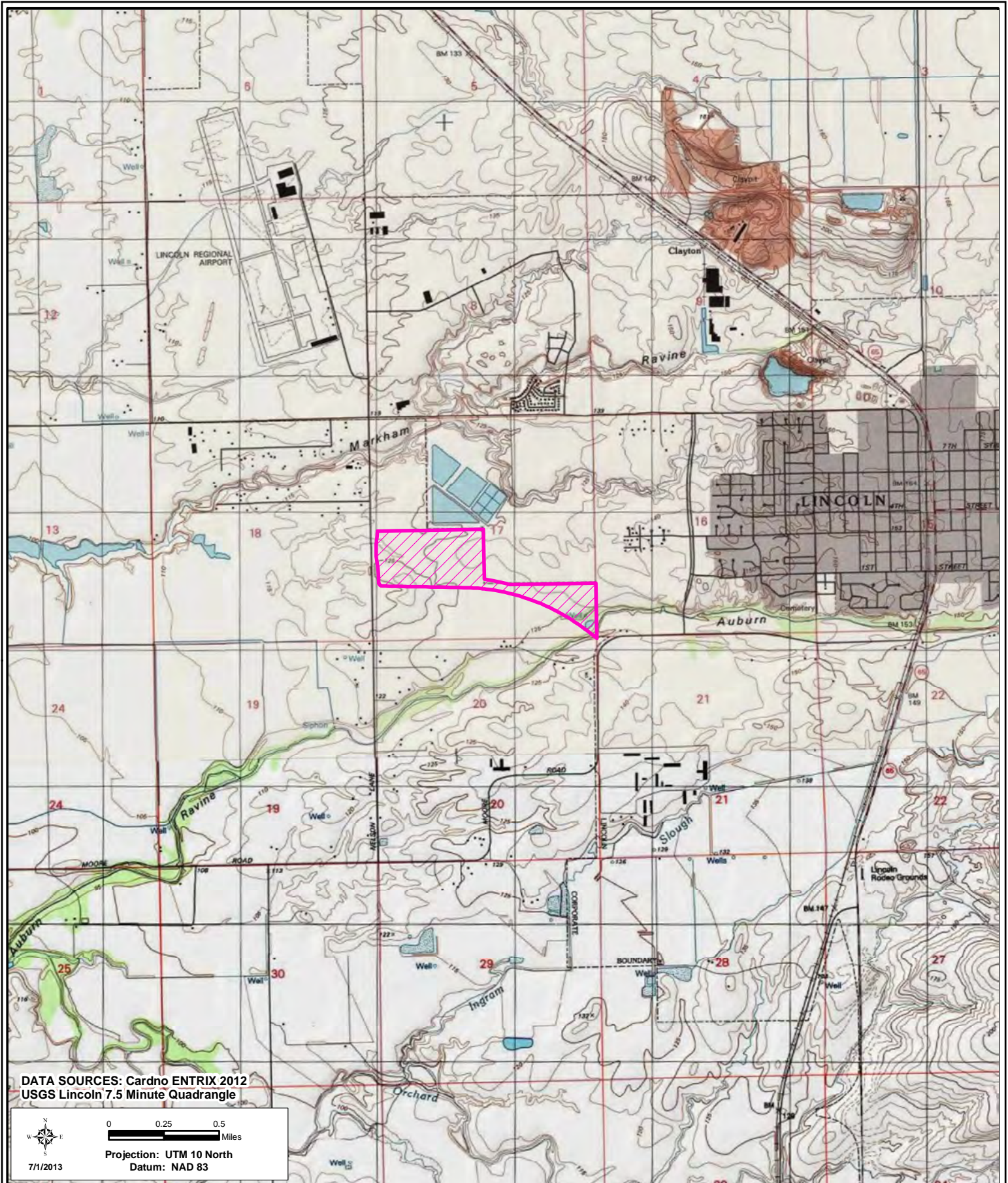
The western parcel (approximately 70 acres) is roughly rectangular in shape and is bordered by Nelson Lane on the west, State Route 65 Bypass on the South, undeveloped land on the north, and residential neighborhood on the east. The eastern parcel (approximately 44 acres) is roughly triangular in shape and is bordered by residential development on the north, Hwy 65 Bypass on the south, and Auburn Ravine on the east (Figure 2). Additionally, the property is located in Section 17, Township 12 North, Range 6 East of the Lincoln U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle map (Latitude 038° 53' 17.31" North; Longitude -121° 20' 09.22" West; UTM 10 S., 4305679.68 m Northing, and UTM 644328.70 m Easting).

The Study Area is approximately 114 acres, and consists of the area surveyed for the boundaries of wetland features and adjacent uplands. The Study Area is generally flat, with elevation ranging from approximately 120 feet above sea level (asl) to 130 feet asl. Land uses in the general vicinity include rural residential and residential development, and agricultural.

The Study Area consists almost exclusively of disturbed non-native annual grassland. The entire western portion and most of the eastern portion of the Study Area have been disked, seeded, and mowed annually for hay production for many years. The western portion, which retains much of the natural topography, is dry farmed, while the eastern portion appears to have been graded flat, and has been flood irrigated. The primary vegetative cover in the study area consists of stubble from oat grass, but other species were observed including Fitch's tarweed (*Centromadia [Hemizonia] fitchii*), yellow flower tarplant (*Holocarpha virgata*), turkey mullein (*Croton setigerus*), and vinegarweed (*Trichostema lanceolatum*). These latter species were very sparse, and associated primarily with the seasonal wetlands or adjacent areas.

Within the non-native annual grassland habitat in the western portion of the Study Area are a number of seasonal wetlands consisting of pools and swales. Most of these features were likely to have been vernal pools or swales in the past (based on the aerial signatures and the abundance of this wetland type in the surrounding region) but due to the long history of annual disking and planting for hay production the boundaries of these features have become indistinct, and no they longer appear to support vernal pool plant species. As stated above, the eastern portion of the Study Area has been graded/leveled, and no seasonal pools or swales are present there.

The region has a Mediterranean climate characterized by hot, dry summers and cool, wet winters. The local and regional geology is within the Sacramento Valley geomorphic province, characterized primarily by agriculture, and is the wetter subregion of the Great Central Valley. The geomorphic province occurs within the greater California Floristic Province. The average summer high temperature is 95°F and the average low is 67°F. The average winter high temperature is 53°F and the average low is 37°F. Average annual precipitation is 17.1 inches (Baldwin et al., 2012).



Peery Property Wet-Season  
Branchiopod Survey

Figure 1

Project Site and Vicinity

## Chapter 3

# Methods

---

In order to assess the presence or absence of listed shrimp species in the Study Area, Cardno ENTRIX conducted protocol-level branchiopod surveys during the 2012-2013 wet season. All surveys were conducted in accordance with the USFWS Guidelines (USFWS, 1996). A list of federal and state special-status plant and wildlife species was developed for the project using a database search, which included a query of the California Natural Diversity Database (CNDDB) for the Lincoln and eight surrounding USGS 7½ minute quadrangles.

Monitoring methods followed the USFWS Guidelines (USFWS, 1996). Invertebrate and hydrologic monitoring were conducted simultaneously. A total of 33 seasonally inundated depressions were sampled for invertebrate species. Mr. Rice, biologist/permitted surveyor (TE175385-1), and Sam Bacchini, biologist/permitted surveyor (TE-795938-7), conducted the dip netting surveys.

The depressional wetlands were visually searched for active large branchiopods prior to entering the water. Walking within the wetlands was minimized to fullest extent possible. Water depth measurements were taken at the same location during each monitoring event and visual observations of invertebrates were made from the wetland edge.

A semi-quantitative sample was taken to determine the relative abundance of macroscopic invertebrates as follows. A net was lowered vertically into the deepest portion of the depressional wetland (usually the center) and rested on the bottom. The 153-µm mesh size net was then moved through the pool for approximately one-meter. Given the aperture of the net of 0.025 m<sup>2</sup> and distance the net was moved, roughly 0.025 m<sup>3</sup> or 25 liters of the water column were sampled horizontally each time. When the water column was shallower than the net aperture height, the volume of water per sweep was calculated by the horizontal distance the net was moved multiplied by the width of the net (25-cm) multiplied by the depth of the water. After the completion of each sample sweep, the contents of the net were examined for aquatic fauna. All animals captured in the net were identified to the lowest justifiable taxon in the field (consisting of 28 taxonomic groups), and recorded on standardized data sheets.

The relative numbers of individuals sampled within each taxonomic group were recorded in one of five categories: rare ( $\leq 2$  individuals), not common (3-10 individuals), common (11-50 individuals), very common (51-100 individuals), and abundant ( $>100$  individuals). This method allows for the relative abundances and richness of aquatic invertebrates to be compared, between and among wetlands, through time. Additionally, this method allows for density estimates of invertebrates to be calculated as number of individuals per liter of water (= number of individuals/net aperture area x length of sweep).

If large branchiopods were not detected during the sample sweep, additional strategically placed sweeps were made with the net. Additional taxonomic groups of aquatic invertebrates detected using these sweeps or visual observation were recorded with an “X” on the standardized field

data sheet to note presence. After the taxonomic identification and enumeration were completed, the contents of the net were placed back into the pool from which they were sampled.

On December 20, 2012, following several rain events, features identified during a previous wetland delineation and features not recorded but ponding at least 3-cm of water were sampled. Several of the wetland features in the Study Area had short inundation periods and not all features were inundated during each survey. The invertebrate monitoring was conducted at the Study Area between December 20, 2012 and March 14, 2013. The site was also inspected for inundation following rain events on March 21, April 5, April 9, and May 7; however, none of the features were inundated after these rain events. Depressional wetlands were monitored if they were inundated to a depth of greater than or equal to 3-cm at the time of each visit.

## Chapter 4

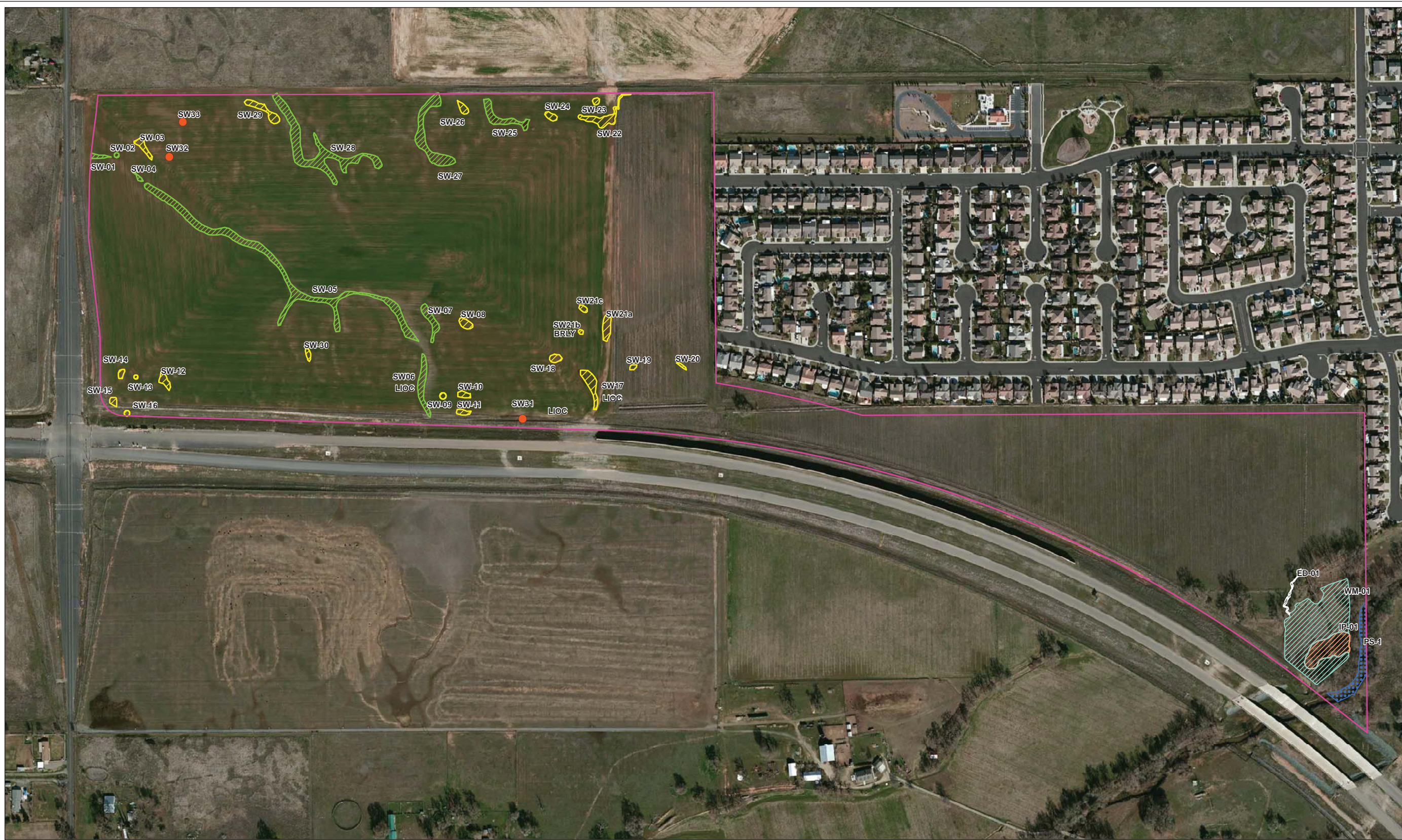
# Results

On January 3, 2013, federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) was found to be present in one of 33 pools monitored (Table 1 and Figure 2). Additionally, non-listed California fairy shrimp (*Linderiella occidentalis*) was observed within three of 33 pools monitored (Table 1 and Figure 2).

<b>Pool Name</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Species Present and Abundance</b>
SW21-b	038° 53' 13.80" N.	-121° 19' 57.65" W.	BRLY (10's)
SW06	038° 53' 11.82" N.	-121° 20' 06.38" W.	LIOC (1)
SW17	038° 53' 11.90" N.	-121° 19' 57.37" W.	LIOC (100's)
SW31	038° 53' 10.31" N.	-121° 20' 00.55" W.	LIOC (100's)

Note: BRLY=*Branchinecta lynchi*, LIOC=*Linderiella occidentalis*.

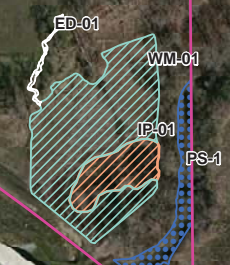
The location and surface area of each wetland feature sampled are included in Appendix B. Appendix C includes a tabular summary of all the sampled wetlands including the remaining required data (i.e., wetland depth of inundation, surface area, water and air temperature, branchiopod species occurrence, and other species observed) for each of the sampled wetland features. Representative site photographs are presented in Appendix D.



WETLANDS**		
Wetland Type	ID	Acres
Seasonal Wetland Pool	SW-03	0.047
Seasonal Wetland Pool	SW-08	0.039
Seasonal Wetland Pool	SW-09	0.012
Seasonal Wetland Pool	SW-10	0.026
Seasonal Wetland Pool	SW-11	0.023
Seasonal Wetland Pool	SW-12	0.040
Seasonal Wetland Pool	SW-13	0.005
Seasonal Wetland Pool	SW-14	0.017
Seasonal Wetland Pool	SW-15	0.019
Seasonal Wetland Pool	SW-16	0.010
Seasonal Wetland Pool	SW-17	0.101
Seasonal Wetland Pool	SW-18	0.030
Seasonal Wetland Pool	SW-19	0.011
Seasonal Wetland Pool	SW-20	0.008
Seasonal Wetland Pool	SW21a	0.067
Seasonal Wetland Pool	SW21b	0.007
Seasonal Wetland Pool	SW21c	0.016
Seasonal Wetland Pool	SW-22	0.118
Seasonal Wetland Pool	SW-23	0.014
Seasonal Wetland Pool	SW-24	0.027
Seasonal Wetland Pool	SW-26	0.030
Seasonal Wetland Pool	SW-29	0.085
Seasonal Wetland Pool	SW-30	0.018
Seasonal Wetland Pool	SW-31	0.314
Seasonal Wetland Pool	SW-32	0.033
Seasonal Wetland Pool	SW-33	0.014
SUBTOTAL		1.131
Seasonal Wetland Swale	SW-01	0.023
Seasonal Wetland Swale	SW-02	0.007
Seasonal Wetland Swale	SW-04	0.012
Seasonal Wetland Swale	SW-05	0.811
Seasonal Wetland Swale	SW-06	0.124
Seasonal Wetland Swale	SW-07	0.086
Seasonal Wetland Swale	SW-25	0.133
Seasonal Wetland Swale	SW-27	0.284
Seasonal Wetland Swale	SW-28	0.534
SUBTOTAL		2.014
Wet Meadow	WM-01	1.528
Irrigation Pond	IP-01	0.358
TOTAL		5.031

OTHER WATERS**		
Wetland Type	ID	Acres
Ephemeral Drainage	ED-01	0.030
Perennial Stream	PS-1	0.315
TOTAL		0.345

TOTAL WATERS OF THE U.S.\* 5.376



WETLANDS	OTHER FEATURES
Seasonal Wetland Pool	Study Area
Seasonal Wetland Swale	
Wet Meadow	
Irrigation Pond	
OTHER WATERS OF THE U.S.	
Ephemeral Drainage	
Perennial Stream	
Pondered Water	

**NOTES**

Gross Site Acreage: +/- 113 ac.  
 Aerial Photo Source: © April, 2010 Microsoft Corporation and its data suppliers  
 Topographic Data Source: Field survey XX/XX/XX, Fraji Design Group. Vertical Datum: NGVD 29  
 BRLY – *Branchinecta lynchi*  
 LIOC – *Lindeniella occidentalis*

\*This exhibit depicts information and data produced in strict accord with the U.S. Army Corps of Engineers wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and conforms to specifications per the Corps Sacramento District. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

\*\*The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.



Surveyors:  
 Ammon Rice, Cardno ENTRIX  
 Sam Sacchini, Cardno ENTRIX  
 GIS Specialist:  
 Melissa Nugent, Cardno ENTRIX

Preparation Date:  
 1 July 2013  
 Revision Date:  
 31 July 2013

Peery Property Wet-Season Branchiopod Survey

Figure 2  
 Wet Season Branchiopod Survey\*

0 50 100 200 300 400  
 SCALE: 1 inch = 200 feet  
 Projection: Cal. Stateplane, Zone 2  
 Datum: NAD 83

## Chapter 5

# Conclusion

---

A total of 33 depressional wetland features were sampled within the 144-acre Study Area. The purpose was to determine presence and absence of branchiopods in each depressional wetland feature. Seven wet season monitoring events were conducted between December 20, 2012 and March 14, 2013. Federally listed *Branchinecta lynchi* was observed within one feature on the project site, SW21b, and non-listed *Linderiella occidentalis* was observed within three of the 33 features, SW06, SW17, and SW31. As part of the State Route 65 Bypass Project, Caltrans constructed a berm along the southern perimeter of the Peery Property. At the time of surveys, water was impounded behind the berm, backing up into the project site (location SW31). After the wet season, Caltrans installed culverts in the berm to allow water to drain properly from the site, returning the previously exiting drainage paths. These modifications to the berm will likely prevent the feature from ponding water in the future.



## Chapter 6

# References

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- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson manual: vascular plants of California*, second edition. University of California Press, Berkeley.
- California Department of Fish and Wildlife (CDFW). 2013. California Natural Diversity Database, Rare Find Version 3.1.0. Last updated December 4, 2012. Available online: <http://www.dfg.ca.gov/biogeodata/cnddb/>. Accessed December 17, 2012.
- U.S. Department of the Interior, U.S. Fish and Wildlife Service. 1996. Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods, April 19, 1996.

Appendix A

# USFWS Correspondence

## Ammon Rice

---

**From:** Kelly, David <david\_kelly@fws.gov>  
**Sent:** Tuesday, December 18, 2012 12:07 PM  
**To:** Ammon Rice  
**Cc:** Terry\_Adelsbach@fws.gov; Bonnie Peterson; Shannon Karvonen; Kellie Berry  
**Subject:** Re: Request to conduct Protocol Level Branchiopod Surveys, Lincoln CA

Ammon Rice,

By this email message you are authorized to conduct wet season surveys (2012-2013) for federally-listed vernal pool branchiopods, per the conditions of your recovery permit TE-175385 and as specified in your attached letter request with maps dated December 17, 2012. The surveys will be conducted at the Peery Property in Placer County. This site is described in the request letter and attached maps, and is located just northeast of the intersection of Nelson Lane and Hwy 65 Bypass, west of the City of Lincoln. Your request is to sample seasonally inundated wetlands, pools, ditches, and basins located within the sites. Surveys may be conducted within all seasonally inundated wetlands identified on-site that may provide suitable vernal pool crustacean habitat. Suitable habitat not previously identified on the project site may also be sampled under this authorization. Follow on dry season surveys are also authorized by this message starting next summer (2013).

Please remember to carry a copy of your permit while doing the work, and to follow the terms and conditions of the permit and the survey guidelines, including the reporting requirements. In your report, please include which surveys were authorized, the names of all persons involved in the surveys, their recovery permit numbers, if applicable, and the date of this authorization, to help ensure that we correctly record the fulfillment of the reporting requirement under this authorization. Please let us know if the surveys are not performed as authorized, or if they are done by a different permittee under a separate authorization. This authorization does not include access to the property which must be arranged with the landowner or manager.

Please send one copy of the report(s) to David Kelly, of our Recovery Branch, and send a separate copy to Kellie Berry, chief of the Sacramento Valley Division. Please keep in mind, and please inform your client that the Service can authorize surveys that establish presence, but not surveys where the purpose is to determine absence when there is a reason to believe that the species can be present even when they are not detected. Such reasons would include species characteristics that make it hard to detect, habitat suitability and proximity to known occurrences of the species. Therefore, if additional information becomes available to us that indicates that listed crustaceans are likely to be present at specific project sites, the Service may determine that the species are present even if your surveys have failed to detect individuals or cysts. We ask that you use UTM coordinates for all spatial data and that you reference the following number in future correspondence regarding these surveys: 2013-TA-0145.

To ensure the accuracy and data integrity of your project, it is requested that you provide spatial information (boundaries, study areas, parcels, point locations, etc.) in the form of an ESRI shape file with projection, a GPS file with projection, or locations in an Excel spreadsheet with projection information. The preferred projection is UTM, Zone 10S, NAD83; the Sacramento Fish and Wildlife Office (SFWO) standard. FGDC compliant metadata must accompany each file. Please include any USFWS File Numbers associated with the data in your documentation. For additional information regarding metadata standards refer to <http://www.fgdc.gov>. For more information regarding spatial data please contact: Cheryl L. Hickam, GIS Branch Chief, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W-2605, Sacramento, Ca 95825-1846, office: 916-414-6708.

On Mon, Dec 17, 2012 at 4:12 PM, Ammon Rice <[ammon.rice@cardno.com](mailto:ammon.rice@cardno.com)> wrote:

Hi Terry and Dave,

I am requesting authorization to perform Protocol-Level We-Season Branchiopod Surveys at the Peery Property, Lincoln, Placer County, CA. Please see the attached request letter. The project site is located northeast of the Nelson Lane intersection with Highway 65 Bypass, on the U.S. Geological Survey (USGS) Lincoln 7.5 minute topographic quadrangle in Section 17, Township 12 North, Range 6 East.

If authorized, we would like to start surveying this week. We confirmed with ECORP that a reference pool in Placer County had mature vernal pool fairy shrimp for the first time this week. The pools at the Peery Property may be inundated for two-and-a-half to three weeks prior to our first survey; however, with this minor deviation from the protocol and checking reference pools, we believe we are early enough in the season to detect branchiopods, if present. We will continue to survey the site every two weeks until presence of branchiopods is confirmed, the pools are dry, or the pools have been inundated for 120 consecutive days.

I greatly appreciate your attention to this request and your understanding of the urgency.

Sincerely,

**Ammon Rice**  
ENVIRONMENTAL SPECIALIST  
CARDNO ENTRIX

Phone (+1) 916-923-1097 Fax (+1) 916-386-3841 Direct (+1) 916-386-3862 Mobile (+1) 559-307-4099  
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--

**David Lee Kelly**  
Recovery Biologist  
Sacramento Fish and Wildlife Office  
2800 Cottage Way W-2605  
Sacramento, California 95825-1888  
Phone:916-414-6492

## Ammon Rice

---

**From:** Ammon Rice  
**Sent:** Sunday, January 13, 2013 10:32 PM  
**To:** David\_Kelly@fws.gov  
**Cc:** Shannon Karvonen (shannon.karvonen@cardno.com)  
**Subject:** Report of Branchinecta lynchi during Protocol Level Branchiopod Surveys, Lincoln CA  
**Attachments:** Peery Propoerty USFWS Notification.pdf

Hi Dave,

This email is to inform you that during protocol level branchiopod surveys, vernal pool fairy shrimp (*Branchinecta lynchi*) was found in one pool on Thursday, January 3, 2013. The surveys are being conducted at the Peery Property, Lincoln, Placer County, CA. Please see the attached map. The project site is located northeast of the Nelson Lane intersection with Highway 65 Bypass, on the U.S. Geological Survey (USGS) Lincoln 7.5 minute topographic quadrangle in Section 17, Township 12 North, Range 6 East.

The pool containing *B. lynchi* was SW21(b), Lat. 38.887108°, Long. -121.332650°. *B. lynchi* was found by Ammon Rice, permit TE-175385-1, and has not been detected in any other pools on the site.

Please let me know if you have any questions or would like more information.

Thanks and Happy New Year!

### Ammon Rice

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---

**From:** Ammon Rice  
**Sent:** Monday, December 17, 2012 4:13 PM  
**To:** [Terry Adelsbach@fws.gov](mailto:Terry_Adelsbach@fws.gov); [David Kelly@fws.gov](mailto:David_Kelly@fws.gov)  
**Cc:** Bonnie Peterson; Shannon Karvonen ([shannon.karvonen@cardno.com](mailto:shannon.karvonen@cardno.com))  
**Subject:** Request to conduct Protocol Level Branchiopod Surveys, Lincoln CA

Hi Terry and Dave,

I am requesting authorization to perform Protocol-Level We-Season Branchiopod Surveys at the Peery Property, Lincoln, Placer County, CA. Please see the attached request letter. The project site is located northeast of the Nelson Lane intersection with Highway 65 Bypass, on the U.S. Geological Survey (USGS) Lincoln 7.5 minute topographic quadrangle in Section 17, Township 12 North, Range 6 East.

If authorized, we would like to start surveying this week. We confirmed with ECORP that a reference pool in Placer County had mature vernal pool fairy shrimp for the first time this week. The pools at the Peery Property may be inundated for two-and-a-half to three weeks prior to our first survey; however, with this minor deviation from the protocol and checking reference pools, we believe we are early enough in the season to detect branchiopods, if present. We will continue to survey the site every two weeks until presence of branchiopods is confirmed, the pools are dry, or the pools have been inundated for 120 consecutive days.

I greatly appreciate your attention to this request and your understanding of the urgency.

Sincerely,

**Ammon Rice**  
ENVIRONMENTAL SPECIALIST  
CARDNO ENTRIX



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Appendix B

# Wet Season Sampling Location Data

Wet Season Sampling Locations at Peery Ranch						
Wetland Name	Area (Acres)	Latitude	Longitude	Section	Township	Range
SW01	0.023	038° 53' 21.23" N	-121° 20' 23.07" W	17	12N	6E
SW02	0.007	038° 53' 21.23" N	-121° 20' 21.73" W	17	12N	6E
SW03	0.047	038° 53' 21.57" N	-121° 20' 20.25" W	17	12N	6E
SW04	0.012	038° 53' 19.99" N	-121° 20' 20.28" W	17	12N	6E
SW05	0.811	038° 53' 18.16" N	-121° 20' 17.25" W	17	12N	6E
SW06	0.124	038° 53' 11.82" N	-121° 20' 06.38" W	17	12N	6E
SW07	0.086	038° 53' 14.55" N	-121° 20' 05.71" W	17	12N	6E
SW08	0.039	038° 53' 14.23" N	-121° 20' 03.80" W	17	12N	6E
SW09	0.012	038° 53' 11.19" N	-121° 20' 03.85" W	17	12N	6E
SW10	0.026	038° 53' 11.20" N	-121° 20' 02.69" W	17	12N	6E
SW11	0.023	038° 53' 10.51" N	-121° 20' 02.76" W	17	12N	6E
SW12	0.040	038° 53' 12.10" N	-121° 20' 19.29" W	17	12N	6E
SW13	0.005	038° 53' 12.13" N	-121° 20' 20.74" W	17	12N	6E
SW14	0.017	038° 53' 12.33" N	-121° 20' 21.42" W	17	12N	6E
SW15	0.019	038° 53' 11.23" N	-121° 20' 21.90" W	17	12N	6E
SW16	0.010	038° 53' 10.96" N	-121° 20' 21.39" W	17	12N	6E
SW17	0.101	038° 53' 11.90" N	-121° 19' 57.37" W	17	12N	6E
SW18	0.030	038° 53' 12.89" N	-121° 19' 59.50" W	17	12N	6E
SW19	0.011	038° 53' 12.48" N	-121° 19' 54.67" W	17	12N	6E
SW20	0.008	038° 53' 12.53" N	-121° 19' 52.69" W	17	12N	6E
SW21a	0.067	038° 53' 14.09" N	-121° 19' 56.44" W	17	12N	6E
SW21b	0.007	038° 53' 13.80" N	-121° 19' 57.65" W	17	12N	6E
SW21c	0.016	038° 53' 14.56" N	-121° 19' 57.45" W	17	12N	6E
SW22	0.188	038° 53' 22.37" N	-121° 19' 55.95" W	17	12N	6E
SW23	0.014	038° 53' 23.12" N	-121° 19' 56.75" W	17	12N	6E
SW24	0.027	038° 53' 22.59" N	-121° 19' 59.04" W	17	12N	6E
SW25	0.133	038° 53' 22.41" N	-121° 19' 01.35" W	17	12N	6E
SW26	0.030	038° 53' 22.90" N	-121° 19' 03.55" W	17	12N	6E
SW27	0.284	038° 53' 22.51" N	-121° 20' 05.76" W	17	12N	6E
SW28	0.534	038° 53' 21.85" N	-121° 19' 57.65" W	17	12N	6E
SW29	0.085	038° 53' 22.42" N	-121° 20' 13.28" W	17	12N	6E
SW30	0.018	038° 53' 12.96" N	-121° 20' 11.73" W	17	12N	6E
*SW31	0.314	038° 53' 10.31" N	-121° 20' 00.55" W	17	12N	6E
*SW32	0.033	038° 53' 21.94" N	-121° 20' 19.35" W	17	12N	6E
*SW33	0.014	038° 53' 22.48" N	-121° 20' 18.06" W	17	12N	6E



Appendix C

# Wet Season Survey Data Summary Sheets











Project: Peery Ranch Surveyor(s): Ammon Rice Quad: Lincoln, Section 17 County: Placer  
 Date: 2/28/2013 Weather Cond: Clear and slight breeze Township: 12N UTM Northing: 4305666.81 m N  
 Time: 900 Air Temperature(°F): Start 55°F Range: 6E UTM Easting: 644322.62 m E

**Abundance:** R = Rare (1-2 individuals), NC = Not Common (3-10 individuals), C = Common (11-50 individuals), VC = Very Common (51-100 individuals), A = Abundant (>100 individuals)  
**Habitat Condition:** UD = undisturbed, D = disturbed - tt = tire tracks, t = trash, p = plowing  
**Hydrology:** D = dry, N/P = not ponding, M=moist, S = saturated to surface, I/P = intermittent ponding, X = Present but not observed in 1 meter sample  
**UG = ungrazed, G = grazed - C = cattle, H = horse, S = sheep, l = light grazing, m = moderate grazing, h = heavy grazing**  
**LB Redroductive Status:** i = immature, m = mature, g = gravid (with eggs)

Pool No.	Water Temp (°F)	Present Depth (inches)		Potential Depth (Inches)		Surface Area (ac)		Crustacea							Insecta							Mollusca			Turbellaria	Acari	Collembola	Other	Herps	Habitat Condition	Comments						
		Max	Ave.	Max	Ave.	% Current Inundation	Pot. Max	Ostracods	Copepods				Large Branchiopods (LB)			Coleoptera			Hemiptera		Ephemeroptera	Odonata		Diptera		Trichoptera	Lymnaeidae	Physidae	Planorbidae			Micro-turbellarian	Hydracarina	Other Invertebrate	Pseudacris	Other	
									Calanoida	Cyclopoda	Cladocera	LIOC	BRLY	BRME	LEPA	LYBR	CYCA	Dytiscidae	Hydrophilidae	Halipidae		Notonectidae	Corixidae	Zygoptera	Anisoptera												Culicidae
SW01	D	-	-	10	8	-	0.023																											p			
SW02	D	-	-	5	4	-	0.007																											p			
SW03	D	-	-	10	6	-	0.047																											p			
SW04	D	-	-	5	4	-	0.012																											p			
SW05	D	-	-	8	4	-	0.811																											p			
SW06	D	-	-	6	5	-	0.124																											p			
SW07	D	-	-	8	6	-	0.086																											p			
SW08	D	-	-	4	3	-	0.039																											p			
SW09	D	-	-	4	3	-	0.012																											p			
SW10	D	-	-	3.5	2	-	0.026																											p			
SW11	D	-	-	3.5	2	-	0.023																											p			
SW12	D	-	-	10	6	-	0.04																											p			
SW13	D	-	-	3.5	2	-	0.005																											p			
SW14	D	-	-	4	3	-	0.017																											p			
SW15	D	-	-	3	2	-	0.019																											p			
SW16	D	-	-	3	2	-	0.014																											p			
SW17	55	4	3	12	7	10	0.101	NC	NC	C	C							X															X		R	p	
SW18	D	-	-	6	4	-	0.03																												p		
SW19	D	-	-	3	2	-	0.011																												p		
SW20	D	-	-	3	2	-	0.008																												p		
SW21a	D	-	-	6	4	-	0.067																												p		
SW21b	D	-	-	6	4	-	0.007																												p		
SW21c	D	-	-	2	1	-	0.016																												p		
SW22	D	-	-	12	5	-	0.188																												p		
SW23	D	-	-	11	7	-	0.014																												p		
SW24	D	-	-	11	7	-	0.027																												p		
SW25	D	-	-	8	6	-	0.133																												p		
SW26	D	-	-	8	6	-	0.03																												p		
SW27	D	-	-	5	4	-	0.284																												p		
SW28	D	-	-	10	7	-	0.534																												p		
SW29	D	-	-	7	5	-	0.085																												p		
SW30	D	-	-	5	4	-	0.018																												p		
*SW31	D	-	-	20	10	-	0.314																												p		
*SW32	D	-	-	7	6	-	0.033																												p		
*SW33	D	-	-	7	6	-	0.014																												p		

All Other Basins On Site Are Not Ponded

\*SW31, SW32, and SW33 were not included in the wetland delineation, however, these features were inundated during the 2012-2013 wet season





Appendix D

# Representative Site Photographs



Photo 1. Seasonal wetland SW21b. This pool contained vernal pool fairy shrimp (*Branchinecta lynchi*). Photo facing west.



Photo 2. Seasonal wetland SW17. This pool contained California fairy shrimp (*Linderiella occidentalis*). Photo facing south.



Photo 3. Feature SW31. This pool contained California fairy shrimp (*Linderiella occidentalis*). Photo facing west.



Photo 4. Seasonal wetland SW28. No vernal pool branchiopods were found in this pool. Photo facing north.



Photo 5. Seasonal wetland SW26. No vernal pool branchiopods were found in this pool. Photo facing northeast.



Photo 6. Seasonal wetland SW24. No vernal pool branchiopods were found in this pool. Photo facing north.



Photo 7. California fairy shrimp (*Linderiella occidentalis*), ostracods, and copepods observed in Feature SW31.



SUD-B Northeast Quadrant Specific Plan

APPENDIX

D

2013-2014 REPORT OF FINDINGS  
REGARDING BRANCHIOPOD  
SURVEYS – PEERY PROPERTY

# 90-Day Report of Findings Regarding Branchiopod Surveys

Peery Property

June 16, 2014





## Document Information

Prepared for            Peery-Arrillaga  
Project Name            Peery Property  
Project Manager        Shannon Karvonen  
Date                      June 16, 2014

Prepared for:

Peery-Arrillaga  
2450 Watson Court, Palo Alto, CA 94303

Prepared by:



Cardno ENTRIX  
701 University Avenue, Suite 200, Sacramento, CA 95825

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## Acronyms

CNDDB	California Natural Diversity Database
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

# 1 Introduction

---

Sam Bacchini conducted protocol-level wet-season branchiopod surveys at Peery Property (Study Area) on behalf of Richard Peery of Peery-Arrillaga, in Lincoln, Placer County, California (Figure 1). Wet-season surveys were authorized by Mr. David Kelly of the U.S. Fish and Wildlife Service (USFWS) on December 9, 2013 (USFWS, Appendix A). The purpose of these surveys was to determine the presence/absence of vernal pool branchiopod species listed as endangered or threatened by the USFWS [i.e., vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*)] within seasonally inundated depressions at the property. These surveys were conducted under the authority of Federal Fish and Wildlife Permit TE-795938-7 and in compliance with the *19 April 1996 Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (Guidelines) (USFWS, 1996). This document is the 90-Day Report of Findings for the Peery Property (as required by Item VII of the Guidelines), which summarizes the results of 2014 wet-season survey work for this site.

Sam Bacchini, Cardno ENTRIX biologist, sampled 29 seasonally inundated depressions within the Study Area (Appendix B). California fairy shrimp (*Lindieriella occidentalis*) were observed in one depression, but no federally listed as threatened vernal pool fairy shrimp (*Branchinecta lynchi*) were observed in the Study Area.

## 2 Background and Site Description

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As requested by the Richard Peery of Peery-Arrillaga, Cardno ENTRIX conducted a protocol-level wet-season branchiopod survey for the Peery Property in an attempt to determine the presence or absence of listed branchiopods.

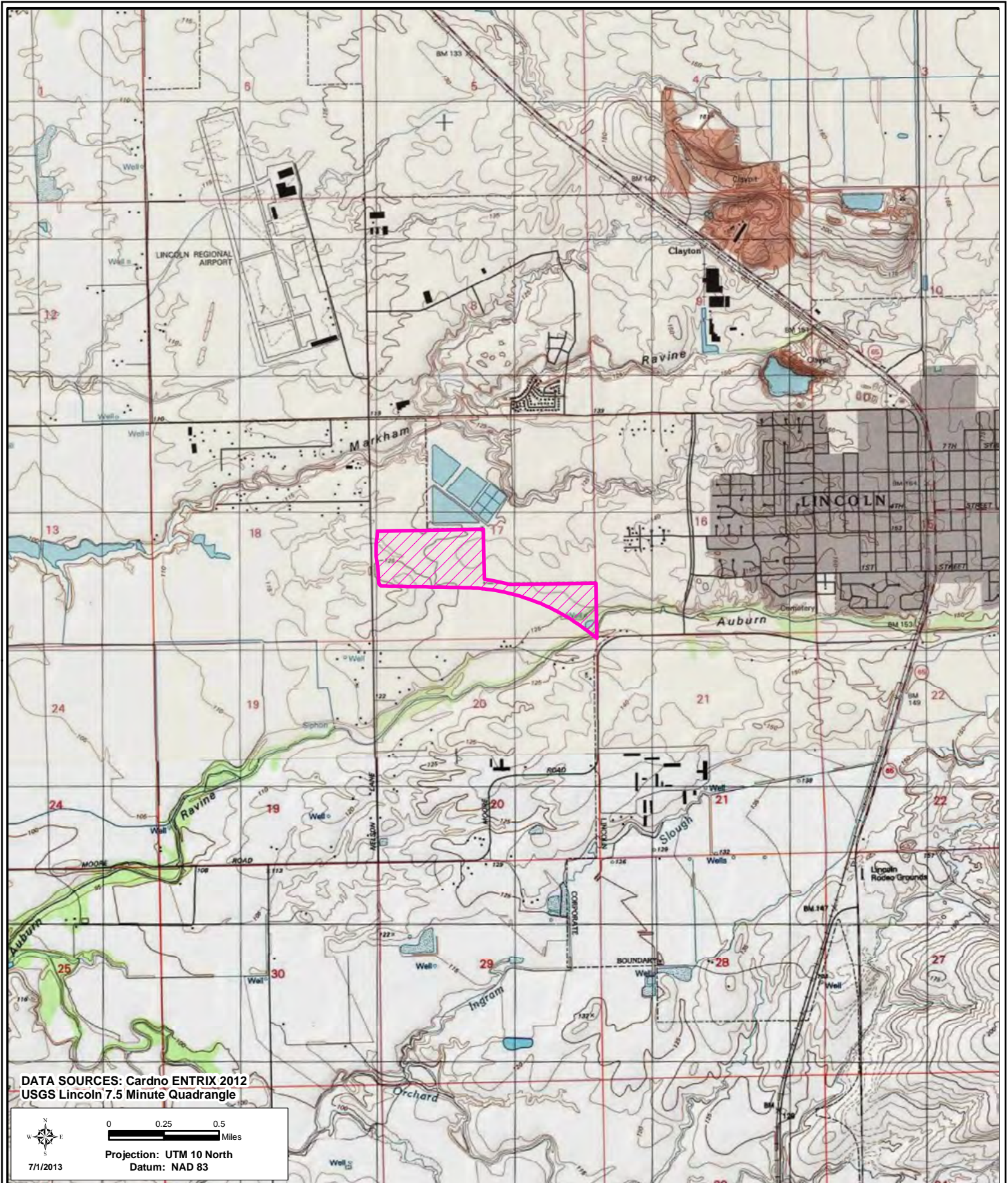
The western parcel (approximately 70 acres) is roughly rectangular in shape and is bordered by Nelson Lane on the west, State Route 65 Bypass on the South, undeveloped land on the north, and residential neighborhood on the east. The eastern parcel (approximately 44 acres) is roughly triangular in shape and is bordered by residential development on the north, Hwy 65 Bypass on the south, and Auburn Ravine on the east (Figure 2). Additionally, the property is located in Section 17, Township 12 North, Range 6 East of the Lincoln U.S. Geological Survey (USGS) 7.5 minute topographic quadrangle map (Latitude 038° 53' 17.31" North; Longitude -121° 20' 09.22" West; UTM 10 S., 4305679.68 m Northing, and UTM 644328.70 m Easting).

The Study Area is approximately 114 acres, and consists of the area surveyed for the boundaries of wetland features and adjacent uplands. The Study Area is generally flat, with elevation ranging from approximately 120 feet above sea level (asl) to 130 feet asl. Land uses in the general vicinity include rural residential and residential development, and agricultural.

The entire western portion and most of the eastern portion of the Study Area have been disked, seeded, and mowed annually for hay production for many years. The western portion, which retains much of the natural topography, is dry farmed, while the eastern portion appears to have been laser leveled, and has been flood irrigated during the dry season for a number of years. The primary vegetative cover in the study area consists of stubble from oat grass, but other species were observed including Fitch's tarweed (*Centromadia [Hemizonia] fitchii*), yellow flower tarplant (*Holocarpha virgata*), turkey mullein (*Croton setigerus*), and vinegarweed (*Trichostema lanceolatum*). These latter species were very sparse, and associated primarily with the seasonal wetlands or adjacent areas.

Within the non-native annual grassland habitat in the western portion of the Study Area are a number of seasonal wetlands consisting of pools and swales. Most of these features were likely to have been vernal pools or swales in the past (based on the aerial signatures and the abundance of this wetland type in the surrounding region) but due to the long history of annual disking and planting for hay production the boundaries of these features have become indistinct, and no they longer appear to support vernal pool plant species. As stated above, the eastern portion of the Study Area has been graded/leveled, no seasonal pools or swales are present there, and no ponding was observed during the survey period.

The region has a Mediterranean climate characterized by hot, dry summers and cool, wet winters. The local and regional geology is within the Sacramento Valley geomorphic province, characterized primarily by agriculture, and is the wetter subregion of the Great Central Valley. The geomorphic province occurs within the greater California Floristic Province. The average summer high temperature is 95°F and the average low is 67°F. The average winter high temperature is 53°F and the average low is 37°F. Average annual precipitation is 17.1 inches (Baldwin et al., 2012).



Peery Property Wet-Season  
Branchiopod Survey

Figure 1

Project Site and Vicinity

## 3 Methods

---

In order to assess the presence or absence of listed shrimp species in the Study Area, Cardno ENTRIX conducted protocol-level branchiopod surveys during the 2013-2014 wet season. All surveys were conducted in accordance with the USFWS Guidelines (USFWS, 1996). A list of federal and state special-status plant and wildlife species was developed for the project using a database search, which included a query of the California Natural Diversity Database (CNDDDB) for the Lincoln and eight surrounding USGS 7½ minute quadrangles.

Monitoring methods followed the USFWS Guidelines (USFWS, 1996). Invertebrate and hydrologic monitoring were conducted simultaneously. A total of 29 seasonally inundated depressions that potentially support vernal pool branchiopods were present in the study area. Sampling using a D style dip net was conducted by Cardno ENTRIX biologist Sam Bacchini (TE-795938-7).

The standard procedure Cardno ENTRIX follows for conducting these surveys includes:

When pools are inundated to a depth of 3 cm or greater, the depressional wetlands are visually searched for active large branchiopods prior to entering the water. Walking within the wetlands is minimized to fullest extent possible. Water depth measurements are taken at the same location during each monitoring event and visual observations of invertebrates were made from the wetland edge.

Following the visual search, a semi-quantitative sample is taken to determine the relative abundance of macroscopic invertebrates as follows. A net was lowered vertically into the deepest portion of the depressional wetland (usually the center) and rested on the bottom. The 153-µm mesh size net is then moved through the pool for approximately one-meter. Given the aperture of the net of 0.025 m<sup>2</sup> and distance the net is moved, roughly 0.025 m<sup>3</sup> or 25 liters of the water column were sampled horizontally each time. When the water column was shallower than the net aperture height, the volume of water per sweep was calculated by the horizontal distance the net was moved multiplied by the width of the net (25-cm) multiplied by the depth of the water. After the completion of each sample sweep, the contents of the net are examined for aquatic fauna. All animals captured in the net were identified to the lowest justifiable taxon in the field (consisting of 28 taxonomic groups), and recorded on standardized data sheets.

The relative numbers of individuals sampled within each taxonomic group are recorded in one of five categories: rare (≤ 2 individuals), not common (3-10 individuals), common (11-50 individuals), very common (51-100 individuals), and abundant (>100 individuals). This method allows for the relative abundances and richness of aquatic invertebrates to be compared, between and among wetlands, through time. Additionally, this method allows for density estimates of invertebrates to be calculated as number of individuals per liter of water (= number of individuals/net aperture area x length of sweep).

If large branchiopods are not detected during the sample sweep, additional strategically placed sweeps are made with the net. Additional taxonomic groups of aquatic invertebrates detected using these sweeps or visual observation are recorded with an "X" on the standardized field data sheet to note presence. After the taxonomic identification and enumeration are completed, the contents of the net were placed back into the pool from which they were sampled.

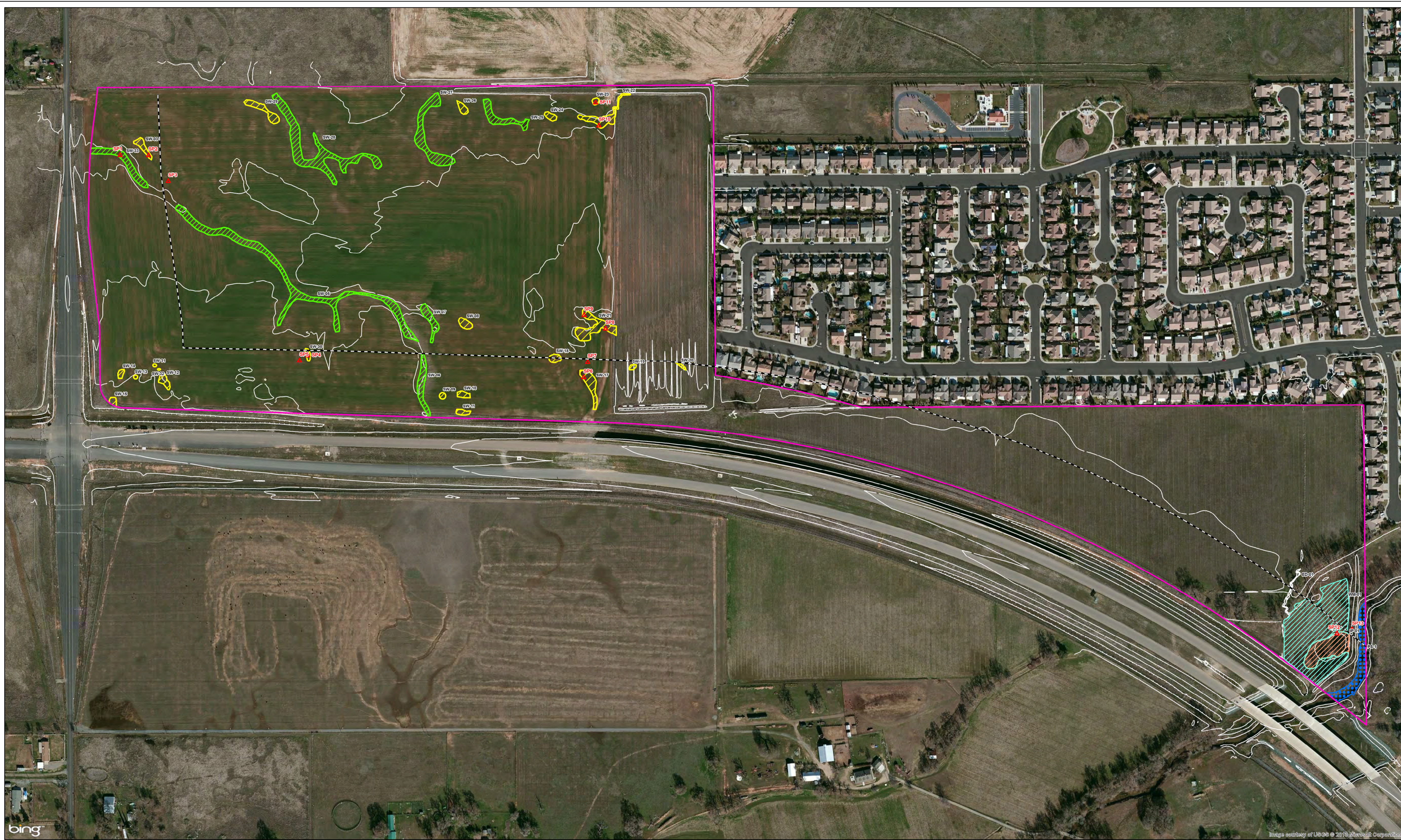
Beginning on February 19, 2014, following significant rain events, features identified during a previous wetland delineation ponding at least 3-cm of water were sampled. Several of the wetland features in the Study Area had short inundation periods and not all features were inundated during each survey. The invertebrate monitoring was conducted at the Study Area biweekly between December 16, 2014 and May 9, 2014. Depressional wetlands were monitored if they were inundated to a depth of greater than or equal to 3-cm at the time of each visit.

## 4 Results

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California fairy shrimp were observed in one pool during the survey, but no federally listed species were observed in any surveyed wetland features. The location and surface area of each wetland feature sampled are included in Appendix B. Appendix C includes a tabular summary of all the sampled wetlands including the remaining required data (i.e., wetland depth of inundation, surface area, water and air temperature, branchiopod species occurrence, and other species observed) for each of the sampled wetland features. Representative site photographs are presented in Appendix D.

California is currently within a drought year but several significant rain events were recorded during the survey period. Inundation was observed within some depressional wetlands during the February 19, March 14, and April 10 surveys and dip net surveys were conducted on February 19 and March 14. Precipitation data for Lincoln is located in Appendix E.



WETLANDS**		
Wetland Type	ID	Acres
Seasonal Wetland Pool	SW-03	0.047
Seasonal Wetland Pool	SW-08	0.039
Seasonal Wetland Pool	SW-09	0.012
Seasonal Wetland Pool	SW-10	0.026
Seasonal Wetland Pool	SW-11	0.023
Seasonal Wetland Pool	SW-12	0.040
Seasonal Wetland Pool	SW-13	0.005
Seasonal Wetland Pool	SW-14	0.017
Seasonal Wetland Pool	SW-15	0.019
Seasonal Wetland Pool	SW-17	0.101
Seasonal Wetland Pool	SW-18	0.030
Seasonal Wetland Pool	SW-19	0.011
Seasonal Wetland Pool	SW-20	0.008
Seasonal Wetland Pool	SW-21	0.181
Seasonal Wetland Pool	SW-22	0.118
Seasonal Wetland Pool	SW-23	0.014
Seasonal Wetland Pool	SW-24	0.027
Seasonal Wetland Pool	SW-26	0.030
Seasonal Wetland Pool	SW-29	0.085
Seasonal Wetland Pool	SW-30	0.018
Seasonal Wetland Pool	SW-31	0.003
Seasonal Wetland Pool	SW-32	0.001
<b>SUBTOTAL</b>		<b>0.855</b>
Seasonal Wetland Swale	SW-05	0.712
Seasonal Wetland Swale	SW-06	0.124
Seasonal Wetland Swale	SW-07	0.086
Seasonal Wetland Swale	SW-25	0.133
Seasonal Wetland Swale	SW-27	0.284
Seasonal Wetland Swale	SW-28	0.534
Seasonal Wetland Swale	SW-33	0.181
<b>SUBTOTAL</b>		<b>2.055</b>
Wet Meadow	WM-01	1.528
Irrigation Pond	IP-01	0.358
<b>TOTAL</b>		<b>4.796</b>

OTHER WATERS**		
Wetland Type	ID	Acres
Ephemeral Drainage	ED-01	0.030
Perennial Stream	PS-1	0.315
<b>TOTAL</b>		<b>0.345</b>

**TOTAL WATERS OF THE U.S.\* 5.142**

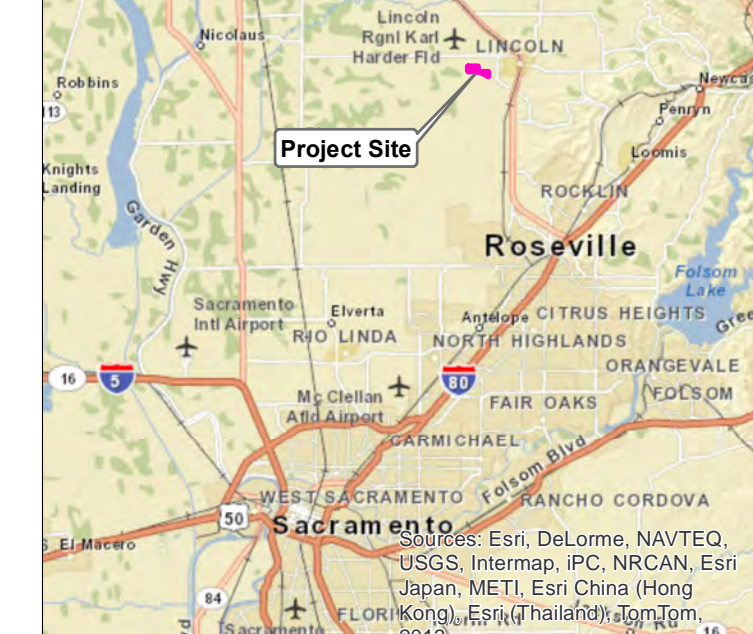
<p><b>WETLANDS</b></p> <ul style="list-style-type: none"> <li> Seasonal Wetland Pool</li> <li> Seasonal Wetland Swale</li> <li> Wet Meadow</li> <li> Irrigation Pond</li> </ul> <p><b>OTHER WATERS OF THE U.S.</b></p> <ul style="list-style-type: none"> <li> Ephemeral Drainage</li> <li> Perennial Stream</li> </ul>	<p><b>OTHER FEATURES</b></p> <ul style="list-style-type: none"> <li> Soil Pit</li> <li> Study Area</li> <li> 2007 Verified Delineation Boundary</li> </ul>
---	--

**NOTES**

Gross Site Acreage: +/- 113 ac.  
 Aerial Photo Source: © April, 2010 Microsoft Corporation and its data suppliers  
 Topographic Data Source: Field survey XXXXXX, Fraji Design Group. Vertical Datum: NGVD 29

\*This exhibit depicts information and data produced in strict accord with the U.S. Army Corps of Engineers wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and conforms to specifications per the Corps Sacramento District. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

\*\*The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.



**Delineators:**  
 Ammon Rice, Cardno ENTRIX  
 Sam Sacchini, Cardno ENTRIX

**GIS Specialist:**  
 Eric Lee, Cardno ENTRIX

**Preparation Date:**  
 28 October 2012

**Revision Date:**  
 28 August 2013

**DRAFT**

Peery Property Wetland Delineation

Figure 2  
**Wetland Delineation\***

SCALE: 1 inch = 200 feet  
 Projection: Cal. Stateplane, Zone 2  
 Datum: NAD 83



## 5 Conclusion

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A total of 29 depressional wetland features were sampled within the 144-acre Study Area. The purpose was to determine presence and absence of branchiopods in each depressional wetland feature. Seven wet-season monitoring events were conducted between December 16, 2013 and May 9, 2014. California fairy shrimp were observed in one pool during the survey, but no federally listed species were observed in any surveyed wetland features.

## 6      References

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Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.

California Department of Fish and Wildlife (CDFW). 2013. California Natural Diversity Database, Rare Find Version 3.1.0. Last updated December 4, 2012. Available online: <http://www.dfg.ca.gov/biogeodata/cnddb/>. Accessed December 17, 2012.

U.S. Department of the Interior, U.S. Fish and Wildlife Service. 1996. Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods, April 19, 1996.

Peery Property

APPENDIX

A

USFWS CORRESPONDENCE

**From:** Kelly, David [[mailto:david\\_kelly@fws.gov](mailto:david_kelly@fws.gov)]

**Sent:** Monday, December 09, 2013 7:03 AM

**To:** Sam Bacchini

**Cc:** Terry Adelsbach; Kellie Berry; Jason Hanni

**Subject:** Authorization to conduct surveys for the listed large branchiopods at the Walkup Ranch, the Peery Property, and the LaBellaRosa property in Placer County.

Sam Bacchini,

By this email message you are authorized to conduct wet season surveys (2013-2014) for federally-listed large branchiopods, per the conditions of the recovery permit TE-795938 (PBSJ, Sam Bacchini) and Kelly Bayne (TE-185595) as specified in your letter request with maps dated November 21, 2013. The surveys will be conducted at the the following locations:

- 1) The Walkup Ranch Project in Placer County. Located north of Hwy 193, south of Auburn Ravine just to the east of the City of Lincoln.
- 2) The Peery property in Placer County. Located just to the east of Nelson Road and directly west of the City of Lincoln.
- 3) The LaBellaRosa property in Placer County. Located north of Hwy 193 east of the City of Lincoln.

These sites are described in the request letters and attached maps and as described above. Your request is to sample seasonally inundated wetlands, pools, ditches, and basins located within the sites. Surveys may be conducted within all seasonally inundated wetlands identified on-site that may provide suitable vernal pool crustacean habitat. Suitable habitat not previously identified on the project site may also be sampled under this authorization. This authorization extends to the conduct of dry season sampling at the same site in 2014.

Please remember to carry a copy of your permit while doing the work, and to follow the terms and conditions of the permit and the survey guidelines, including the reporting requirements. In your report, please include which surveys were authorized, the names of all persons involved in the surveys, their recovery permit numbers, if applicable, and the date of this authorization, to help ensure that we correctly record the fulfillment of the reporting requirement under this authorization. Please let us know if the surveys are not performed as authorized, or if they are done by a different permittee under a separate authorization. This authorization does not include access to the property which must be arranged with the landowner or manager.

Please send one hard copy of the report(s) to David Kelly, of our Recovery Branch, and send a separate copy to Kellie Berry, Chief of the Sacramento Valley Division (can be electronic). We ask that you use UTM coordinates for all spatial data and that

you reference the following numbers in future correspondence regarding these surveys:

- 1) The Walkup Ranch Project in Placer County: 2008-TA-0187
- 2) The Peery property in Placer County: 2013-TA-0145
- 3) The LaBellaRosa property in Placer County: 2008-TA-1815

To ensure the accuracy and data integrity of your project, it is requested that you provide spatial information (boundaries, study areas, parcels, point locations, etc.) in the form of an ESRI shape file with projection, a GPS file with projection, or locations in an Excel spreadsheet with projection information . The preferred projection is UTM, Zone 10S, NAD83; the Sacramento Fish and Wildlife Office (SFWO) standard. FGDC compliant metadata must accompany each file. Please include any USFWS File Numbers associated with the data in your documentation. For additional information regarding metadata standards refer to <http://www.fgdc.gov>. [For more information regarding spatial data please contact: Cheryl L. Hickam, GIS Branch Chief, U.S. Fish and Wildlife Service, 2800 Cottage Way, Suite W-2605, Sacramento, Ca 95825-1846, office: 916-414-6708.](#)

--

David Lee Kelly  
Recovery Biologist  
Sacramento Fish and Wildlife Office  
2800 Cottage Way W-2605  
Sacramento, California 95825-1888  
Phone:916-414-6492

Peery Property

APPENDIX

# B

WETLAND LOCATION DATA

Wet Season Wetland Locations at Peery Ranch						
Wetland Name	Area (Acres)	Latitude	Longitude	Section	Township	Range
SW03	0.047	038° 53' 21.57" N	-121° 20' 20.25" W	17	12N	6E
SW05	0.811	038° 53' 18.16" N	-121° 20' 17.25" W	17	12N	6E
SW06	0.124	038° 53' 11.82" N	-121° 20' 06.38" W	17	12N	6E
SW07	0.086	038° 53' 14.55" N	-121° 20' 05.71" W	17	12N	6E
SW08	0.039	038° 53' 14.23" N	-121° 20' 03.80" W	17	12N	6E
SW09	0.012	038° 53' 11.19" N	-121° 20' 03.85" W	17	12N	6E
SW10	0.026	038° 53' 11.20" N	-121° 20' 02.69" W	17	12N	6E
SW11	0.023	038° 53' 10.51" N	-121° 20' 02.76" W	17	12N	6E
SW12	0.040	038° 53' 12.10" N	-121° 20' 19.29" W	17	12N	6E
SW13	0.005	038° 53' 12.13" N	-121° 20' 20.74" W	17	12N	6E
SW14	0.017	038° 53' 12.33" N	-121° 20' 21.42" W	17	12N	6E
SW15	0.019	038° 53' 11.23" N	-121° 20' 21.90" W	17	12N	6E
SW17	0.101	038° 53' 11.90" N	-121° 19' 57.37" W	17	12N	6E
SW18	0.030	038° 53' 12.89" N	-121° 19' 59.50" W	17	12N	6E
SW19	0.011	038° 53' 12.48" N	-121° 19' 54.67" W	17	12N	6E
SW20	0.008	038° 53' 12.53" N	-121° 19' 52.69" W	17	12N	6E
SW21a	0.067	038° 53' 14.09" N	-121° 19' 56.44" W	17	12N	6E
SW21b	0.007	038° 53' 13.80" N	-121° 19' 57.65" W	17	12N	6E
SW21c	0.016	038° 53' 14.56" N	-121° 19' 57.45" W	17	12N	6E
SW22	0.188	038° 53' 22.37" N	-121° 19' 55.95" W	17	12N	6E
SW23	0.014	038° 53' 23.12" N	-121° 19' 56.75" W	17	12N	6E
SW24	0.027	038° 53' 22.59" N	-121° 19' 59.04" W	17	12N	6E
SW25	0.133	038° 53' 22.41" N	-121° 19' 01.35" W	17	12N	6E
SW26	0.030	038° 53' 22.90" N	-121° 19' 03.55" W	17	12N	6E
SW27	0.284	038° 53' 22.51" N	-121° 20' 05.76" W	17	12N	6E
SW28	0.534	038° 53' 21.85" N	-121° 19' 57.65" W	17	12N	6E
SW29	0.085	038° 53' 22.42" N	-121° 20' 13.28" W	17	12N	6E
SW30	0.018	038° 53' 12.96" N	-121° 20' 11.73" W	17	12N	6E
*SW31	0.314	038° 53' 10.31" N	-121° 20' 00.55" W	17	12N	6E
*SW32	0.033	038° 53' 21.94" N	-121° 20' 19.35" W	17	12N	6E
*SW33	0.014	038° 53' 22.48" N	-121° 20' 18.06" W	17	12N	6E

Peery Property

APPENDIX

C

WET SEASON SURVEY DATA  
SUMMARY SHEETS



**Project Name:** Peery Property  
**Surveyor/Permit Number:** Sam Bacchini  
**Date:** 12.16.13

**County:** Placer

**Quad:** Lincoln

**Township, Range, Section:** T12N, R6E

**Time:** **Weather Conditions:** Cloudy

Pond #	Temp (F)		Depth (inches)		Surface Area (ftx ft)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	40	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	40	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-06	40	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-07	40	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-08	40	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-09	40	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-10	40	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-11	40	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-12	40	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-13	40	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-14	40	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-15	40	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-17	40	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-18	40	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-19	40	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-20	40	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-21	40	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-22	40	n/a	n/a	12	n/a	5126.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-23	40	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-24	40	n/a	n/a	11	n/a	1183.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-25	40	n/a	n/a	8	n/a	5799.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-26	40	n/a	n/a	8	n/a	1306.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-27	40	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-28	40	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-29	40	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-30	40	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-31	40	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-32	40	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-33	40	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	

Turbidity: C= clear view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed, sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

Pond #	Temp (F)		Depth (inches)		Surface Area (ft2)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information	
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera					
SW-03	62	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	62	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-06	62	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-07	62	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-08	62	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-09	62	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-10	62	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-11	62	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-12	62	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-13	62	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-14	62	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-15	62	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-17	62	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-18	62	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-19	62	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-20	62	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-21	62	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-22	62	70.7	6	12	45x10	5126.1	tea	-	-	-	X	-	-	-	-	-	-	-	-	-	D-p	Some crustaceans found
SW-23	62	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-24	62	70.7	6	11	33x10	1183.2	tea	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	No species seen during survey
SW-25	62	70.7	14	8	80x40	5799.7	cloudy tea	-	-	-	X	-	-	-	-	-	-	-	-	-	D-p	Some crustaceans found
SW-26	62	71.6	13	8	20x30	1306.9	tea	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	No species seen during survey
SW-27	62	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-28	62	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-29	62	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-30	62	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-31	62	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-32	62	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-33	62	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey

Turbidity: C= clea view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed,sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

Project Name: Peery Property

County Placer

Quad: Lincoln

Township, Range, Section: T12N, R6E

Page:

Surveyor/Permit Number: Sam Bacchini

Date: 3.14.14

Time:

Weather Conditions: Clear and sunny

Pond #	Temp (F)		Depth (inches)		Surface Area (ft2)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	71.6	62.6	2	10	8x12	2032	tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen
SW-05	71.6	62.6	4	8	11x10	30994.3	tea	-	-	-	-	-	X	-	-	-	-	-	-	D-p	Insect species seen
SW-06	71.6	64.4	2	6	10x10	5413.5	cloudy tea	-	-	-	-	-	X	-	-	-	-	-	-	D-p	Insect species seen
SW-07	71.6	64.4	4	8	9x12	3756.9	cloudy tea	-	-	-	X	X	X	X	-	-	-	-	-	D-p	Crustaceans and insects seen
SW-08	71.6	64.4	3	4	8x9	1700.8	cloudy tea	-	-	-	-	-	X	X	-	-	-	-	-	D-p	Insect species seen
SW-09	71.6	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-10	71.6	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-11	71.6	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-12	71.6	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-13	71.6	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-14	71.6	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-15	71.6	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-17	71.6	64.4	6	12	10x11	4403.3	cloudy tea	X	-	-	X	X	X	X	-	-	X	-	X	D-p	Multiple species seen
SW-18	71.6	64.4	3	6	5x9	1304.1	cloudy tea	-	-	-	-	-	X	X	-	-	-	-	-	D-p	Insect species seen
SW-19	71.6	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-20	71.6	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-21	71.6	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-22	71.6	59	4	12	11x12	5126.1	tea	-	-	X	X	-	X	X	-	-	X	-	-	D-p	Crustaceans and insects seen
SW-23	71.6	57.2	4	11	3x4	628.5	cloudy tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen
SW-24	71.6	57.2	8	11	7x8	1183.2	cloudy	-	-	-	X	-	X	X	-	-	X	-	-	D-p	Crustaceans and insects seen
SW-25	71.6	57.2	6	8	8x9	5799.7	cloudy	-	-	-	X	-	X	X	-	-	X	-	-	D-p	Crustaceans and insects seen
SW-26	71.6	n/a	3	8	9x11	1306.9	cloudy	-	-	-	X	-	X	X	-	-	X	-	-	D-p	Crustaceans and insects seen
SW-27	71.6	58.1	6	5	10x13	12392.2	tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen
SW-28	71.6	58.1	5	10	12x13	23275.5	tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen
SW-29	71.6	62.6	3	7	8x9	3723.5	tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen
SW-30	71.6	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-31	71.6	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-32	71.6	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey
SW-33	71.6	62.6	6	7	8x12	7270.9	cloudy tea	-	-	-	-	-	X	X	-	-	X	-	-	D-p	Insect species seen

Turbidity: C= clea view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed,sheep, L = light grazing, M = moderate grazing, H = heavy grazing

UG, ungrazed, c = cattle, h = horses, s = sheep

**Project Name:** Peery Property  
**Surveyor/Permit Number:** Sam Bacchini  
**Date:** 4.10.14

**County:** Placer

**Quad:** Lincoln

**Township, Range, Section:** T12N, R6E

**Time:** **Weather Conditions:** Sunny

Pond #	Temp (F)		Depth (inches)		Surface Area (ft2)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	78	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	78	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-06	78	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-07	78	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-08	78	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-09	78	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-10	78	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-11	78	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-12	78	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-13	78	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-14	78	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-15	78	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-17	78	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-18	78	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-19	78	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-20	78	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-21	78	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-22	78	n/a	n/a	12	n/a	5126.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-23	78	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-24	78	n/a	n/a	11	n/a	1183.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-25	78	n/a	<2	8	16	5799.7	tea	-	-	-	-	-	-	-	-	-	-	-	D-p	Not deep enough to survey	
SW-26	78	n/a	<2	8	6	1306.9	mud	-	-	-	-	-	-	-	-	-	-	-	D-p	Not deep enough to survey	
SW-27	78	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-28	78	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-29	78	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-30	78	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-31	78	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-32	78	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-33	78	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	

Turbidity: C= clear view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed, sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

**Project Name:** Peery Property  
**Surveyor/Permit Number:** Sam Bacchini  
**Date:** 3.28.14

**County:** Placer

**Quad:** Lincoln

**Township, Range, Section:** T12N, R6E

**Time:** **Weather Conditions:** Cloudy

Pond #	Temp (F)		Depth (inches)		Surface Area (ftx ft)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	69	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	69	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-06	69	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-07	69	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-08	69	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-09	69	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-10	69	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-11	69	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-12	69	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-13	69	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-14	69	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-15	69	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-17	69	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-18	69	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-19	69	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-20	69	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-21	69	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-22	69	n/a	n/a	12	n/a	5126.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-23	69	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-24	69	n/a	n/a	11	n/a	1183.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-25	69	n/a	n/a	8	n/a	5799.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-26	69	n/a	n/a	8	n/a	1306.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-27	69	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-28	69	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-29	69	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-30	69	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-31	69	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-32	69	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-33	69	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	

Turbidity: C= clear view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed, sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

**Project Name:** Peery Property  
**Surveyor/Permit Number:** Sam Bacchini

**County:** Placer

**Quad:** Lincoln

**Township, Range, Section:** T12N, R6E

**Date:** 4.24.14

**Time:**

**Weather Conditions:** Sunny

Pond #	Temp (F)		Depth (inches)		Surface Area (ftx ft)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	65	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	65	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-06	65	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-07	65	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-08	65	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-09	65	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-10	65	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-11	65	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-12	65	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-13	65	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-14	65	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-15	65	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-17	65	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-18	65	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-19	65	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-20	65	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-21	65	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-22	65	n/a	n/a	12	n/a	5126.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-23	65	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-24	65	n/a	n/a	11	n/a	1183.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-25	65	n/a	n/a	8	n/a	5799.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-26	65	n/a	n/a	8	n/a	1306.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-27	65	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-28	65	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-29	65	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-30	65	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-31	65	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-32	65	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-33	65	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	

Turbidity: C= clear view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed, sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

**Project Name:** Peery Property  
**Surveyor/Permit Number:** Sam Bacchini  
**Date:** 5.09.14

**County:** Placer

**Quad:** Lincoln

**Township, Range, Section:** T12N, R6E

**Time:** **Weather Conditions:** Sunny

Pond #	Temp (F)		Depth (inches)		Surface Area (ftx ft)		Turbidity (secci disc depth)	Crustaceans					Insects					Fish	Herps	Habitat Condition	Notes / Voucher information
	Air	Water	Average	Est. Max.	Present	Est. Max.		Anostracans	Notostracans	Copepods	Ostracods	Cladocera	Coleoptera	Hemiptera	Ephemeroptera	Odonata	Diptera				
SW-03	87	n/a	n/a	10	n/a	2032	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-05	87	n/a	n/a	8	n/a	30994.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-06	87	n/a	n/a	6	n/a	5413.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-07	87	n/a	n/a	8	n/a	3756.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-08	87	n/a	n/a	4	n/a	1700.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-09	87	n/a	n/a	4	n/a	524.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-10	87	n/a	n/a	3.5	n/a	1139.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-11	87	n/a	n/a	3.5	n/a	1015.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-12	87	n/a	n/a	10	n/a	1720.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-13	87	n/a	n/a	3.5	n/a	218.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-14	87	n/a	n/a	4	n/a	738	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-15	87	n/a	n/a	3	n/a	837.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-17	87	n/a	n/a	12	n/a	4403.3	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-18	87	n/a	n/a	6	n/a	1304.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-19	87	n/a	n/a	3	n/a	457.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-20	87	n/a	n/a	3	n/a	341.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-21	87	n/a	n/a	6	n/a	7899.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-22	87	n/a	n/a	12	n/a	5126.1	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-23	87	n/a	n/a	11	n/a	628.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-24	87	n/a	n/a	11	n/a	1183.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-25	87	n/a	n/a	8	n/a	5799.7	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-26	87	n/a	n/a	8	n/a	1306.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-27	87	n/a	n/a	5	n/a	12392.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-28	87	n/a	n/a	10	n/a	23275.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-29	87	n/a	n/a	7	n/a	3723.5	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-30	87	n/a	n/a	5	n/a	776.2	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-31	87	n/a	n/a	20	n/a	139.4	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-32	87	n/a	n/a	7	n/a	64.8	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	
SW-33	87	n/a	n/a	7	n/a	7270.9	n/a	-	-	-	-	-	-	-	-	-	-	-	D-p	Dry at time of survey	

Turbidity: C= clear view of bottom of pool

Habitat Conditions: UD = undisturbed, D = disturbed, tt = tire tracks, t = trash, p = plowed, g = grazed, sheep, L = light grazing, M = moderate grazing, H = heavy grazing

**UG, ungrazed, c = cattle, h = horses, s = sheep**

Peery Property

APPENDIX

D

REPRESENTATIVE SITE  
PHOTOGRAPHS





Photo 1: Represented site photo of Peery Property. Property dry planted for oats and hay



Photo 2: Seasonal Wetland Pool 26 on April 12, 2014. Not deep enough to survey on this visit, but surveyed on February 19 and March 14, no special status branchiopods observed



Photo 3: Seasonal Wetland Swale 25 on April 12, 2014. Not deep enough to survey on this visit, but surveyed on February 19 and March 14, no special status branchiopods observed



Photo 4: Seasonal Wetland Swale 05 on April 12, 2014. Dry during this survey, but surveyed on March 14, no special status branchiopods found

Peery Property

APPENDIX

E

PRECIPITATION DATA FOR  
LINCOLN, CA

## Precipitation Data for Lincoln, CA

Date	PPT (inches)	Rain to Date (inches) from 6/30/13
10/1/2013	0	0.42
10/2/2013	0	0.42
10/3/2013	0	0.42
10/4/2013	0	0.42
10/5/2013	0	0.42
10/6/2013	0	0.42
10/7/2013	0	0.42
10/8/2013	0	0.42
10/9/2013	0	0.42
10/10/2013	0	0.42
10/11/2013	0	0.42
10/12/2013	0	0.42
10/13/2013	0	0.42
10/14/2013	0	0.42
10/15/2013	0	0.42
10/16/2013	0	0.42
10/17/2013	0	0.42
10/18/2013	0	0.42
10/19/2013	0	0.42
10/20/2013	0	0.42
10/21/2013	0	0.42
10/22/2013	0	0.42
10/23/2013	0	0.42
10/24/2013	0	0.42
10/25/2013	0	0.42
10/26/2013	0	0.42
10/27/2013	0.08	0.5
10/28/2013	0.01	0.51
10/29/2013	0	0.51
10/30/2013	0	0.51
10/31/2013	0	0.51
11/1/2013	0	0.51
11/2/2013	0	0.51
11/3/2013	0	0.51
11/4/2013	0	0.51
11/5/2013	0	0.51
11/6/2013	0	0.51
11/7/2013	0	0.51

<b>Date</b>	<b>PPT (inches)</b>	<b>Rain to Date (inches) from 6/30/13</b>
11/8/2013	0	0.51
11/9/2013	0	0.51
11/10/2013	0	0.51
11/11/2013	0	0.51
11/12/2013	0	0.51
11/13/2013	0	0.51
11/14/2013	0	0.51
11/15/2013	0	0.51
11/16/2013	0	0.51
11/17/2013	0	0.51
11/18/2013	0	0.51
11/19/2013	0.67	1.18
11/20/2013	0.88	2.06
11/21/2013	0.38	2.44
11/22/2013	0	2.44
11/23/2013	0	2.44
11/24/2013	0	2.44
11/25/2013	0	2.44
11/26/2013	0	2.44
11/27/2013	0	2.44
11/28/2013	0	2.44
11/29/2013	0	2.44
11/30/2013	0	2.44
12/1/2013	0	2.44
12/2/2013	0	2.44
12/3/2013	0	2.44
12/4/2013	0	2.44
12/5/2013	0	2.44
12/6/2013	0.43	2.87
12/7/2013	0.01	2.88
12/8/2013	0.01	2.89
12/9/2013	0	2.89
12/10/2013	0	2.89
12/11/2013	0	2.89
12/12/2013	0	2.89
12/13/2013	0	2.89
12/14/2013	0	2.89
12/15/2013	0	2.89
12/16/2013	0	2.89
12/17/2013	0	2.89

<b>Date</b>	<b>PPT (inches)</b>	<b>Rain to Date (inches) from 6/30/13</b>
12/18/2013	0	2.89
12/19/2013	0	2.89
12/20/2013	0	2.89
12/21/2013	0	2.89
12/22/2013	0	2.89
12/23/2013	0	2.89
12/24/2013	0	2.89
12/25/2013	0	2.89
12/26/2013	0	2.89
12/27/2013	0	2.89
12/28/2013	0	2.89
12/29/2013	0	2.89
12/30/2013	0	2.89
12/31/2013	0	2.89
1/1/2014	0	2.89
1/2/2014	0	2.89
1/3/2014	0	2.89
1/4/2014	0	2.89
1/5/2014	0	2.89
1/6/2014	0	2.89
1/7/2014	0	2.89
1/8/2014	0	2.89
1/9/2014	0	2.89
1/10/2014	0	2.89
1/11/2014	0.04	2.93
1/12/2014	0	2.93
1/13/2014	0	2.93
1/14/2014	0	2.93
1/15/2014	0	2.93
1/16/2014	0	2.93
1/17/2014	0	2.93
1/18/2014	0	2.93
1/19/2014	0	2.93
1/20/2014	0	2.93
1/21/2014	0	2.93
1/22/2014	0	2.93
1/23/2014	0	2.93
1/24/2014	0	2.93
1/25/2014	0	2.93
1/26/2014	0	2.93

<b>Date</b>	<b>PPT (inches)</b>	<b>Rain to Date (inches) from 6/30/13</b>
1/27/2014	0	2.93
1/28/2014	0	2.93
1/29/2014	0.17	3.1
1/30/2014	0.1	3.2
1/31/2014	0.02	3.22
2/1/2014	0	3.22
2/2/2014	0	3.22
2/3/2014	0	3.22
2/4/2014	0	3.22
2/5/2014	0	3.22
2/6/2014	0.35	3.57
2/7/2014	0.42	3.99
2/8/2014	2.28	6.27
2/9/2014	1.23	7.5
2/10/2014	0.08	7.58
2/11/2014	0	7.58
2/12/2014	0	7.58
2/13/2014	0	7.58
2/14/2014	0	7.58
2/15/2014	0.09	7.67
2/16/2014	0.02	7.69
2/17/2014	0	7.69
2/18/2014	0	7.69
2/19/2014	0	7.69
2/20/2014	0	7.69
2/21/2014	0	7.69
2/22/2014	0	7.69
2/23/2014	0	7.69
2/24/2014	0	7.69
2/25/2014	0	7.69
2/26/2014	0.41	8.1
2/27/2014	0.1	8.2
2/28/2014	1.68	9.88
3/1/2014	0	9.88
3/2/2014	0.19	10.07
3/3/2014	0.22	10.29
3/4/2014	0.1	10.39
3/5/2014	0.37	10.76
3/6/2014	0.01	10.77
3/7/2014	0	10.77

<b>Date</b>	<b>PPT (inches)</b>	<b>Rain to Date (inches) from 6/30/13</b>
3/8/2014	0	10.77
3/9/2014	0	10.77
3/10/2014	0.3	11.07
3/11/2014	0	11.07
3/12/2014	0	11.07
3/13/2014	0	11.07
3/14/2014	0	11.07
3/15/2014	0	11.07
3/16/2014	0	11.07
3/17/2014	0	11.07
3/18/2014	0	11.07
3/19/2014	0	11.07
3/20/2014	0	11.07
3/21/2014	0	11.07
3/22/2014	0	11.07
3/23/2014	0	11.07
3/24/2014	0	11.07
3/25/2014	0.14	11.21
3/26/2014	0.53	11.74
3/27/2014	0.03	11.77
3/28/2014	0	11.77
3/29/2014	0.99	12.76
3/30/2014	0	12.76
3/31/2014	0.25	13.01
4/1/2014	1	14.01
4/2/2014	0.11	14.12
4/3/2014	0	14.12
4/4/2014	0.15	14.27
4/5/2014	0	14.27
4/6/2014	0	14.27
4/7/2014	0	14.27
4/8/2014	0	14.27
4/9/2014	0	14.27
4/10/2014	0	14.27
4/11/2014	0	14.27
4/12/2014	0	14.27
4/13/2014	0	14.27
4/14/2014	0	14.27
4/15/2014	0	14.27
4/16/2014	0	14.27





SUD-B Northeast Quadrant Specific Plan

APPENDIX

E

CNDDDB AND USFW QUERY  
RESULTS

**U.S. Fish & Wildlife Service**  
**Sacramento Fish & Wildlife Office**  
**Federal Endangered and Threatened Species that Occur in**  
**or may be Affected by Projects in the Counties and/or**  
**U.S.G.S. 7 1/2 Minute Quads you requested**

Document Number: 141006040607

Current as of: October 6, 2014

---

Quad Lists

Listed Species

Invertebrates

*Branchinecta conservatio*

Conservancy fairy shrimp (E)

*Branchinecta lynchi*

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

*Desmocerus californicus dimorphus*

valley elderberry longhorn beetle (T)

*Lepidurus packardii*

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

*Hypomesus transpacificus*

delta smelt (T)

*Oncorhynchus mykiss*

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

*Oncorhynchus tshawytscha*

Central Valley spring-run chinook salmon (T) (NMFS)

winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

*Rana draytonii*

California red-legged frog (T)

Reptiles

*Thamnophis gigas*

giant garter snake (T)

Candidate Species

Birds

*Coccyzus americanus occidentalis*

Western yellow-billed cuckoo (C)

Quads Containing Listed, Proposed or Candidate Species:

GOLD HILL (527B)

ROCKLIN (527C)

LINCOLN (528A)  
SHERIDAN (528B)  
PLEASANT GROVE (528C)  
ROSEVILLE (528D)  
WOLF (542C)  
WHEATLAND (543C)  
CAMP FAR WEST (543D)

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## County Lists

No county species lists requested.

### Key:

- (E) *Endangered* - Listed as being in danger of extinction.
- (T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
- (P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.
- Critical Habitat* - Area essential to the conservation of a species.
- (PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
- (C) *Candidate* - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) *Critical Habitat* designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

### Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

### Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should

determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

## Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

## Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

## Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

### Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts.

[More info](#)

### Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

### Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be January 04, 2015.



## Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



**Query Criteria:** Quad is (Lincoln (3812183) or Wolf (3912112) or Camp Far West (3912113) or Wheatland (3912114) or Sheridan (3812184) or Pleasant Grove (3812174) or Roseville (3812173) or Rocklin (3812172) or Gold Hill (3812182))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Agelaius tricolor</i></b> tricolored blackbird	ABPBXB0020	None	None	G2G3	S1S2	SSC
<b><i>Alkali Meadow</i></b> Alkali Meadow	CTT45310CA	None	None	G3	S2.1	
<b><i>Alkali Seep</i></b> Alkali Seep	CTT45320CA	None	None	G3	S2.1	
<b><i>Ammodramus savannarum</i></b> grasshopper sparrow	ABPBXA0020	None	None	G5	S2	SSC
<b><i>Andrena subapasta</i></b> an andrenid bee	IIHYM35210	None	None	G1G2	S1S2	
<b><i>Ardea herodias</i></b> great blue heron	ABNGA04010	None	None	G5	S4	
<b><i>Athene cunicularia</i></b> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<b><i>Balsamorhiza macrolepis</i></b> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<b><i>Branchinecta conservatio</i></b> Conservancy fairy shrimp	ICBRA03010	Endangered	None	G1	S1	
<b><i>Branchinecta lynchi</i></b> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S2S3	
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>Chloropyron molle ssp. hispidum</i></b> hispid salty bird's-beak	PDSCR0J0D1	None	None	G2T2	S2	1B.1
<b><i>Circus cyaneus</i></b> northern harrier	ABNKC11010	None	None	G5	S3	SSC
<b><i>Clarkia biloba ssp. brandegeae</i></b> Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
<b><i>Corynorhinus townsendii</i></b> Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	G3G4	S2S3	SSC
<b><i>Desmocerus californicus dimorphus</i></b> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
<b><i>Downingia pusilla</i></b> dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Gratiola heterosepala</i></b> Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
<b><i>Hydrochara rickseckeri</i></b> Ricksecker's water scavenger beetle	IICOL5V010	None	None	G2?	S2?	
<b><i>Juncus leiospermus var. ahartii</i></b> Ahart's dwarf rush	PMJUN011L1	None	None	G2T1	S1	1B.2
<b><i>Juncus leiospermus var. leiospermus</i></b> Red Bluff dwarf rush	PMJUN011L2	None	None	G2T2	S2	1B.1
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G4T1	S1	FP
<b><i>Legenere limosa</i></b> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<b><i>Lepidurus packardi</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S2S3	
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Melospiza melodia</i></b> song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
<b><i>Navarretia myersii ssp. myersii</i></b> pincushion navarretia	PDPLM0C0X1	None	None	G1T1	S1	1B.1
<b>Northern Hardpan Vernal Pool</b> Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
<b>Northern Volcanic Mud Flow Vernal Pool</b> Northern Volcanic Mud Flow Vernal Pool	CTT44132CA	None	None	G1	S1.1	
<b><i>Oncorhynchus mykiss irideus</i></b> steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2	S2	
<b><i>Pandion haliaetus</i></b> osprey	ABNKC01010	None	None	G5	S3	WL
<b><i>Progne subis</i></b> purple martin	ABPAU01010	None	None	G5	S3	SSC
<b><i>Riparia riparia</i></b> bank swallow	ABPAU08010	None	Threatened	G5	S2S3	
<b><i>Setophaga petechia</i></b> yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<b><i>Wolffia brasiliensis</i></b> Brazilian watermeal	PMLEM03020	None	None	G5	S1	2B.3

Record Count: 38



# Wetland Delineation and Preliminary Jurisdictional Determination

Peery Property

March 6, 2015



## Document Information

Prepared for            Peery-Arrillaga  
Project Name            Peery Property  
Project Manager        Shannon Karvonen  
Date                      March 6, 2015

Prepared for:

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## Acronyms

FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
NRCS	Natural Resource Conservation Service
OBL	Obligate
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

# 1 Introduction

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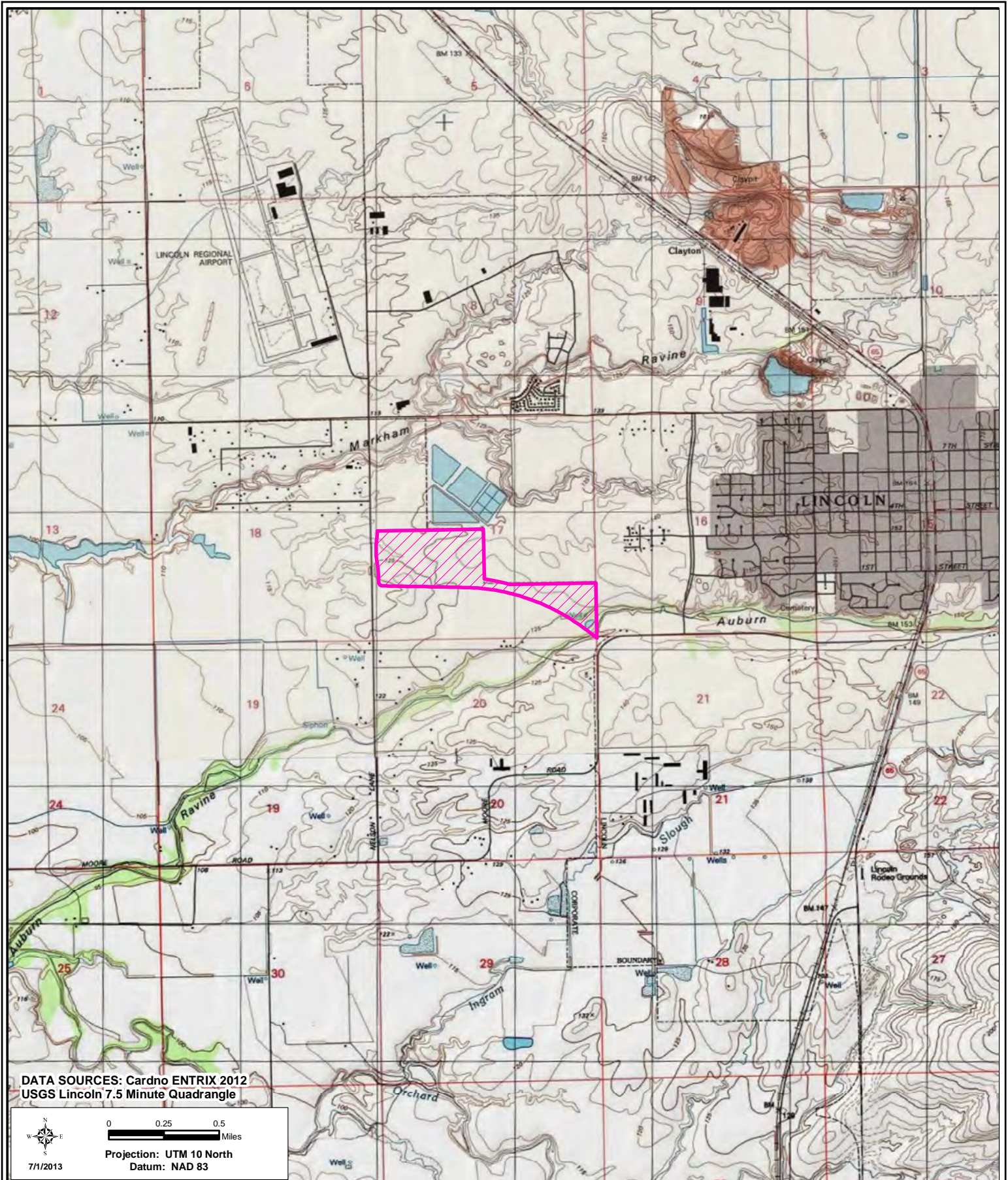
As requested by the Richard Peery of Peery-Arrillaga, Cardno conducted routine wetland delineation for the Peery Ranch (Figure 1). This report presents the results of the field evaluation and provides a preliminary determination of jurisdictional wetlands and waters of the United States as defined by the Clean Water Act. The project site is located on the U.S. Geological Survey (USGS) Lincoln 7.5 minute topographic quadrangle in Section 17, Township 12 North, Range 6 East. The site is approximately 114 acres total, consisting of two adjacent parcels. The western parcel (approximately 70 acres) is roughly rectangular in shape and is bordered by Nelson Lane on the west, the Hwy 65 Bypass on the South, undeveloped land on the north, and residential development on the east. The eastern parcel (approximately 44 acres) is roughly triangular in shape and is bordered by residential development on the north, the Hwy 65 Bypass on the south, and Auburn Ravine on the east.

This report presents the results of the field evaluation and provides a preliminary discussion regarding current wetlands and other Waters of the United States as defined by the Clean Water Act (CWA) within the Study Area.

This delineation of Waters of the United States contains the following:

- A narrative describing the methodology used to delineate the wetlands and Waters of the United States in the Study Area.
- A narrative description of existing field conditions, hydrology, soils descriptions, and plant communities present in the Study Area.
- Maps, including a USGS map with the Project location, a soils map, and aerial imagery showing the delineated wetlands and Waters of the United States in the Study Area.

The narrative and supporting graphics listed above accompany the wetland delineation map. This map was prepared locations of wetland indicators, mapping conventions and symbols, reference block, scale, property lines (when available), Study Area boundaries, and topography.



 Project Area



Peery Property  
Figure 1

Project Site and Vicinity

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## 2 Regulatory Framework

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### 2.1 Federal Jurisdiction of Wetlands and Other Waters of the United States

#### 2.1.1 Section 404 of the Clean Water Act

Under Section 404 of the CWA, the U.S. Environmental Protection Agency (EPA) and the USACE have regulatory and permitting authority regarding discharge of dredged or fill material into “navigable Waters of the United States”. The scope of the USACE jurisdiction was further refined in *Rapanos v. U.S.* and *Carabell v. U.S.* Guidance (EPA, 2008). The USACE asserts jurisdiction over the following waters:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and,
- Wetlands that directly abut such tributaries.

The USACE determines jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent;
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent; and,
- Wetlands adjacent to but that does not directly abut a relatively permanent non-navigable tributary.

A significant nexus exists when it is demonstrated that the tributary and/or wetland along with any other, similarly situated wetlands, has “more than a speculative or insubstantial effect on the chemical, physical and biological integrity of a traditional navigable water.”

The USACE generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); or
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

### 2.2 State Jurisdiction of Wetlands and Other Waters

#### 2.2.1 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) regulate activities in Waters of the State, under the Dickey Water Pollution Act of 1949 and the Porter-Cologne Act of 1969. Waters of the State include Waters of the United States., and are defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Additionally, the RWQCB regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Act through the State Water Quality Certification Program. The State Water Quality Certification Program regulates proposed federally permitted activity which may result in a discharge to water bodies including discharges of dredged or fill material permitted by the USACE under section 404 of the CWA (e.g., navigational dredging; flood control channelization; levee construction; channel clearing; and fill of wetlands or other water bodies for land development), and

ensures consistency with the Federal CWA, California Environmental Quality Act (CEQA), California Endangered Species Act (ESA), and the Porter-Cologne Act.

The Central Valley RWQCB has jurisdiction over the Study Area. Because Waters of the State are defined more broadly than Waters of the United States., projects that do not require a federal permit may still result in dredge or fill in Waters of the State. Such projects may be regulated by the RWQCB under Waste Discharge Requirements or Certifications of Waste Discharge Requirements.



## 3 Methodology

On September 19, 2011, and October 19, 2012 Cardno biologists collected field data in an attempt to identify the boundaries of potential wetlands and other waters of the U.S. Data on vegetation, soils, and hydrologic characteristics of potentially-jurisdictional features were recorded in the field on data forms for the Arid West Region. The area surveyed included all features within the two adjacent parcels (Study Area). Additional information for the western and southern boundary of the site was obtained from a verified delineation titled *Delineation of Jurisdictional Wetlands and Waters, Route 65 Lincoln Bypass, Placer County, California (Corp file No. SPK-1995-00363)* that was acquired through a FOIA request made on September 12, 2011. Information was also obtained for the eastern portion of the western parcel from a verified wetland delineation titled *Wetland Restoration Report for the State Route 65 Lincoln Bypass Haul Road (USACE File No. SPK-1995-00363) 3-PLA-Route 65-KP R19.6 (PM R12.2) – KP R38.3 (PM 23.8), EA 333800*. This delineation also overlaps along its western boundary with the *Wetland Delineation and Preliminary Jurisdictional Determination Nelson Lane Bridge Replacement Project (Bridge No. 19C0082)* that was verified by the USACE.

The wetland delineation was revised based on input from the USACE verification visit, and was resubmitted to the USACE on October 6, 2014. At the direction of the USACE, Cardno revised this wetland map and resubmitted it to the USACE on February 23, 2015. Based on the delineation, it is estimated that there is a total of 7.532 acres of wetlands within the Peery Property. Final verification from the USACE is still in progress at the time of this writing.

For each sampling site, the site location was recorded and the geographic coordinates (longitude and latitude) were collected. A handheld Trimble Geo 7X (2014 Series) Global Positioning System (GPS) unit capable of sub-meter accuracy was used to digitally record the boundaries of each potential jurisdictional wetland area identified in the Study Area. Vegetation communities were classified pursuant to the California Wildlife Habitat Relationship (CWHR) scheme (Mayer and Laudenslayer 1988). Plant species were identified using the *Jepson Manual of Higher Plants of California* (Baldwin Ed., 2012). Representative photographs of the Study Area are in Appendix B.

GPS data were subsequently downloaded from the GPS unit, differentially corrected using Trimble Pathfinder Office software and converted to GIS shapefiles. These shapefiles were then overlaid on aerial base maps of the Study Area, showing the location of wetlands in relation to topographical features. GPS data were corrected as necessary based on the distance and bearing from known topographic features and facilities, and the acreage of each wetland or other water in the Study Area was calculated.

The recorded OHWM limits were imported into ArcGIS and cross-referenced with mapped topography to delineate wetland and other waters which are subject to the jurisdiction of the USACE.

### 3.1 Waters of the United States

#### 3.1.1 Potential Section 404 Jurisdictional Wetlands

The delineation of Waters of the United States was conducted in accordance with the *1987 U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) (Wetland Delineation Manual), *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007), and *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region 2.0* (USACE, 2008) (Regional Supplement). A Level 2, routine wetland delineation, was conducted (as defined in the Wetland Delineation Manual) which consisted of an onsite inspection and evaluation of three parameters that identify and delineate the boundaries of wetlands, including (1) the dominance of wetland vegetation; (2) the presence of hydric soils; and (3) hydrologic conditions that result in periods of inundation or saturation on the surface as a result of flooding or ponding.

The *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed, 1988), was consulted as a guideline, however, per USACE regulatory notice dated May 10, 2012 the draft *North American Digital Flora: National Wetland Plant List* (Lichvar, 2013) was used to determine the wetland indicator status of plants identified in the Study Area. The *U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) Web Soil Survey for Placer County, Western Area California* (Soil Survey Staff, 2013) and the *National List of Hydric Soils* (NRCS, 2013) were used to preliminarily identify soil types in the Study Area.

Data on vegetation, soils, and hydrologic characteristics were recorded in the field on data forms for the Arid West Region (Appendix C).

### **3.1.1.1 Vegetation**

A visual assessment was made of all plant species located in and around the Study Area. Habitat was classified based on *A Guide to Habitat Classification of California* (Mayer, 1988) and vegetation series were defined based on *A Manual of California Vegetation, Second Edition* (Sawyer, et al., 2009). Plant species were identified using *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin Ed., 2012) and analyzed to determine the presence or absence of hydrophytic vegetation. The procedure for determining the presence of hydrophytic vegetation followed that identified in the Regional Supplement. Specifically, it involves the following assessment for each sample plot:

1. Apply Indicator 1 (Dominance Test). If the plant community passes the dominance test, then the vegetation is hydrophytic and no further vegetation analysis is required.
    - a. If the plant community fails the dominance test and indicators of hydric soil and/or wetland hydrology are absent, then hydrophytic vegetation is absent unless the site meets the requirements for a problematic wetland vegetation.
    - b. If the plant community fails the dominance test, but indicators of hydric soil and wetland hydrology are both present, proceed to Step 2.
  2. Apply Indicator 2 (Prevalence Index). This and the following step assume that at least one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present.
    - a. If the plant community satisfies the prevalence index, then the vegetation is hydrophytic. No further vegetation analysis is required.
    - b. If the plant community fails the prevalence index, proceed to Step 3.
  3. Apply Indicator 3 (Morphological Adaptations).
    - a. If the indicator is satisfied, then the vegetation is hydrophytic.
    - b. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless indicators of hydric soil and wetland hydrology are present and the site meets the requirements for a problematic wetland situation.
1. Wetland indicator species include those listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative (FAC) in the *National List of Plant Species that Occur in Wetlands: California (Region 0)*. Vegetation was described in terms of both species and percent coverage per strata. Sample plots that had vegetation that met the above criteria were identified as hydrophytic.

### **3.1.1.2 Soils**

The Soil Survey of Placer County was used to identify potential soils (map units) present in the vicinity of the Study Area (Figure 2). Soils were examined by digging a test pit to a depth of 20 inches, where feasible, to determine if soils exhibited hydric characteristics. In some cases loose soil, groundwater, or a

restrictive layer prohibited the digging of 20 inch test pits, and pits were dug to a depth sufficient to identify hydric indicators. The determination of hydric soils was based on soil texture, matrix color, and/or the presence of other hydric soil indicators such as mottles.

The NRCS maintains a list of hydric soil indicators that are known to occur in the United States. Soil samples were collected and described according to the methodology provided in the Regional Supplement. Soil chroma and values were determined by using a standard Munsell soil color chart (Munsell, 2009). Hydric soils were determined to be present if any of the soil samples met one or more of the hydric soil indicators described by the NRCS.

### **3.1.1.3 Hydrology**

The USACE jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period of time sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days in the Arid West Region). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or secondary indicators such as the FAC-neutral test, or the presence of a shallow aquitard. The Regional Supplement contains 18 primary hydrology indicators and nine secondary hydrology indicators.

The presence of these primary or secondary indicators was used to determine whether each sample point met the wetland hydrology criteria. A minimum of one primary indicator or two secondary indicators are required to meet the wetland hydrology criterion.

### **3.1.2 Potential Section 404 Other Waters**

The Study Area was evaluated for the presence of “other waters,” including lakes, rivers, and perennial or intermittent streams. Potential “other waters” may be identified by the presence of a defined river or streambed, a bank, or evidence of flow, or the absence of emergent vegetation in ponds and lakes. The extent of other waters was mapped to the ordinary high water mark (OHWM) as defined by the USACE Regulatory Guidance Letter No. 05-05 Ordinary High Water Mark Identification (USACE, 2005).

CWA regulations define the OHWM at 33 CFR 328.3(e) as the following:

- The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

The following geomorphic OHWM indicators, as described in the U.S. Army Corps of Engineers (USACE) publication A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States (Lichvar & McColley 2008), were used to delineate the OHWM of other Waters of the United States:

1. **Benches:** Formed by the removal of previously aggraded sediment, and located near the below/at ordinary high water (OHW) boundary and potentially near the at/above boundary.
2. **Drift:** Organic debris larger than twigs. Tends to be oriented in the direction of flow, and often collects behind/in obstructions or is simply deposited by receding flow.
3. **Exposed Root Hairs Below Intact Soil Layer:** Exposed by erosion of sediment. Tend to be located along the above/at OHW boundary or where benches have formed.
4. **Change in Particle Size Distribution:** Transition from coarser to finer sediment common, and likely to occur near the at/below OHW boundary.
5. **Upper Limit of Sand-Sized Particles:** Deposited due to reduced flow competence, and tends to be concentrated near the at/below OHW boundary but may extend to the above OHW boundary.

6. **Valley Flat:** Formed by the deposition of fine-grained sediment during over-bank flow, and located adjacent to low-flow feature(s) and extends to the break in slope (when present) near the at/above OHW boundary.

### **3.2 Waters of the State**

Although the SWRCB and RWQCB are in the process of establishing a formal wetland delineation protocol and wetland definition for Waters of the State, these agencies have typically accepted the USACE delineation protocol. However, these agencies do regulate “isolated waters” and non-navigable waters under the Porter-Cologne Act. Therefore, the methods described in Section 3.1 (Waters of the United States) were used to determine potential Waters of the State, but it was assumed that all wetlands and waters delineated using the USACE methods fall in the state’s jurisdiction under the Porter-Cologne Act.

## 4 Study Area

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The Study Area is approximately 114 acres, and consists of the area surveyed for the boundaries of wetland features and adjacent uplands (Appendix A). The Study Area is generally flat, with elevation ranging from approximately 120 feet above sea level (asl) to 130 feet asl. Land uses in the general vicinity include rural residential and residential development, and agricultural. Representative photographs of the Study Area are located in Appendix B.

### 4.1 Vegetation

#### 4.1.1 Non-native Annual Grassland

The Study Area consists almost exclusively of disturbed non-native annual grassland. The entire western portion and most of the eastern portion of the Study Area have been disked, seeded, and mowed annually for hay production for many years. The western portion, which retains much of the natural topography, is dry farmed, while the eastern portion appears to have been graded flat, and has been flood irrigated. The primary vegetative cover in the study area consists of stubble from oat grass, but other species were observed including Fitch's tarweed (*Centromadia* [*Hemizonia*] *fitchii*), yellow flower tarplant (*Holocarpha virgata*), turkey mullein (*Croton setigerus*), and vinegarweed (*Trichostema lanceolatum*). These latter species were very sparse, and associated primarily with the seasonal wetlands or adjacent areas.

Within the non-native annual grassland habitat in the western portion of the Study Area are a number of seasonal wetlands consisting of pools and swales. Most of these features were likely to have been vernal pools or swales in the past (based on the aerial signatures and the abundance of this wetland type in the surrounding region) but due to the long history of annual disking and planting for hay production the boundaries of these features have become indistinct, and no they longer appear to support vernal pool plant species. As stated above, the eastern portion of the Study Area has been graded/leveled, and no seasonal pools or swales are present.

#### 4.1.2 Oak Woodland

A small portion of the southeast corner of the Study Area contains oak woodland. This is a narrow band along the upland portion of the Auburn Ravine corridor and along the adjacent portion of the Hwy 65 Bypass, and consists of approximately 100 trees consisting primarily of valley oak (*Quercus lobata*) along with a few blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizenii*) and northern California black walnut (*Juglans hindsii*). The understory consists primarily of non-native grassland species including wild oats, ripgut brome (*Bromus diandrus*), Medusahead grass, prickly lettuce (*Lactuca serriola*), wild radish (*Raphanus sativus*), wild mustard (*Brassica* sp.), broad leaf filaree (*Erodium botrys*), English plantain, vetch (*Vicia* sp.), Spanish lotus (*Acmispon americanus* var. *americanus*), field bindweed, and cutleaf geranium.

#### 4.1.3 Riparian

Auburn Ravine passes through the southeast corner of the Study Area. The channel is separated from the oak woodland area by a levee. The main channel is separated from the oak woodland area by a levee. The channel side of the levee and the opposite bank are vegetated by riparian woodland including Northern California black walnut (*Juglans hindsii*), willow, and valley oak, with an understory of Himalayan blackberry, pokeberry (*Phytolacca americana*) and a variety of annual grasses and forbs similar to that found in the oak woodland.

## 4.2 Soils

The soil map units and miscellaneous land types in the Study Area and vicinity are described in soil report for the *Placer County, California, Western Part* (USDA Soil Conservation Service, 2014). Soil map units that occur in the Study Area are shown in Figure 2 and include Alamo-Fiddymment complex 0 to 5 percent slopes, Cometa-Fiddymment complex, 1 to 5 percent slopes, Cometa-Ramona sandy loam, 1 to 5 percent slopes, Kilaga loam, Ramona sandy loam, 2 to 9 percent slopes, San Joaquin-Cometa sandy loams, 1 to 5 percent slopes, and Xerofluvents, frequently flooded. Descriptions of each of these soil types are provided below.

### **Alamo-Fiddymment complex 0 to 5 percent slopes**

The Alamo-Fiddymment complex series consists of moderately deep to hardpan, poorly drained soils that formed in alluvium from mixed sources. Alamo soils are found in basins and drainageways on floodplains and fan remnants. The Alamo-Fiddymment complex soils are poorly drained with very slow runoff, and very slow permeability. Within Placer County, Alamo-Fiddymment complex soils are listed as a hydric soil within depressions (USDA 2010).

### **Cometa-Fiddymment complex, 1 to 5 percent slopes**

The Cometa-Fiddymment complex series consists of moderately deep, moderately well to well drained soils found on nearly level to rolling low terraces and hills, or on slightly dissected older stream terraces. Cometa-Fiddymment complex soils are moderately well or well drained with slow to medium runoff and very slow permeability. Within Placer County, Cometa-Fiddymment complex soils are listed as a hydric soil within depressions (USDA 2010).

### **Cometa-Ramona sandy loam, 1 to 5 percent slopes**

Cometa-Ramona sandy loam soils are found on nearly level to rolling low hills, terraces and fans. They are on terraces and fans at elevations of 250 to 3,500 feet. They formed in alluvium derived mostly from granitic and related rock sources. Cometa-Ramona sandy loam is well-drained with slow to medium runoff, and moderately slow permeability. Within Placer County, Cometa-Ramona sandy loam is listed as a hydric soil within depressions (USDA 2010).

### **Kilaga loam**

Kilaga loam consists of deep to very deep, well drained soils formed in alluvium from mixed rock sources, forming on nearly level to gently rolling terraces. Kilaga loam is well drained with slow to medium runoff and slow permeability. Within Placer County, Kilaga loam is listed as a hydric soil within drainage ways (USDA 2010).

### **Ramona sandy loam, 2 to 9 percent slopes**

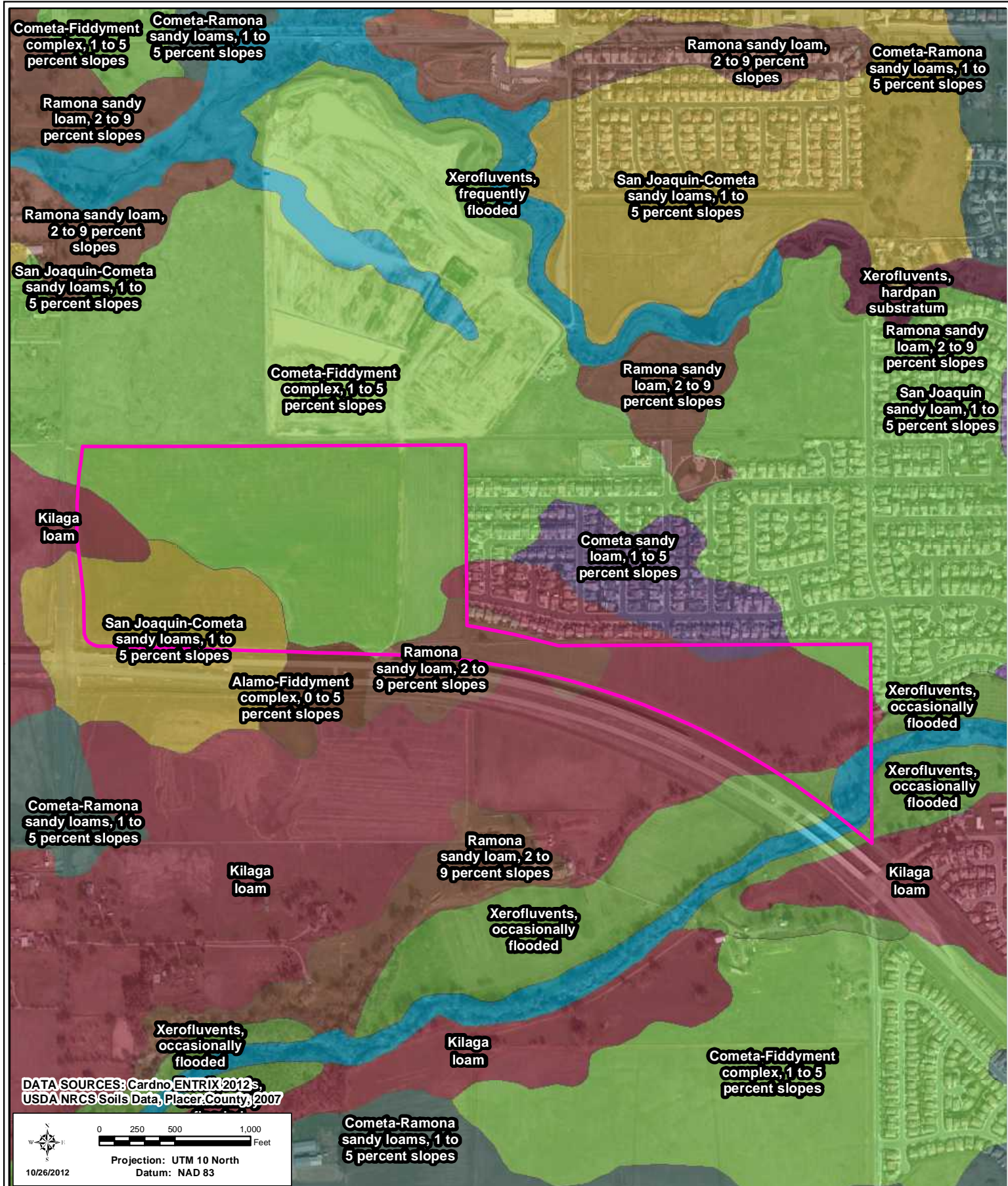
The Ramona soils are nearly level to moderately steep. They are on terraces and fans at elevations of 250 to 3,500 feet. They formed in alluvium derived mostly from granitic and related rock sources. Ramona sandy loam is well-drained with slow to rapid runoff, and moderately slow permeability. Within Placer County, Ramona sandy loam is listed as a hydric soil within drainage ways (USDA 2010).

### **San Joaquin-Cometa sandy loams, 1 to 5 percent slopes**

San Joaquin-Cometa sandy loams consist of soils that formed in alluvium derived from mixed but dominantly granitic rock sources, occurring on hummocky, nearly level to undulating low terraces. San Joaquin-Cometa sandy loams are well and moderately well drained with medium to very high runoff and very slow permeability. Some areas are subject to rare or occasional flooding. Within Placer County, San Joaquin-Cometa sandy loam is listed as a hydric soil within depressions (USDA 2010).

### **Xerofluvents, frequently flooded**

Xerofluvents are found on flood plains along rivers or streams or on alluvial fans, mostly in areas with Mediterranean climates. Flooding is most common in winter, but some of the soils are flooded in spring due to melting snow in the nearby mountains. Vegetation communities on Xerofluvents typically consist of mixed forest or grass and shrubs. Xerofluvents, frequently flooded soil type is found adjacent to stream channels and consist of narrow bands of somewhat poorly drained recent alluvium. Areas containing this soil type are typically subject to frequent flooding and channelization. Within Placer County, Xerofluvents, frequently flooded soils are listed as a hydric soil within drainage ways (USDA 2010).



DATA SOURCES: Cardno ENTRIX 2012s, USDA NRCS Soils Data, Placer County 2007

0 250 500 1,000 Feet

Projection: UTM 10 North  
Datum: NAD 83

10/26/2012

Study Area



Peery Property

Figure 2

Soil Types in the Project Vicinity



### **4.3 Hydrology**

The Study Area lies within the Upper Coon – Upper Auburn Watershed, and appears to be a part of a larger historic vernal pool/swale complex that encompassed much of the surrounding region prior to development for urban or agricultural uses. While generally flat, the topography in the western portion of the Study Area appears to generally slope from east to west and from the north to south. The topography in the eastern portion of the Study Area appears to slope from west to east towards Auburn Ravine. The source of the water for the seasonal wetlands in the area seems to be primarily from precipitation, and runoff from adjacent uplands. Auburn Ravine receives water from upstream sources, as well as overland flow from the adjacent watershed. Water was flowing in Auburn Ravine at the time of the survey. The U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) mapped only Auburn Ravine and a freshwater pond adjacent to Auburn Ravine. No other features are mapped for the remainder of the Study Area (USFWS 2010).

## 5 Results and Discussion

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Wetlands and Other Waters present in the Study Area (see Appendix A) included seasonal wetlands, seasonal wetland swales, a wetland meadow, an irrigation pond, a ditch, an ephemeral drainage, and Auburn Ravine. The hydrophytic vegetation, hydric soils, and wetland hydrology of these features are described below. Representative photographs of the Study Area are located in Appendix B, and copies of data sheets are located in Appendix C.

Upland areas are fairly consistent throughout the Study Area. No hydrologic indications were observed. Soils were generally sandy clay to sandy clay loam with some larger sand and gravel, and no stratified layers with soil chroma in the range of 7.5 YR 4/4. Typical plant species observed throughout the upland portion of the Study Area consisted almost exclusively of oat grass.

### 5.1 Seasonal Wetlands (3.288 acres)

There are 35 features in the Study Area mapped as seasonal wetland pools totaling 3.288 acres. The majority of these features occur in the western portion of the Study Area, while only five small seasonal wetland features are present in the eastern portion. These features were likely to have been vernal pools in the past, but decades of disking and planting for dry farmed hay and other crops has degraded these features to the point where they no longer appear to support vernal pool plant species. While oat grass was the dominant species observed in these features, there was generally a higher amount of barren ground in the basins of these features, and turkey mullein and vinegarweed were also present within the boundaries of these features.

### 5.2 Seasonal Wetland Swales (1.797 acres)

The four seasonal wetland swales totaling 1.797 acres mapped in the Study Area were also, like the seasonal wetlands, likely to have been vernal swales in the past, but no longer support vernal pool plant species due to the decade's long history of agricultural disturbances. Three of these features occur in the western portion of the property, while one runs along the eastern side of the eastern parcel. Species observed within these features were the same as those observed within the seasonal wetlands.

### 5.3 Wet Meadow (1.687 acres)

A large wet meadow area totaling 1.687 acres was mapped in the southeast corner of the Study Area adjacent to Auburn Ravine, but separated from it by a levee. This feature is a shallow basin that surrounds the irrigation pond described below, and is densely vegetated with a variety of facultative and obligate wetland plant species including water pepper (*Persicaria hydropiperoides*), umbrella sedge, Baltic rush (*Juncus balticus*), dallis grass (*Paspalum dilatatum*), and bull thistle (*Cirsium vulgare*). This feature appears to have received water from one of two wells located in the southeast corner of the Study Area, and likely receives water during flood irrigation of the adjacent graded field.

### 5.4 Irrigation Pond (0.358 acre)

An irrigation pond occurs within the above described wet meadow. This feature covers approximately 0.358 acre, and consists of a low spot within the larger wet meadow area. As with the wet meadow, it appears to receive its water primarily from nearby wells that were used to flood irrigate the adjacent hay field. Vegetation in this feature consists primarily of cattail along with some water pepper and umbrella sedge.

### 5.5 Ditch (0.057 acre/ 815 linear feet)

An irrigation ditch occurs along the eastern boundary edge of the Study Area. The ditch originated from a culvert on the north edge and flows south then west to the ephemeral drainage. This feature is vegetated with non-native annual grassland species.

### 5.6 Ephemeral Drainage (0.030 acre/ 60 linear feet)

The ephemeral drainage occurs at the southeastern edge of the eastern hay field. It appears to originate near a well that is also at the edge of the hay field, and flows into the wet meadow adjacent to Auburn Ravine. This feature is scoured from water flow, unvegetated, and appears to convey flows from the adjacent field to the wet meadow and irrigation pond during flood irrigation.

### 5.7 Auburn Ravine (0.315 acre/ 430 linear feet)

Auburn Ravine is a perennial stream that flows from northeast to southwest passing under the Hwy 65 Bypass as it leaves the Study Area. Approximately 500 linear feet of this feature define the eastern boundary of the Study Area with an approximate average width of 20 feet. The vegetation community along Auburn Ravine is riparian with a sparse to dense understory, and is described in more detail under Riparian Woodland above.

**Table 1 Wetlands and Other Waters in the Study Area**

Wetlands and Other Waters Type	ID	Acreages
Seasonal Wetland 02	SW-02	0.041
Seasonal Wetland 03	SW-03	0.005
Seasonal Wetland 04	SW-04	0.150
Seasonal Wetland 05	SW-05	0.014
Seasonal Wetland 06	SW-06	1.372
Seasonal Wetland 07	SW-07	0.011
Seasonal Wetland 08	SW-08	0.033
Seasonal Wetland 10	SW-10	0.423
Seasonal Wetland 11	SW-11	0.234
Seasonal Wetland 12	SW-12	0.014
Seasonal Wetland 13	SW-13	0.075
Seasonal Wetland 14	SW-14	0.013
Seasonal Wetland 15	SW-15	0.088
Seasonal Wetland 16	SW-16	0.212
Seasonal Wetland 17	SW-17	0.130
Seasonal Wetland 18	SW-18	0.008
Seasonal Wetland 19	SW-19	0.067
Seasonal Wetland 21	SW-21	0.016
Seasonal Wetland 22	SW-22	0.010
Seasonal Wetland 23	SW-23	0.019
Seasonal Wetland 24	SW-24	0.098
Seasonal Wetland 25	SW-25	0.086
Seasonal Wetland 26	SW-26	0.030
Seasonal Wetland 27	SW-27	0.025
Seasonal Wetland 28	SW-28	0.012
Seasonal Wetland 29	SW-29	0.007
Seasonal Wetland 30	SW-30	0.006
Seasonal Wetland 31	SW-31	0.003
Seasonal Wetland 32	SW-32	0.028

Seasonal Wetland 33	SW-33	0.035
Seasonal Wetland 34	SW-34	0.001
Seasonal Wetland 35	SW-35	0.008
Seasonal Wetland 36	SW-36	0.005
Seasonal Wetland 37	SW-37	0.007
Seasonal Wetland 38	SW-38	0.002
Wetland Swale 01	SW-01	0.980
Wetland Swale 09	SW-09	0.455
Wetland Swale 20	SW-20	0.244
Wetland Swale 39	SW-39	0.118
Wet Meadow 01	WM-01	1.687
Irrigation Pond	IP-01	0.358
<b>Total Wetlands</b>		<b>7.130</b>
<b>Other Waters</b>		<b>Acreages/ Linear Feet</b>
Ditch	D-01	0.057 acres/ 815 linear feet
Ephemeral Drainage	ED-01	0.030 acres/ 60 linear feet
Auburn Ravine	PS-01	0.315 acres/ 430 linear feet
<b>Total Other Waters</b>		<b>0.402 acres/ 1,305 linear feet</b>
<b>Total Wetlands and Other Waters</b>		<b>7.532 acres/ 1,305 linear feet</b>

## 6 Findings

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Based on the findings of this delineation, the Study Area contains approximately 7.130-acre wetland and 0.402 acre (1,305 linear feet) of other waters of the U.S. (Appendix A) that are potentially subject to the USACE's jurisdiction pursuant to the Clean Water Act for the following reasons:

- The vernal pools, seasonal wetlands irrigation pond and wet meadow in the Study Area meet the USACE's three-parameter wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology); and
- The pools in the Study Area are hydrologically linked to the drainage ditches that convey water through a series of drainages and canals to the Sacramento River. Thus, the wetland has a significant nexus to a non-relatively permanent water that flows directly to a Traditional Navigable Water.

As this report is a preliminary jurisdictional determination, we assume that the USACE has jurisdiction over all features included in the delineation map. Additionally, while the state may have independent jurisdiction criteria, we assume the state has jurisdiction over these mapped features as well.

No additional wetlands or waters were identified in the Study Area. All wetlands and waters with the Study Area meet the broader criteria for Water of the State and should be considered RWQCB jurisdiction.

## 7 Supplemental Information

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### 7.1 Directions to the Study Area

From Sacramento, California, take Interstate-80 (I-80) East toward Roseville. Take exit for Highway 65 and head north until you reach the intersection of the Hwy 65 Bypass and Nelson Lane. This intersection is the southwest corner of the Study Area.

### 7.2 Contact Information

#### Applicant

Richard Peery  
Peery-Arrillaga  
2450 Watson Court  
Palo Alto, CA 94303  
(650) 380-3665

#### Delineator

Sam Bacchini  
Cardno  
701 University Ave, Suite 200  
Sacramento, California 95825  
(916) 386-3850  
[sam.bacchini@cardno.com](mailto:sam.bacchini@cardno.com)

## 8 References

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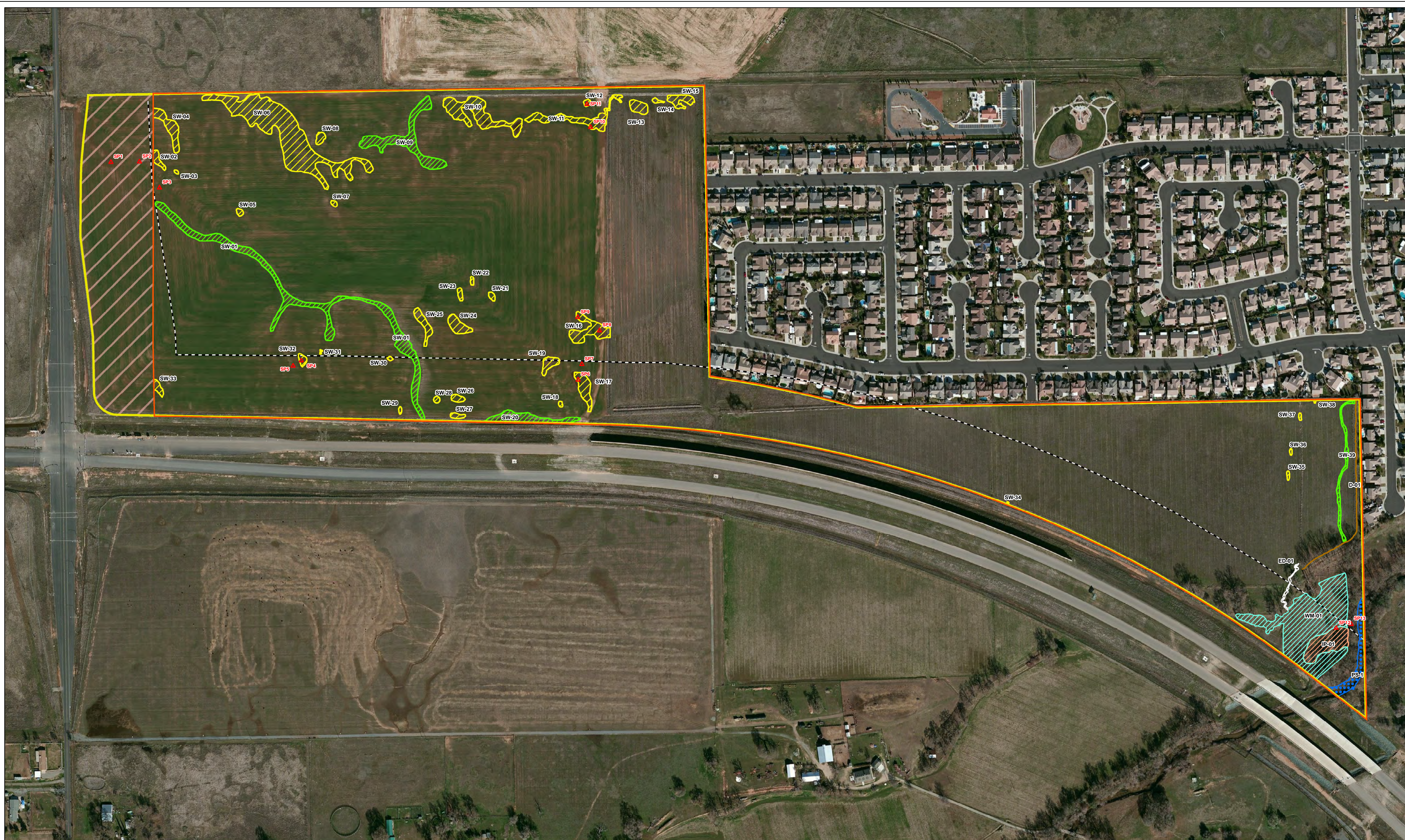
Peery Property

APPENDIX

A

WETLANDS AND OTHER WATERS  
MAP





WETLANDS**		
Wetland Type	ID	Acres
Seasonal Wetland Pool	SW-02	0.041
Seasonal Wetland Pool	SW-03	0.005
Seasonal Wetland Pool	SW-04	0.150
Seasonal Wetland Pool	SW-05	0.014
Seasonal Wetland Pool	SW-06	1.372
Seasonal Wetland Pool	SW-07	0.011
Seasonal Wetland Pool	SW-08	0.033
Seasonal Wetland Pool	SW-10	0.423
Seasonal Wetland Pool	SW-11	0.234
Seasonal Wetland Pool	SW-12	0.014
Seasonal Wetland Pool	SW-13	0.075
Seasonal Wetland Pool	SW-14	0.013
Seasonal Wetland Pool	SW-15	0.088
Seasonal Wetland Pool	SW-16	0.212
Seasonal Wetland Pool	SW-17	0.130
Seasonal Wetland Pool	SW-18	0.008
Seasonal Wetland Pool	SW-19	0.067
Seasonal Wetland Pool	SW-21	0.016
Seasonal Wetland Pool	SW-22	0.010
Seasonal Wetland Pool	SW-23	0.019
Seasonal Wetland Pool	SW-24	0.098
Seasonal Wetland Pool	SW-25	0.086
Seasonal Wetland Pool	SW-26	0.030
Seasonal Wetland Pool	SW-27	0.025
Seasonal Wetland Pool	SW-28	0.012
Seasonal Wetland Pool	SW-29	0.007
Seasonal Wetland Pool	SW-30	0.006
Seasonal Wetland Pool	SW-31	0.003
Seasonal Wetland Pool	SW-32	0.028
Seasonal Wetland Pool	SW-33	0.035
Seasonal Wetland Pool	SW-34	0.001
Seasonal Wetland Pool	SW-35	0.008
Seasonal Wetland Pool	SW-36	0.005
Seasonal Wetland Pool	SW-37	0.007
Seasonal Wetland Pool	SW-38	0.002
<b>SUBTOTAL</b>		<b>3.288</b>
Seasonal Wetland Swale	SW-01	0.980
Seasonal Wetland Swale	SW-09	0.455
Seasonal Wetland Swale	SW-20	0.244
Seasonal Wetland Swale	SW-39	0.118
<b>SUBTOTAL</b>		<b>1.797</b>
Wet Meadow	WM-01	1.687
Irrigation Pond	IP-01	0.358
<b>TOTAL</b>		<b>7.130</b>

OTHER WATERS**		
Wetland Type	ID	Acres
Ditch	D-01	0.057
Ephemeral Drainage	ED-01	0.030
Perennial Stream	PS-1	0.315
<b>TOTAL</b>		<b>0.402</b>

**TOTAL WATERS OF THE U.S.\* 7.532**

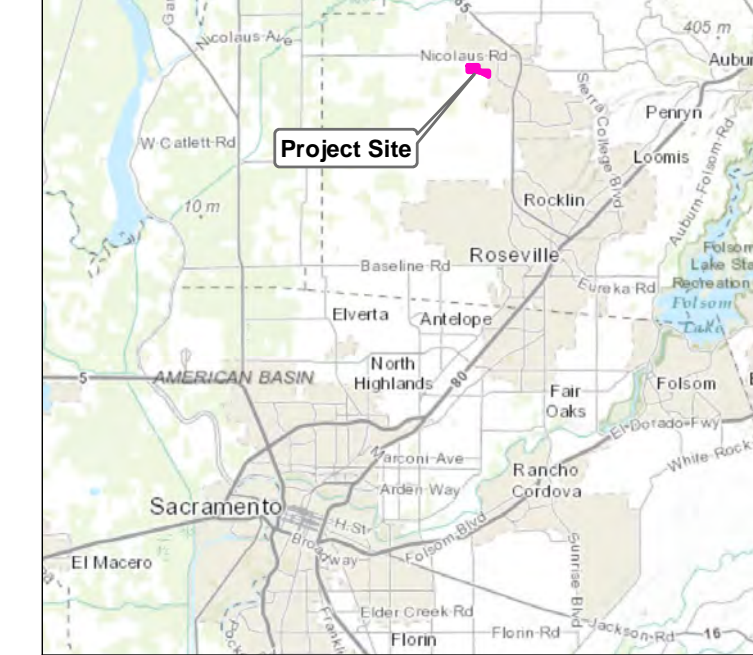
WETLANDS	OTHER FEATURES
Seasonal Wetland Pool	Soil Pit
Seasonal Wetland Swale	Project Site
Wet Meadow	Study Area
Irrigation Pond	Previously Evaluated (Nelson Lane)
<b>OTHER WATERS OF THE U.S.</b>	2007 Verified Delineation Boundary
Ditch	
Ephemeral Drainage	
Perennial Stream	

**NOTES**

Gross Site Acreage: +/- 114 ac.  
 Aerial Photo Source: © April, 2012 Microsoft Corporation and its data suppliers  
 Topographic Data Source: Fraji Design Group. Vertical Datum: NGVD 29

\*This exhibit depicts information and data produced in strict accord with the U.S. Army Corps of Engineers wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and conforms to specifications per the Corps Sacramento District. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

\*\*The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.



**Delineators:**  
 Ammon Risk, Cardno  
 Sam Bacchini, Cardno  
**GIS Specialist:**  
 Melissa Nugent, Cardno

**Preparation Date:**  
 25 October 2012  
**Revision Date:**  
 23 July 2014

Peery Property Wetland Delineation

**Appendix A**

**Wetland Delineation\***

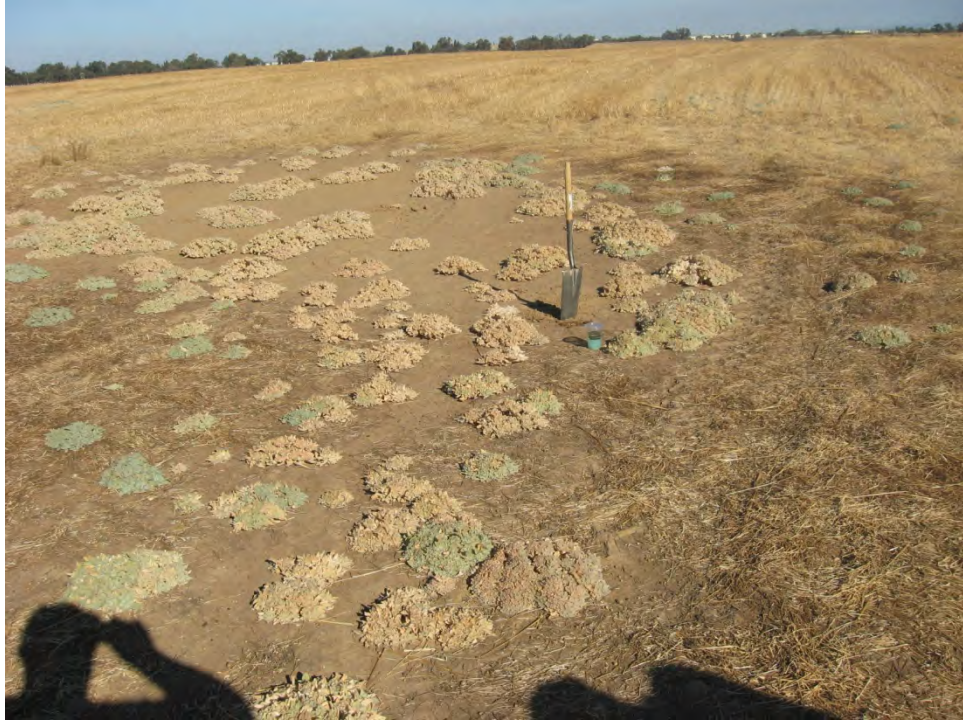
0 50 100 200 300 400 Feet  
 SCALE: 1 inch = 200 feet  
 Projection: Cal. Stateplane, Zone 2  
 Datum: NAD 83

Peery Property

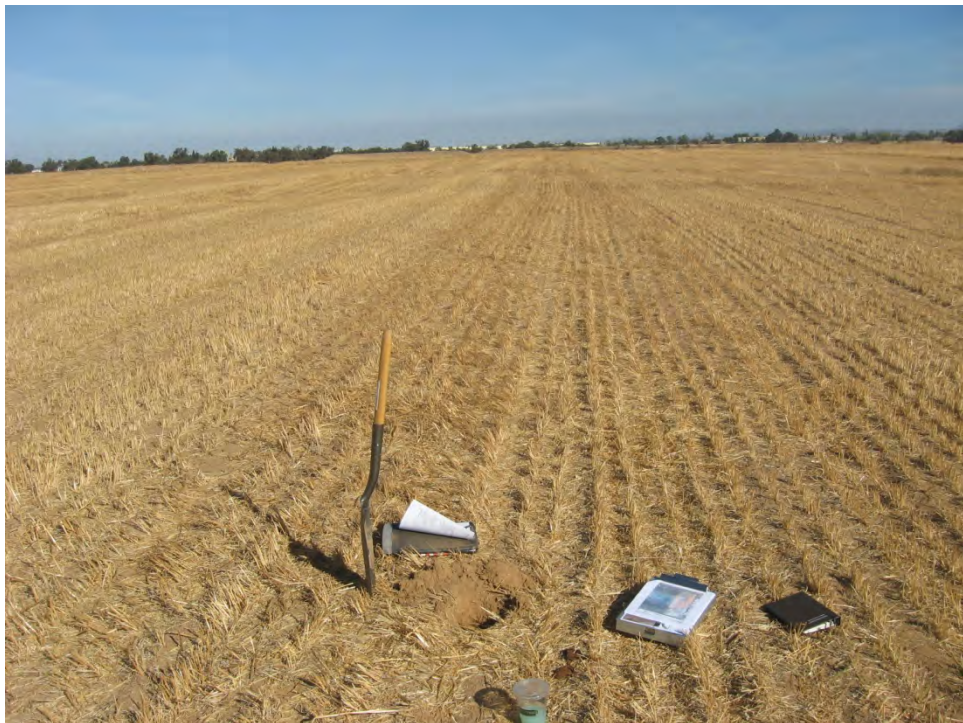
APPENDIX

# B

REPERSENTATIVE SITE  
PHOTOGRAPHS



Typical seasonal wetland in the western portion of the site



Typical upland on the site



View of wet meadow looking south



View of irrigation pond looking south



View of Auburn Ravine from levee looking southeast



View of Auburn Ravine levee looking south

Peery Property

APPENDIX

C

DATA SHEETS

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

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP1  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-1%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: I41, Cometa-Fiddymont complex, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	Is the Sampled Area within a Wetland?      Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/>	No <input type="radio"/>	
Remarks: <u>Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. Soil is made up of red parent material. While wetland hydrology was present at this sampling point, the requisite hydrophytic vegetation and hydric soils were absent.</u>			

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>N/A</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: <u>0</u> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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>12</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>480</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A)      <u>492</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.92</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	x 3 = <u>12</u>	FACU species	x 4 = <u>0</u>	UPL species	x 5 = <u>480</u>	Column Totals:	<u>100</u> (A) <u>492</u> (B)	Prevalence Index = B/A = <u>4.92</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>12</u>																			
FACU species	x 4 = <u>0</u>																			
UPL species	x 5 = <u>480</u>																			
Column Totals:	<u>100</u> (A) <u>492</u> (B)																			
Prevalence Index = B/A = <u>4.92</u>																				
Total Cover: _____ %																				
<b>Sapling/Shrub Stratum</b>																				
1. <u>N/A</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
<b>Herb Stratum</b>																				
1. <u>Avena fatua</u>	<u>90</u>	<u>Yes</u>	<u>Not Listed</u>																	
2. <u>Croton setigerus</u>	<u>5</u>	<u>No</u>	<u>Not Listed</u>																	
3. <u>Lolium multiflorum</u>	<u>4</u>	<u>No</u>	<u>FAC</u>																	
4. <u>Phalaris sp.</u>	<u>1</u>	<u>No</u>	<u>Not Listed</u>																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>100</u> %																				
<b>Woody Vine Stratum</b>																				
1. <u>N/A</u>																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>0</u> %      % Cover of Biotic Crust <u>0</u> %																				
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																				
Remarks: <u>Property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices.</u>																				

**SOIL**

Sampling Point: SP1

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16"	5 YR 3/4	80	5 YR 5/6	5	C	M	Loam	Uniform soil stratum.
			5 YR 3/2	15	C	M		
16" =								
Bottom								

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

**Hydric Soil Present?** Yes  No

Remarks: Red parent material indicator (TF2) not satisfied since red layer extends below 12" beneath soil surface.

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

**Field Observations:**

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

**Wetland Hydrology Present?** Yes  No

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

Google Earth satellite imagery dated 6/13/2011.

Remarks: Sample point taken in a depression visible in satellite imagery.



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

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP2  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-1%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: 141, Cometa-Fiddymont complex, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: <u>Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. Hydrophytic vegetation and wetland hydrology are present at this location. The red parent material of the soil is naturally problematic, but red parent indicator hydric soil indicator (TF2) is present. This feature is depicted on map as SW1.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>N/A</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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><u>85</u> x 3 = <u>255</u></td> </tr> <tr> <td>FACU species</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>15</u> x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A) <u>330</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.30</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	<u>85</u> x 3 = <u>255</u>	FACU species	x 4 = <u>0</u>	UPL species	<u>15</u> x 5 = <u>75</u>	Column Totals:	<u>100</u> (A) <u>330</u> (B)	Prevalence Index = B/A = <u>3.30</u>	
Total % Cover of:	Multiply by:																			
OBL species	x 1 = <u>0</u>																			
FACW species	x 2 = <u>0</u>																			
FAC species	<u>85</u> x 3 = <u>255</u>																			
FACU species	x 4 = <u>0</u>																			
UPL species	<u>15</u> x 5 = <u>75</u>																			
Column Totals:	<u>100</u> (A) <u>330</u> (B)																			
Prevalence Index = B/A = <u>3.30</u>																				
<b>Sapling/Shrub Stratum</b> 1. <u>N/A</u> 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____ %																				
<b>Herb Stratum</b> 1. <u>Lolium multiflorum</u> 85 Yes FAC 2. <u>Avena fatua</u> 13 No Not Listed 3. <u>Taeniatherum caput-medusae</u> 1 No Not Listed 4. <u>Phalaris sp.</u> 1 No Not Listed 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>100%</u>																				
<b>Woody Vine Stratum</b> 1. <u>N/A</u> 2. _____ Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust <u>0</u> %		<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>																

Remarks: Property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices. This sample point was dominated by Lolium multiflorum.

**SOIL**

Sampling Point: SP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	7.5 YR 4/4	90	5 YR 5/8	5	C	M	Sandy loam	Uniform soil stratum.
			5 YR 3/2	5	C	M		
12" =								
Bottom								

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Hardpan layer</u> Depth (inches): <u>12"</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Red Parent Material (TF2) indicator present, as red layer entirely within top 12" of test pit. Hardpan layer at 12" prevented deeper excavation and evaluation.	

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Google Earth satellite imagery dated 6/13/2011.

Remarks: Sample point taken in a depression visible in satellite imagery. Oxidized rhizospheres along living roots visible.

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP3  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 0-1%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: 141, Cometa-Fiddymnt complex, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. The red parent material of the soil is naturally problematic, but red parent indicator hydric soil indicator (TF2) is present. This data point, which was taken at a high point, lacks the requisite hydrophytic vegetation or wetland hydrology.	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>N/A</i>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> % (A/B)
4. _____				
Total Cover: _____ %				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <i>N/A</i>				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 <u>100</u> x 5 = <u>500</u>
				Column Totals: <u>100</u> (A) <u>500</u> (B)
				Prevalence Index = B/A = <u>5.00</u>
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <i>Avena fatua</i>	96	Yes	Not Listed	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <i>Hemizonia congesta</i>	2	No	Not Listed	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup>
3. <i>Croton setigerus</i>	1	No	Not Listed	<input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
4. <i>Phalaris sp.</i>	1	No	Not Listed	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: <u>100</u> %				
Woody Vine Stratum				
1. <i>N/A</i>				
2. _____				
Total Cover: _____ %				
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust <u>0</u> %		
Remarks: Property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices. This sample point was dominated by <i>Avena fatua</i> .				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>

**SOIL**

Sampling Point: SP3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12"	5 YR 3/4	90	5 YR 3/1	5	C	M	Sandy loam	Uniform soil stratum.
			10 YR 5/2	5	D	M		
12" =								
Bottom								

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

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

<b>Restrictive Layer (if present):</b> Type: <u>Hardpan layer</u> Depth (inches): <u>12"</u>	Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Red Parent Material (TF2) indicator present, as red layer entirely within top 12" of test pit. Hardpan layer at 12" prevented deeper excavation and evaluation. Some depletion visible in this sample.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	Secondary Indicators (2 or more required) <input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Google Earth satellite imagery dated 6/13/2011.	

Remarks: Sample point taken at a high point. No wetland hydrology indicators were present at this location.

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

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP4  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-2%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: 182, San Joaquin-Cometa sandy loams, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. The red parent material of the soil is naturally problematic, but red parent indicator hydric soil indicator (TF2) is present. This sample point appeared to be in a wetland, but contains borderline upland vegetation.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>N/A</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: <u>0</u> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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><u>60</u> x 3 = <u>180</u></td> </tr> <tr> <td>FACU species</td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species</td> <td><u>40</u> x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>100</u> (A) <u>380</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>3.80</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species	x 1 = <u>0</u>	FACW species	x 2 = <u>0</u>	FAC species	<u>60</u> x 3 = <u>180</u>	FACU species	x 4 = <u>0</u>	UPL species	<u>40</u> x 5 = <u>200</u>	Column Totals:	<u>100</u> (A) <u>380</u> (B)	Prevalence Index = B/A = <u>3.80</u>	
Total % Cover of:	Multiply by:																			
OBL species	x 1 = <u>0</u>																			
FACW species	x 2 = <u>0</u>																			
FAC species	<u>60</u> x 3 = <u>180</u>																			
FACU species	x 4 = <u>0</u>																			
UPL species	<u>40</u> x 5 = <u>200</u>																			
Column Totals:	<u>100</u> (A) <u>380</u> (B)																			
Prevalence Index = B/A = <u>3.80</u>																				
Sapling/Shrub Stratum Total Cover: _____ %																				
1. <u>N/A</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
Herb Stratum				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																
1. <u>Lolium multiflorum</u>	<u>60</u>	Yes	FAC																	
2. <u>Avena fatua</u>	<u>37</u>	Yes	Not Listed																	
3. <u>Croton setigerus</u>	<u>2</u>	No	Not Listed																	
4. <u>Hemizonia congesta</u>	<u>1</u>	No	Not Listed																	
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>100</u> %																				
Woody Vine Stratum																				
1. <u>N/A</u>																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>0</u> %		% Cover of Biotic Crust <u>0</u> %																		
Remarks: <u>The vegetation in this sample point comes close to, but does not, satisfy the dominance test. The property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices.</u>																				

**SOIL**

Sampling Point: SP4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>		
0-4"	5 YR 3/4	74	5 YR 5/8	25	C	M	Loam
			10 YR 2/2	1	C	M	
4-6"	10 YR 4/3	65	10 YR 2/2	5	C	M	
			10 YR 5/3	30	D	M	
6-8"	5 YR 4/3	74	10 YR 2/1	25	C	M	
			7.5 YR 5/8	1	C	M	
8" =							
Bottom							
<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"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input checked="" type="checkbox"/> Red Parent Material (TF2)	<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)		<input type="checkbox"/> Depleted Dark Surface (A11)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pools (F9)			
							<sup>4</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present.
<b>Restrictive Layer (if present):</b>							
Type: <u>Hardpan layer</u>							
Depth (inches): <u>8"</u>				Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/>			
Remarks: Red Parent Material (TF2) indicator present, as first red layer entirely within top 12" of test pit. Hardpan layer at 8" prevented deeper excavation and evaluation. Distinct stratification with some depletion visible at this sample pit.							

**HYDROLOGY**

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)					
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" 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"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9)			<input type="checkbox"/> Water-Stained Leaves (B9)		
<b>Field Observations:</b>					
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____				
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____				
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Google Earth satellite imagery dated 6/13/2011.					
Remarks: Sample point taken at a depression visible in Google Earth satellite imagery.					

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Scheiber Biological Resources Assessment City/County: Lincoln / Placer Sampling Date: 9/19/2011  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP5  
 Investigator(s): Sam Bacchini & Dan Neal Section, Township, Range: S17, T12N, R6E MDB&M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0%  
 Subregion (LRR): C - Mediterranean California Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD83  
 Soil Map Unit Name: 182, San Joaquin-Cometa sandy loams, 1 to 5 percent slopes NWI classification: Hydric

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Parcel was mowed in connection with normal farming practices, making identification of vegetation difficult. None of the wetland indicators, including the red parent material soil indicator, were present at this sample point.</u>	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
Total Cover: _____%					
<b>Sapling/Shrub Stratum</b>					
1. <u>N/A</u>					
2. _____					
3. _____					
4. _____					
5. _____					
Total Cover: _____%					
<b>Herb Stratum</b>					
1. <u>Avena fatua</u>	75	Yes	Not Listed		
2. <u>Lolium multiflorum</u>	25	Yes	FAC		
3. _____					
4. _____					
5. _____					
6. _____					
7. _____					
8. _____					
Total Cover: <u>100%</u>					
<b>Woody Vine Stratum</b>					
1. <u>N/A</u>					
2. _____					
Total Cover: _____%					
% Bare Ground in Herb Stratum <u>0 %</u>		% Cover of Biotic Crust <u>0 %</u>			

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>25</u>	x 3 = <u>75</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>75</u>	x 5 = <u>375</u>
<b>Column Totals:</b> <u>100</u> (A)	<u>450</u> (B)

Prevalence Index = B/A = 4.50

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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

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

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: The property owner indicated that parcel normally contains dry-farmed wild oat, and was recently mowed pursuant to his normal farming practices.

**SOIL**

Sampling Point: SP5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14"	7.5 YR 3/4	98	7.5 YR 2/1	2	C	M	Loam	Uniform stratum.
14" =								
Bottom								

<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.

Hyric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)			Indicators for Problematic Hyric 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 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):	Hyric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Type: _____	
Depth (inches): _____	

Remarks: The Red Parent Material (TF2) soil indicator is not present, as the red layer extends deeper than the first 12" of the test pit.

**HYDROLOGY**

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

Field Observations:				Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	
Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	_____		
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	_____		
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	_____		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  
 Google Earth satellite imagery dated 6/13/2011.

Remarks: This sample point was taken at a high point adjacent to the TIP4 sample point. No wetland hydrology was present.



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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP6  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FACW species</td> <td align="center">x 2 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FAC species</td> <td align="center">x 3 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>FACU species</td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> <td></td> </tr> <tr> <td>UPL species</td> <td align="center">x 5 =</td> <td align="center"><u>50</u></td> <td></td> </tr> <tr> <td>Column Totals:</td> <td></td> <td align="center"><u>50</u> (A)</td> <td align="center"><u>250</u> (B)</td> </tr> <tr> <td align="center" colspan="2">Prevalence Index = B/A =</td> <td align="center" colspan="2"><u>5.00</u></td> </tr> </table>	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>50</u>		Column Totals:		<u>50</u> (A)	<u>250</u> (B)	Prevalence Index = B/A =		<u>5.00</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>50</u>																																		
Column Totals:		<u>50</u> (A)	<u>250</u> (B)																																	
Prevalence Index = B/A =		<u>5.00</u>																																		
<b>Sapling/Shrub Stratum</b> 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____ %																																				
<b>Herb Stratum</b> 1. <u>Croton setiger</u> 30 Not Listed 2. <u>Avena sp.</u> 20 Not Listed 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>50</u> %																																				
<b>Woody Vine Stratum</b> 1. _____ 2. _____ Total Cover: _____ %																																				
% Bare Ground in Herb Stratum <u>50</u> %		% Cover of Biotic Crust <u>40</u> %		<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																																				
Remarks: <u>Hemizonia fitchii (Not Listed) was present outside the sample point elsewhere in the feature. Oat in the field had been recently mowed.</u>																																				

**SOIL**

Sampling Point: SP6

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 3/2	50	5YR 4/6	50	D	M	Clay Loam	
6	10YR 3/1	50	7.5YR 4/6	50	D	M	Clay	

<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.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Indicators for Problematic Hydric Soils: <sup>4</sup>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Other (Explain in Remarks)
<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):**  
 Type: Clay pan  
 Depth (inches): 6

**Hydric Soil Present?** Yes  No

Remarks:

**HYDROLOGY**

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

**Field Observations:**

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

**Wetland Hydrology Present?** Yes  No

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

Remarks:

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP7  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec 17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymont complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</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)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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>300</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>60</u> (A)     <u>300</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table>	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>300</u>	Column Totals:	<u>60</u> (A) <u>300</u> (B)	Prevalence Index = B/A = <u>5.00</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>300</u>																			
Column Totals:	<u>60</u> (A) <u>300</u> (B)																			
Prevalence Index = B/A = <u>5.00</u>																				
<b>Sapling/Shrub Stratum</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
<b>Herb Stratum</b>																				
1. <u>Avena sp.</u>	<u>60</u>		Not Listed																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>60</u> %																				
<b>Woody Vine Stratum</b>																				
1. _____																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>40</u> %     % Cover of Biotic Crust _____ %																				

**Hydrophytic Vegetation Indicators:**  
 Dominance Test is >50%  
 Prevalence Index is ≤3.0<sup>1</sup>  
 Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Oat in the field had been recently mowed.

**SOIL**

Sampling Point: SP7

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 4/3	95	7.5YR 4/6	5	D	M	Sandy Clay Loam	
6	7.5YR 3/4	100					Clay 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.

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

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

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>6</u>	<b>Hydric Soil Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
---	---

Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks:

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP8  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Hydric Soil Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Wetland Hydrology Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>		

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u>	(A)
2. _____				Total Number of Dominant Species Across All Strata: <u>0</u>	(B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> %	(A/B)
4. _____				<b>Prevalence Index worksheet:</b>	
Total Cover: _____ %				Total % Cover of:	Multiply by:
<b>Sapling/Shrub Stratum</b>				OBL species	x 1 = <u>0</u>
1. _____				FACW species	x 2 = <u>0</u>
2. _____				FAC species	x 3 = <u>0</u>
3. _____				FACU species	x 4 = <u>80</u>
4. _____				UPL species	x 5 = <u>0</u>
5. _____				Column Totals:	<u>20</u> (A) <u>80</u> (B)
Total Cover: _____ %				Prevalence Index = B/A = <u>4.00</u>	
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b>	
1. <u>Centromadia fitchii</u>	<u>20</u>		FACU	<input checked="" type="checkbox"/> Dominance Test is >50%	
2. <u>Avena sp.</u>			Not Listed	<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. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.	
6. _____				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>	
7. _____					
8. _____					
Total Cover: <u>20</u> %					
<b>Woody Vine Stratum</b>					
1. _____					
2. _____					
Total Cover: _____ %					
% Bare Ground in Herb Stratum <u>65</u> %		% Cover of Biotic Crust <u>20</u> %			
Remarks: <u>Oat in the field had been recently mowed.</u>					

**SOIL**

Sampling Point: SP8

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 4/1	20	7.5YR 4/4	80	D	M	Sandy Clay Loam	Red parent material
6	7.5YR 3/2	20	7.5YR 4/6	80	D	M	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>6</u>	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
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Remarks:

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

Remarks:

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP9  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddyment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</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) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <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>400</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>80</u> (A) <u>400</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table>	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>400</u>	Column Totals:	<u>80</u> (A) <u>400</u> (B)	Prevalence Index = B/A = <u>5.00</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>400</u>																			
Column Totals:	<u>80</u> (A) <u>400</u> (B)																			
Prevalence Index = B/A = <u>5.00</u>																				
<b>Sapling/Shrub Stratum</b>																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____ %																				
<b>Herb Stratum</b>																				
1. <u>Avena sp.</u>	<u>80</u>		Not Listed																	
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>80</u> %																				
<b>Woody Vine Stratum</b>																				
1. _____																				
2. _____																				
Total Cover: _____ %																				
% Bare Ground in Herb Stratum <u>20</u> %		% Cover of Biotic Crust _____ %																		
<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																				
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																				
<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>																				
Remarks: <u>Oat in the field had been recently mowed.</u>																				

**SOIL**

Sampling Point: SP9

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

Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	7.5YR 3/4	80	7.5YR 4/6	20	D	M	Sandy Clay Loam	
10	7.5YR 3/4	60	7.5YR 4/6	40	D	M	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:<sup>4</sup></b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>10</u>	Hydric Soil Present?    Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (any one indicator is sufficient) <table border="0"> <tr> <td><input type="checkbox"/> Surface Water (A1)</td> <td><input type="checkbox"/> Salt Crust (B11)</td> </tr> <tr> <td><input type="checkbox"/> High Water Table (A2)</td> <td><input type="checkbox"/> Biotic Crust (B12)</td> </tr> <tr> <td><input type="checkbox"/> Saturation (A3)</td> <td><input type="checkbox"/> Aquatic Invertebrates (B13)</td> </tr> <tr> <td><input type="checkbox"/> Water Marks (B1) (Nonriverine)</td> <td><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</td> <td><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</td> </tr> <tr> <td><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</td> <td><input checked="" type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td><input type="checkbox"/> Surface Soil Cracks (B6)</td> <td><input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)</td> </tr> <tr> <td><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td><input type="checkbox"/> Water-Stained Leaves (B9)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input checked="" 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)		<b>Secondary Indicators (2 or more required)</b> <table border="0"> <tr><td><input type="checkbox"/> Water Marks (B1) (Riverine)</td></tr> <tr><td><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</td></tr> <tr><td><input type="checkbox"/> Drift Deposits (B3) (Riverine)</td></tr> <tr><td><input type="checkbox"/> Drainage Patterns (B10)</td></tr> <tr><td><input type="checkbox"/> Dry-Season Water Table (C2)</td></tr> <tr><td><input type="checkbox"/> Thin Muck Surface (C7)</td></tr> <tr><td><input type="checkbox"/> Crayfish Burrows (C8)</td></tr> <tr><td><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</td></tr> <tr><td><input type="checkbox"/> Shallow Aquitard (D3)</td></tr> <tr><td><input type="checkbox"/> FAC-Neutral Test (D5)</td></tr> </table>	<input type="checkbox"/> Water Marks (B1) (Riverine)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)																												
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)																												
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)																												
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																												
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)																												
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input checked="" 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)																													
<input type="checkbox"/> Water Marks (B1) (Riverine)																													
<input type="checkbox"/> Sediment Deposits (B2) (Riverine)																													
<input type="checkbox"/> Drift Deposits (B3) (Riverine)																													
<input type="checkbox"/> Drainage Patterns (B10)																													
<input type="checkbox"/> Dry-Season Water Table (C2)																													
<input type="checkbox"/> Thin Muck Surface (C7)																													
<input type="checkbox"/> Crayfish Burrows (C8)																													
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)																													
<input type="checkbox"/> Shallow Aquitard (D3)																													
<input type="checkbox"/> FAC-Neutral Test (D5)																													
<b>Field Observations:</b> Surface Water Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present?    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present?    Yes <input checked="" type="radio"/> No <input type="radio"/>																												
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																													
Remarks: Feature is a topographic depression																													



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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP10  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymont complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																
2. _____																				
3. _____																				
4. _____																				
Total Cover: <u>0</u> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <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>40</u></td> </tr> <tr> <td>UPL species</td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>50</u> (A) <u>240</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.80</u></td> </tr> </table>	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>40</u>	UPL species	x 5 = <u>200</u>	Column Totals:	<u>50</u> (A) <u>240</u> (B)	Prevalence Index = B/A = <u>4.80</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>40</u>																			
UPL species	x 5 = <u>200</u>																			
Column Totals:	<u>50</u> (A) <u>240</u> (B)																			
Prevalence Index = B/A = <u>4.80</u>																				
<b>Sapling/Shrub Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
Total Cover: <u>0</u> %																				
<b>Herb Stratum</b>				<b>Hydrophytic Vegetation Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																
1. <u>Avena sp.</u>	30		Not Listed																	
2. <u>Centromadia fitchii</u>	10		FACU																	
3. <u>Croton setiger</u>	10		Not Listed																	
4. _____																				
5. _____																				
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>50</u> %																				
<b>Woody Vine Stratum</b>																				
1. _____																				
2. _____																				
Total Cover: <u>0</u> %																				
% Bare Ground in Herb Stratum <u>50</u> %		% Cover of Biotic Crust _____ %																		
Remarks: <u>Trichostema lanceolatum present outside of the sample point, elsewhere in the feature. Oat in the field had been recently mowed.</u>																				

**SOIL**

Sampling Point: SP10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	50	7.5YR 4/6	50	D	M	Sandy Clay Loam	
8	10YR 3/3	60	7.5YR 4/6	40	D	RC	Clay 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.

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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.

<b>Restrictive Layer (if present):</b> Type: Clay pan Depth (inches): 8	<b>Hydric Soil Present?</b> Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks:	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (2 or more required)</b>	
Primary Indicators (any one indicator is sufficient)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)	
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)	
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" 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 checked="" 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 type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Water Table Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches):	
<b>Wetland Hydrology Present?</b>			Yes <input checked="" type="radio"/> No <input type="radio"/>

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

Remarks: Feature is a topographic depression

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP11  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8862 Long: -121.3308 Datum: NAD 83  
 Soil Map Unit Name: Cometa-Fiddymment complex, 2 to 9 percent slopes NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>The parcel has been used as a used as an agricultural field for growing oats and has been disked. A haul road was constructed through the site and after construction was completed, the seasonal wetlands were recontured.</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. _____				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> % (A/B)																																
2. _____																																				
3. _____																																				
4. _____																																				
Total Cover: _____ %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td><td align="center"><u>0</u></td> <td align="center">x 1 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACW species</td><td align="center"><u>0</u></td> <td align="center">x 2 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FAC species</td><td align="center"><u>0</u></td> <td align="center">x 3 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>FACU species</td><td align="center"><u>0</u></td> <td align="center">x 4 =</td> <td align="center"><u>0</u></td> </tr> <tr> <td>UPL species</td><td align="center"><u>60</u></td> <td align="center">x 5 =</td> <td align="center"><u>300</u></td> </tr> <tr> <td>Column Totals:</td><td align="center"><u>60</u> (A)</td> <td></td><td align="center"><u>300</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>5.00</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	<u>0</u>	x 1 =	<u>0</u>	FACW species	<u>0</u>	x 2 =	<u>0</u>	FAC species	<u>0</u>	x 3 =	<u>0</u>	FACU species	<u>0</u>	x 4 =	<u>0</u>	UPL species	<u>60</u>	x 5 =	<u>300</u>	Column Totals:	<u>60</u> (A)		<u>300</u> (B)	Prevalence Index = B/A = <u>5.00</u>			
Total % Cover of:		Multiply by:																																		
OBL species	<u>0</u>	x 1 =	<u>0</u>																																	
FACW species	<u>0</u>	x 2 =	<u>0</u>																																	
FAC species	<u>0</u>	x 3 =	<u>0</u>																																	
FACU species	<u>0</u>	x 4 =	<u>0</u>																																	
UPL species	<u>60</u>	x 5 =	<u>300</u>																																	
Column Totals:	<u>60</u> (A)		<u>300</u> (B)																																	
Prevalence Index = B/A = <u>5.00</u>																																				
<b>Sapling/Shrub Stratum</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: _____ %																																				
<b>Herb Stratum</b>																																				
1. <u>Avena sp.</u>	<u>60</u>		Not Listed																																	
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>60</u> %																																				
<b>Woody Vine Stratum</b>																																				
1. _____																																				
2. _____																																				
Total Cover: _____ %																																				
% Bare Ground in Herb Stratum <u>40</u> %		% Cover of Biotic Crust _____ %																																		
Remarks: <u>Oat in the field had been recently mowed.</u>																																				

**SOIL**

Sampling Point: SPI1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5YR 3/3	60	7.5YR 4/6	40	D	M	Sandy Clay Loam	
6	7.5YR 2.5/3	90	7.5YR 4/6	10	D	M	Clay 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.

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

<b>Restrictive Layer (if present):</b> Type: <u>Clay pan</u> Depth (inches): <u>8</u>	Hydric Soil Present?    Yes <input checked="" type="radio"/> No <input type="radio"/>
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Remarks: Dark concretions at 6 inches

**HYDROLOGY**

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

Remarks: Feature is a topographic depression

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP12  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8836 Long: -121.3216 Datum: NAD 83  
 Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Basin adjacent to Auburn ravine, separated by berm.	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____%				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____%				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. <i>Polypogonum aviculare</i>	40	Yes	FACW	
2. <i>Typha latifolia</i>	10	Yes	OBL	
3. <i>Cyperus sp.</i>	30	Yes	FACW	
4. <i>Paspalum distichum</i>	10	No	FAC	
5. <i>Cirsium vulgare</i>	10	No	FACU	
6. _____				
7. _____				
8. _____				
Total Cover: <u>100%</u>				
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
Total Cover: _____%				
% Bare Ground in Herb Stratum <u>0 %</u>		% Cover of Biotic Crust <u>0 %</u>		
Remarks: Associate species: <i>Quercus lobata</i> , <i>Juglans hindsii</i> , <i>Rubus armeniacus</i>				

**Dominance Test worksheet:**

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

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

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

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:		
OBL species	<u>10</u>	x 1 =	<u>10</u>	
FACW species	<u>70</u>	x 2 =	<u>140</u>	
FAC species	<u>10</u>	x 3 =	<u>30</u>	
FACU species	<u>10</u>	x 4 =	<u>40</u>	
UPL species	<u>0</u>	x 5 =	<u>0</u>	
Column Totals:	<u>100</u>	(A)	<u>220</u>	(B)
Prevalence Index = B/A =			<u>2.20</u>	

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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

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

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

**Hydrophytic Vegetation Present?** Yes  No

**SOIL**

Sampling Point: SP12

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

Depth (Inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/1	60	7.5YR 4/6	40	RM	M	Silty Clay	

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils:</b>
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" 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 checked="" 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):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

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

**HYDROLOGY**

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

**Field Observations:**

Surface Water Present?	Yes <input type="radio"/> No <input checked="" type="radio"/>	Depth (inches): _____
Water Table Present?	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="radio"/> No <input type="radio"/>	Depth (inches): <u>16</u>

**Wetland Hydrology Present?** Yes  No

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

Remarks: Marshy basin adjacent to Auburn Ravine, separated from creek by a levee. Marshy area and reservoir or stock pond within the basin.

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

Project/Site: Peery Property City/County: Placer County Sampling Date: 10-19-12  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: SP13  
 Investigator(s): Sam Bacchini and Ammon Rice Section, Township, Range: Sec17, T12N, R6E  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1-5%  
 Subregion (LRR): C - Mediterranean California Lat: 38.8836 Long: -121.3216 Datum: NAD 83  
 Soil Map Unit Name: Xerofluvents, frequently flooded NWI classification: None

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: <u>Upland berm adjacent to marsh and Auburn Ravine</u>	

**VEGETATION**

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status																																	
1. <u>Valley Oak</u>	40	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0</u> % (A/B)																																
2. <u>Juglans hindsii</u>	30	Yes	FAC																																	
3. _____																																				
4. _____																																				
Total Cover: <u>70</u> %				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center">0</td> <td align="center">x 1 =</td> <td align="center">0</td> </tr> <tr> <td>FACW species</td> <td align="center">0</td> <td align="center">x 2 =</td> <td align="center">0</td> </tr> <tr> <td>FAC species</td> <td align="center">30</td> <td align="center">x 3 =</td> <td align="center">90</td> </tr> <tr> <td>FACU species</td> <td align="center">40</td> <td align="center">x 4 =</td> <td align="center">160</td> </tr> <tr> <td>UPL species</td> <td align="center">55</td> <td align="center">x 5 =</td> <td align="center">275</td> </tr> <tr> <td>Column Totals:</td> <td align="center">125</td> <td align="center">(A)</td> <td align="center">525 (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>4.20</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	0	x 1 =	0	FACW species	0	x 2 =	0	FAC species	30	x 3 =	90	FACU species	40	x 4 =	160	UPL species	55	x 5 =	275	Column Totals:	125	(A)	525 (B)	Prevalence Index = B/A = <u>4.20</u>			
Total % Cover of:		Multiply by:																																		
OBL species	0	x 1 =	0																																	
FACW species	0	x 2 =	0																																	
FAC species	30	x 3 =	90																																	
FACU species	40	x 4 =	160																																	
UPL species	55	x 5 =	275																																	
Column Totals:	125	(A)	525 (B)																																	
Prevalence Index = B/A = <u>4.20</u>																																				
<b>Sapling/Shrub Stratum</b>																																				
1. _____																																				
2. _____																																				
3. _____																																				
4. _____																																				
5. _____																																				
Total Cover: _____ %																																				
<b>Herb Stratum</b>																																				
1. <u>Avena fatua</u>	25	Yes	Not Listed	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.																																
2. <u>Bromus diandrus</u>	20	Yes	Not Listed																																	
3. <u>Foeniculum vulgare</u>	10	No	Not Listed																																	
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>55</u> %																																				
<b>Woody Vine Stratum</b>																																				
1. _____																																				
2. _____																																				
Total Cover: _____ %																																				
% Bare Ground in Herb Stratum <u>45</u> %		% Cover of Biotic Crust <u>0</u> %																																		
Remarks: _____																																				

**SOIL**

Sampling Point: SP13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture <sup>3</sup>	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
6	7.5YR 4/4	100					Silty 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.

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

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

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

**HYDROLOGY**

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

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="radio"/> No <input checked="" type="radio"/>
Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	

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

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



# Wetland Delineation and Preliminary Jurisdictional Determination

Gill Property

March 6, 2015



## Document Information

Prepared for Gill Property Development, LLC  
Project Name Gill Property  
Project Manager Shannon Karvonen  
Date March 6, 2015

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## Acronyms

FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
NRCS	Natural Resource Conservation Service
OBL	Obligate
OHW	Ordinary High Water
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

# 1 Introduction

---

Cardno conducted a wetland delineation for the Gill Property (Project). The Project is comprised of one parcel (APN 021292001000) within the City of Lincoln, Placer County, California. The Project is located at the approximate latitude 38.8959° north and longitude -121.3381° west (Figure 1), and on the USGS 7.5 minute topographic quadrangle map for Lincoln, California, in Sections 17, Township 12 North, Range 6 East, Mount Diablo Baseline & Meridian.

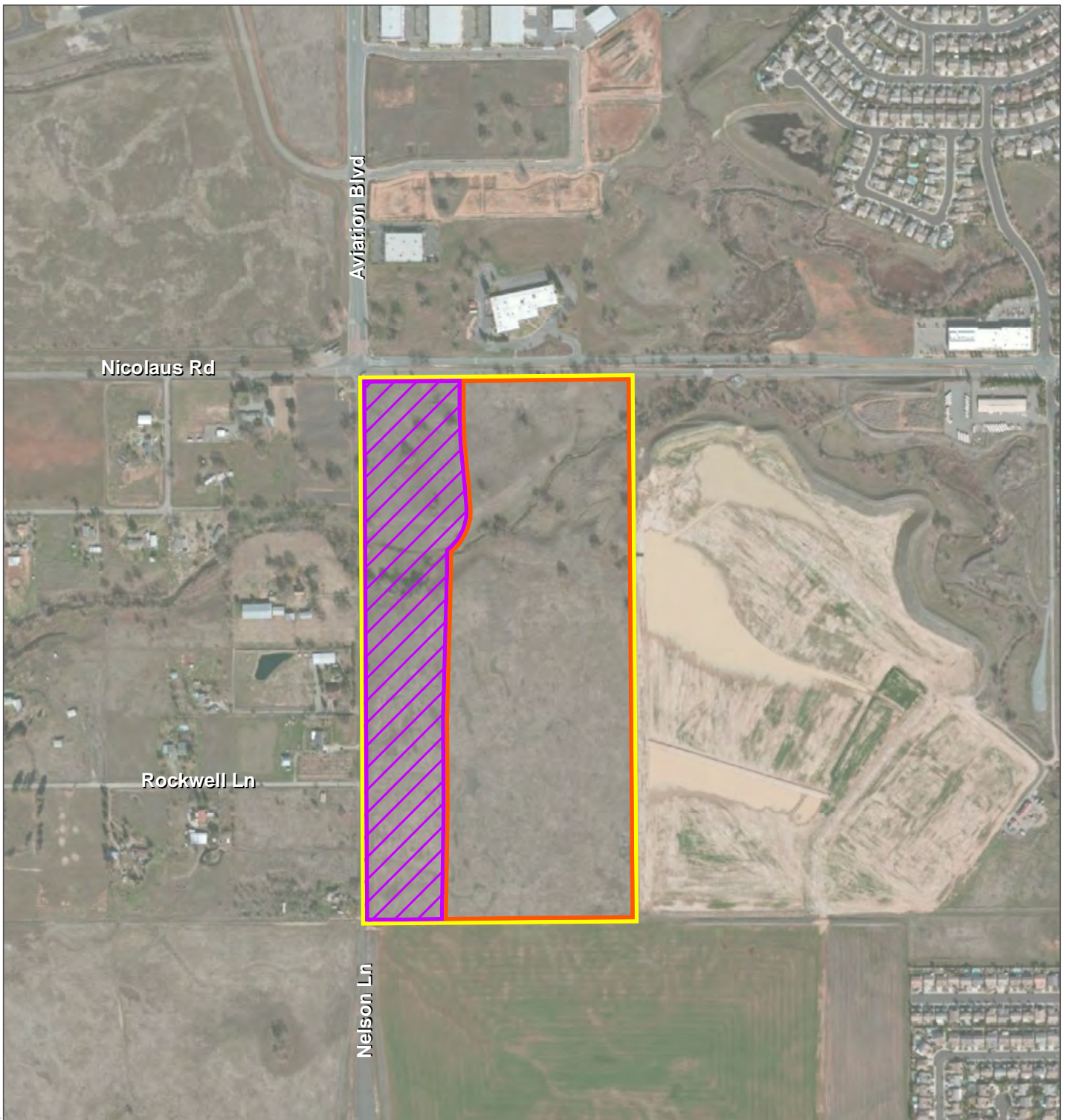
A previous Wetland Delineation and Preliminary Jurisdictional Determination for the Nelson Lane Bridge Replacement Project (Bridge No. 19C0082) was conducted by Cardno in June of 2012 and overlapped the western portion of this Project. This previously delineated area was excluded from this wetland delineation and not part of the Study Area (Study Area), Figure 1 shows the Project and Study Area boundary.

This report presents the results of the field evaluation and provides a preliminary discussion regarding wetlands and other Waters of the United States as defined by the Clean Water Act (CWA) within the Study Area.

This delineation of Waters of the United States contains the following:

- A narrative describing the methodology used to delineate the wetlands and Waters of the United States in the Study Area.
- A narrative description of existing field conditions, hydrology, soils descriptions, and plant communities present in the Study Area.
- Maps, including a USGS map with the Project location, a soils map, and aerial imagery showing the delineated wetlands and Waters of the United States in the Study Area.

The narrative and supporting graphics listed above accompany the wetland delineation map. This map was prepared using horizontal survey control, locations of wetland indicators, mapping conventions and symbols, reference block, scale, property lines (when available), Study Area boundaries, and topography.



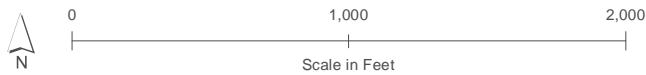
Z:\GIS\Enrich\E314004400\_Gill\Amn\enrich\map\Gill\_SiteandVicinity\_8111\_10.mxd Date: 4/9/2014 4:31/2014



**LEGEND**

- Study Area
- NAPOTS
- Project Boundary

GILL PROPERTY



**Figure 1**  
Site and Vicinity

---

## 2 Regulatory Framework

---

### 2.1 Federal Jurisdiction of Wetlands and Other Waters of the United States

#### 2.1.1 Section 404 of the Clean Water Act

Under Section 404 of the CWA, the U.S. Environmental Protection Agency (EPA) and the USACE have regulatory and permitting authority regarding discharge of dredged or fill material into “navigable Waters of the United States”. The scope of the USACE jurisdiction was further refined in *Rapanos v. U.S.* and *Carabell v. U.S.* Guidance (EPA, 2008). The USACE asserts jurisdiction over the following waters:

- Traditional navigable waters;
- Wetlands adjacent to traditional navigable waters;
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and,
- Wetlands that directly abut such tributaries.

The USACE determines jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent;
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent; and,
- Wetlands adjacent to but that does not directly abut a relatively permanent non-navigable tributary.

A significant nexus exists when it is demonstrated that the tributary and/or wetland along with any other, similarly situated wetlands, has “more than a speculative or insubstantial effect on the chemical, physical and biological integrity of a traditional navigable water.”

The USACE generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow); or
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

### 2.2 State Jurisdiction of Wetlands and Other Waters

#### 2.2.1 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) regulate activities in Waters of the State, under the Dickey Water Pollution Act of 1949 and the Porter-Cologne Act of 1969. Waters of the State include Waters of the United States., and are defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Additionally, the RWQCB regulates discharges of fill and dredged material under Section 401 of the CWA and the Porter-Cologne Act through the State Water Quality Certification Program. The State Water Quality Certification Program regulates proposed federally permitted activity which may result in a discharge to water bodies including discharges of dredged or fill material permitted by the USACE under section 404 of the CWA (e.g., navigational dredging; flood control channelization; levee construction; channel clearing; and fill of wetlands or other water bodies for land development), and

ensures consistency with the Federal CWA, California Environmental Quality Act (CEQA), California Endangered Species Act (ESA), and the Porter-Cologne Act.

The Central Valley RWQCB has jurisdiction over the Study Area. Because Waters of the State are defined more broadly than Waters of the United States., projects that do not require a federal permit may still result in dredge or fill in Waters of the State. Such projects may be regulated by the RWQCB under Waste Discharge Requirements or Certifications of Waste Discharge Requirements.



## 3 Methodology

The Study Area for this delineation encompasses all anticipated construction areas in the vicinity of the Project Area (Appendix A). On April 3, 2014, A Cardno biologist collected field data and delineated potential USACE and RWQCB jurisdictional boundaries in the Study Area. For each sampling site, the site location was recorded and the geographic coordinates (longitude and latitude) were collected. A handheld Trimble Geo 6000 XT (2012 Series) Global Positioning System (GPS) unit capable of sub-meter accuracy was used to digitally record the boundaries of each potential jurisdictional wetland area identified in the Study Area. Vegetative communities were classified pursuant to the California Wildlife Habitat Relationship (CWHR) scheme (Mayer and Laudenslayer 1988). Plant species were identified using the *Jepson Manual of Higher Plants of California* (Baldwin Ed., 2012). Representative photographs of the Study Area are in Appendix B.

GPS data were subsequently downloaded from the GPS unit, differentially corrected using Trimble Pathfinder Office software and converted to GIS shapefiles. These shapefiles were then overlaid on base maps of the Study Area, showing the location of wetlands in relation to topographical features. GPS data were corrected as necessary based on the distance and bearing from known topographic features and facilities, and the acreage of each wetland or other water in the Study Area was calculated.

The recorded OHWM limits were imported into ArcGIS and cross-referenced with mapped topography to delineate wetland and other waters which are subject to the jurisdiction of the USACE.

### 3.1 Waters of the United States

#### 3.1.1 Potential Section 404 Jurisdictional Wetlands

The delineation of Waters of the United States was conducted in accordance with the *1987 U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) (Wetland Delineation Manual), *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE, 2007), and *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region 2.0* (USACE, 2008) (Regional Supplement). A Level 2, routine wetland delineation, was conducted (as defined in the Wetland Delineation Manual) which consisted of an onsite inspection and evaluation of three parameters that identify and delineate the boundaries of wetlands, including (1) the dominance of wetland vegetation; (2) the presence of hydric soils; and (3) hydrologic conditions that result in periods of inundation or saturation on the surface as a result of flooding or ponding.

The *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed, 1988), was consulted as a guideline, however, per USACE regulatory notice dated May 10, 2012 the draft *North American Digital Flora: National Wetland Plant List* (Lichvar, 2013) was used to determine the wetland indicator status of plants identified in the Study Area. The *U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) Web Soil Survey for Placer County, Western Area California* (Soil Survey Staff, 2013) and the *National List of Hydric Soils* (NRCS, 2013) were used to preliminarily identify soil types in the Study Area.

Data on vegetation, soils, and hydrologic characteristics were recorded in the field on data forms for the Arid West Region (Appendix C).

##### 3.1.1.1 **Vegetation**

A visual assessment was made of all plant species located in and around the Study Area. Habitat was classified based on *A Guide to Habitat Classification of California* (Mayer, 1988) and vegetation series were defined based on *A Manual of California Vegetation, Second Edition* (Sawyer, et al., 2009). Plant species were identified using *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin

Ed., 2012) and analyzed to determine the presence or absence of hydrophytic vegetation. The procedure for determining the presence of hydrophytic vegetation followed that identified in the Regional Supplement. Specifically, it involves the following assessment for each sample plot:

1. Apply Indicator 1 (Dominance Test). If the plant community passes the dominance test, then the vegetation is hydrophytic and no further vegetation analysis is required.
  - a. If the plant community fails the dominance test and indicators of hydric soil and/or wetland hydrology are absent, then hydrophytic vegetation is absent unless the site meets the requirements for a problematic wetland vegetation.
  - b. If the plant community fails the dominance test, but indicators of hydric soil and wetland hydrology are both present, proceed to Step 2.
2. Apply Indicator 2 (Prevalence Index). This and the following step assume that at least one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present.
  - a. If the plant community satisfies the prevalence index, then the vegetation is hydrophytic. No further vegetation analysis is required.
  - b. If the plant community fails the prevalence index, proceed to Step 3.
3. Apply Indicator 3 (Morphological Adaptations).
  - a. If the indicator is satisfied, then the vegetation is hydrophytic.
  - b. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless indicators of hydric soil and wetland hydrology are present and the site meets the requirements for a problematic wetland situation.

Wetland indicator species include those listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative (FAC) in the National List of Plant Species that Occur in Wetlands: California (Region 0). Vegetation was described in terms of both species and percent coverage per strata. Sample plots that had vegetation that met the above criteria were identified as hydrophytic. A list of plant species observed within the Study Area and the wetland indicator status is available in Appendix D.

### **3.1.1.2 Soils**

The Soil Survey of Placer County was used to identify potential soils (map units) present in the vicinity of the Study Area (Figure 2). Soils were examined by digging a test pit to a depth of 20 inches, where feasible, to determine if soils exhibited hydric characteristics. In some cases loose soil, groundwater, or a restrictive layer prohibited the digging of 20 inch test pits, and pits were dug to a depth sufficient to identify hydric indicators. The determination of hydric soils was based on soil texture, matrix color, and/or the presence of other hydric soil indicators such as mottles.

The NRCS maintains a list of hydric soil indicators that are known to occur in the United States. Soil samples were collected and described according to the methodology provided in the Regional Supplement. Soil chroma and values were determined by using a standard Munsell soil color chart (Munsell, 2009). Hydric soils were determined to be present if any of the soil samples met one or more of the hydric soil indicators described by the NRCS.

### **3.1.1.3 Hydrology**

The USACE jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period of time sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days in the Arid West Region). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or

secondary indicators such as the FAC-neutral test, or the presence of a shallow aquitard. The Regional Supplement contains 18 primary hydrology indicators and nine secondary hydrology indicators.

The presence of these primary or secondary indicators was used to determine whether each sample point met the wetland hydrology criteria. A minimum of one primary indicator or two secondary indicators are required to meet the wetland hydrology criterion.

### **3.1.2 Potential Section 404 Other Waters**

The Study Area was evaluated for the presence of “other waters,” including lakes, rivers, and perennial or intermittent streams. Potential “other waters” may be identified by the presence of a defined river or streambed, a bank, or evidence of flow, or the absence of emergent vegetation in ponds and lakes. The extent of other waters was mapped to the ordinary high water mark (OHWM) as defined by the USACE Regulatory Guidance Letter No. 05-05 Ordinary High Water Mark Identification (USACE, 2005).

CWA regulations define the OHWM at 33 CFR 328.3(e) as the following:

- The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

The following geomorphic OHWM indicators, as described in the U.S. Army Corps of Engineers (USACE) publication A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States (Lichvar & McColley 2008), were used to delineate the OHWM of other Waters of the United States:

1. **Benches:** Formed by the removal of previously aggraded sediment, and located near the below/at ordinary high water (OHW) boundary and potentially near the at/above boundary.
2. **Drift:** Organic debris larger than twigs. Tends to be oriented in the direction of flow, and often collects behind/in obstructions or is simply deposited by receding flow.
3. **Exposed Root Hairs Below Intact Soil Layer:** Exposed by erosion of sediment. Tend to be located along the above/at OHW boundary or where benches have formed.
4. **Change in Particle Size Distribution:** Transition from coarser to finer sediment common, and likely to occur near the at/below OHW boundary.
5. **Upper Limit of Sand-Sized Particles:** Deposited due to reduced flow competence, and tends to be concentrated near the at/below OHW boundary but may extend to the above OHW boundary.
6. **Valley Flat:** Formed by the deposition of fine-grained sediment during over-bank flow, and located adjacent to low-flow feature(s) and extends to the break in slope (when present) near the at/above OHW boundary.

### **3.1.3 Areas Excluded from Section 404 Jurisdiction**

Some areas that meet the technical criteria for wetlands or other waters may not be jurisdictional under the CWA. Included in this category are (1) some man-induced wetlands, which are areas that have developed at least some characteristics of naturally occurring wetlands due to either intentional or incidental human activities, and (2) “isolated” wetlands, or non-navigable waters which are not connected or adjacent to a navigable Waters of the United States through either a hydrologic or economic connection. Per SWANCC v. United States, examples of man-induced wetlands include, but are not limited to, irrigated wetlands, impoundments (such as stock ponds for livestock), drainage ditches constructed in uplands, wetlands resulting from filling of formerly deep water habitats, dredged material disposal areas, and wetlands resulting from stream channel realignment. Isolated wetlands include

wetland areas which do not have a surface or groundwater connection to, and are not adjacent to navigable Waters of the United States.

### **3.2 Waters of the State**

Although the SWRCB and RWQCB are in the process of establishing a formal wetland delineation protocol and wetland definition for Waters of the State, these agencies have typically accepted the USACE delineation protocol. However, these agencies do regulate “isolated waters” and non-navigable waters under the Porter-Cologne Act. Therefore, the methods described in Section 3.1 (Waters of the United States) were used to determine potential Waters of the State, but it was assumed that all wetlands and waters delineated using the USACE methods fall in the state’s jurisdiction under the Porter-Cologne Act

## 4 Study Area

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The Study Area is approximately 53 acres, and consists of the area surveyed for wetland features and the boundaries of adjacent uplands (Figure 3). The Study Area is generally flat, with elevation ranging from approximately 105 feet above sea level (asl) at Markham Ravine up to 130 feet asl in the upland portions to the north and south. Land uses in the general vicinity consist of undisturbed and undeveloped grassland. Representative photographs of the Study Area are located in Appendix B. Vegetation communities consist primarily of non-native annual grasslands with a few scattered oaks, with riparian vegetation occurring along Markham Ravine.

### 4.1 Vegetation

#### 4.1.1 Non-native Annual Grassland

Typical species observed in this community, include medusa head grass (*Elymus caput-medusae*), wild oat (*Avena fatua*), soft chess (*Bromus hordeaceus*), foxtail barley (*Hordeum murinum ssp. leporinum*), purple needle grass (*Stipa pulchra*), chicory (*Cichorium intybus*), climbing bedstraw (*Galium porrigens*), and annual fireweed (*Epilobium brachycarpum*). Other species observed during the survey included red stemmed filaree (*Erodium cicutarium*), cutleaf geranium (*Geranium dissectum*), Bithynian vetch (*Vicia bithynica*), purple vetch (*Vicia benghalensis*), miniature lupine (*Lupinus bicolor*), fiddleneck (*Amsinckia menziesii*), black mustard (*Brassica nigra*), English plantain (*Plantago lanceolata*), shepherd's purse (*Capsella bursa-pastoris*), field bindweed (*Convolvulus arvensis*), shamrock clover (*Trifolium dubium*), rose clover (*Trifolium hirtum*), and yellow star thistle (*Centaurea solstitialis*).

#### 4.1.2 Riparian

Riparian vegetation in the project area occurs in a narrow band along Markham Ravine. The canopy layer consists primarily of valley oak, with a few interior live oaks, northern California black walnut, and willow (*Salix* sp.) present as well. The understory is fairly sparse, but a few patches of Himalayan blackberry (*Rubus armeniacus*) are present. A narrow herbaceous understory included species such as fiddle dock (*Rumex pulcher*), common rush (*Juncus effusus*), sedges (*Carex* sp.), rough cocklebur (*Xanthium strumarium*), and curly dock (*Rumex crispus*) occurs along the banks in clumps, but otherwise the herbaceous layer consists of grasses and forbs similar to the adjacent grassland. Common cattails (*Typha latifolia*) and floating primrose (*Ludwigia peploides*) are present along the banks of Markham Ravine

### 4.2 Soils

The soil map units and miscellaneous land types in the Study Area and vicinity are described in soil report for the *Placer County, California, Western Part* (USDA Soil Conservation Service, 2013). Soil map units that occur in the Study Area are shown in Figure 2 and include Cometa-Fiddymment complex; Cometa-Ramona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded. Descriptions of each of these soil types are provided below.

#### **Cometa-Fiddymment complex, 1 to 5 percent slopes**

The Cometa-Fiddymment complex series consists of moderately deep, moderately well to well drained soils found on nearly level to rolling low terraces and hills, or on slightly dissected older stream terraces. Cometa-Fiddymment complex soils are moderately well or well drained with slow to medium runoff and very slow permeability. Within Placer County, Cometa-Fiddymment complex soils are listed as a hydric soil within depressions (USDA 2010).

#### **Cometa-Ramona sandy loams, 1 to 5 percent slopes**

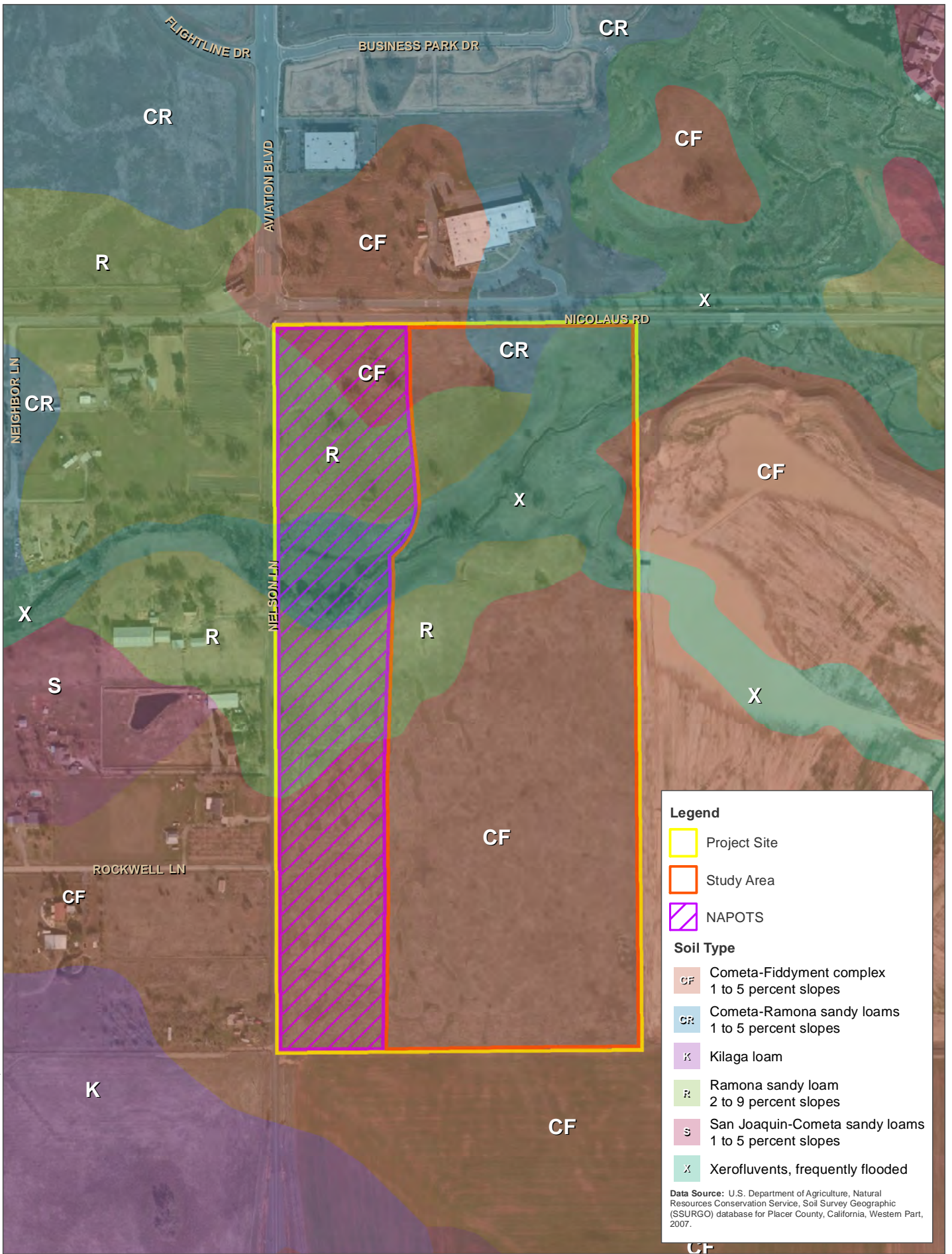
Cometa- Ramona sandy loam series are found on terraces between one to five percent and between 20 and 3,500 feet above mean sea level. They are formed from alluvium derived granite and have a restricted layer over 80 inches down. Cometa- Ramona are considered well- drained and within Placer County is listed as a hydric soil within drainage ways (USDA 2010).

**Ramona sandy loam, 2 to 9 percent slopes**

The Ramona soils are nearly level to moderately steep. They are on terraces and fans at elevations of 250 to 3,500 feet. They formed in alluvium derived mostly from granitic and related rock sources. Ramona sandy loam is well-drained with slow to rapid runoff, and moderately slow permeability. Within Placer County, Ramona sandy loam is listed as a hydric soil within drainage ways (USDA 2010).

**Xerofluvents, frequently flooded**

Xerofluvents are found on flood plains along rivers or streams or on alluvial fans, mostly in areas with Mediterranean climates. Flooding is most common in winter, but some of the soils are flooded in spring due to melting snow in the nearby mountains. Vegetation communities on Xerofluvents typically consist of mixed forest or grass and shrubs. Xerofluvents, frequently flooded soil type is found adjacent to stream channels and consist of narrow bands of somewhat poorly drained recent alluvium. Areas containing this soil type are typically subject to frequent flooding and channelization. Within Placer County, Xerofluvents, frequently flooded soils are listed as a hydric soil within drainage ways (USDA 2010).



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### **4.3 Hydrology**

The Study Area lies within the Lower Bear Watershed, and appears to be a part of a larger historic vernal pool/swale complex that encompassed much of the surrounding region prior to development for urban or agricultural uses. While generally flat, the topography in the Study Area appears to slope from east to west, and towards Markham Ravine. The source of the water for the vernal pools and seasonal wetlands in the area appears to be from precipitation, and runoff from paved surfaces in the roadside ditches. Markham Ravine receives water from upstream sources, as well as overland flow from the adjacent watershed. Water was flowing in Markham Ravine at the time of the survey.



## 5 Results and Discussion

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Cardno biologists Sam Bacchini, and Alexandra Topor delineated wetlands and other waters in the Study Area on April 3, 2014. A Wetland Delineation Map and Report was created from the data gathered and submitted to the USACE on May 29, 2014 for verification. An onsite meeting between Cardno and the USACE was conducted on February 9, 2015. Several additional wetland features were added and other features' boundaries were revised. An updated wetland delineation map was then produced and submitted to the Corps on March 3, 2015.

Wetlands and Other Waters present in the Study Area (see Appendix A, and Figure 3) included, Markham Ravine, an ephemeral swale tributary to Markham Ravine, a seasonal drainage tributary to Markham Ravine, two wetlands in the Markham Ravine flood plain, and seventy seven vernal pools. The banks of the stream were inspected for OHWM indicators using the methods described in Section 2 above, and GPS points were recorded along the banks. Representative photographs of the Study Area are located in Appendix B.

### 5.1 Vernal Pool (4.156 acres)

There are 77 wetland features in the Study Area that were mapped as vernal pools, totaling 4.156 acres. These features are distinct depressions of varying depths and size. A fire occurring in the early summer of 2013 cleared many of the vernal pools of invasive upland grasses. The pools affected by the fire had a high diversity of vernal pool plants such as Great Valley button celery (*Eryngium castrense*), smooth goldfields (*Lasthenia glaberrima*), vernal pool goldfields (*Lasthenia fremontii*), popcornflower (*Plagiobothrys stipitatus*), white meadowfoam (*Limnanthes alba*), hyssop loosestrife (*Lythrum hyssopifolium*), Pillwort (*Pilularia americana*), Owl's clover (*Castilleja campestris*), creeping spike rush (*Eleocharis macrostachya*), vernal pool buttercup (*Ranunculus bonariensis*), and spinyfruit buttercup (*Ranunculus muricatus*). The vernal pools that were unaffected by the 2013 fire were mostly overgrown with invasive upland plant species such as Medusa head, red stemmed filaree, common wild oats, soft chess, and foxtail barley. All vernal pools had distinct boundaries and had generally similar appearance and soil types, most pools were inundated with water.

### 5.2 Seasonal Wetland (0.633 acre)

Three seasonal wetland features totaling 1.48 acres are mapped within the floodplain of Markham Ravine. These features consist of W-01 (0.561 acre), WC-02 (0.072 acre), and FPW-01 (0.847 acre). These features occur in the floodplain of Markham Ravine and result from inundation during high water events, becoming isolated when high water recedes. FPW-01 and W-01 are located on the north side of Markham Ravine while w-02 is located on the south side of Markham Ravine. W-01 is on the northeastern edge of the Study Area, near Nicolaus Road, and extends outside of the study area to the east. The boundaries of these features were determined based on vegetation and flow patterns. The plant species observed in these features included meadow fescue (*Festuca pratensis*), curly dock, common rush, and little rattlesnake grass (*Briza minor*).

### 5.3 Ephemeral Swale (0.013 acre/ 187 linear feet)

A single ephemeral drainage is located in the Study Area near the western portion of Markham Ravine draining from the upland portion of the site, south of Markham Ravine, flowing north/northwest to the Markham Ravine creek channel. The ephemeral swale is approximately 87.1 linear feet and 0.013 acre. This feature does not have a distinct bed or bank, and is vegetated with similar upland grasses and forbs found in the adjacent uplands.

#### 5.4 Seasonal Drainage (0.207 acre/ 927 linear feet)

This drainage feature originates from a culvert on the eastern edge of the property and flows generally northwest to Markham Ravine. This is a natural, meandering feature that originally extended into the adjacent property to the east, prior to the construction of a large detention basin on that property. The culvert was placed to drain overflow water from the detention basin on the neighboring property to Markham Ravine. The drainage feature is approximately 0.207 acre and 927.1 linear feet long with an average width of three feet. The feature has a distinct bed and bank, and contains hydrophytic vegetation such as common rush, sedges, nut sedge (*Cyperus eragrostis*), curly dock, and rough cocklebur.

#### 5.5 Markham Ravine (0.617 acre/ 1,173 linear feet)

Markham Ravine is a perennial stream that flows from east to west, bisecting the site. Approximately 1,173.4 linear feet of this feature pass through the Study Area with an approximate average width of 26 feet and covering 0.616 acre. The vegetation community along Markham Ravine is riparian with a sparse understory, and is described in more detail above in Section 4.1.2.

**Table 1 Wetland and Other Waters in the Study Area**

Wetlands	Acres
VP-01	1.237
VP-02	0.022
VP-03	0.010
VP-04	0.030
VP-05	0.023
VP-06	0.013
VP-07	0.040
VP-08	0.017
VP-09	0.017
VP-10	0.015
VP-11	0.012
VP-12	0.017
VP-13	0.014
VP-14	0.010
VP-15	0.016
VP-16	0.214
VP-17	0.024
VP-18	0.010
VP-19	0.023
VP-20	0.029
VP-21	0.011
VP-22	0.013
VP-23	0.042
VP-24	0.032
VP-25	0.032
VP-26	0.016
VP-27	0.005
VP-28	0.129
VP-29	0.268
VP30	0.030
VP-31	0.048
VP-32	0.025
VP-33	0.064
VP-34	0.025

Wetlands	Acres
VP-35	0.021
VP-36	0.024
VP-37	0.014
VP-38	0.009
VP-39	0.018
VP-40	0.033
VP-41	0.014
VP-42	0.008
VP-43	0.005
VP-44	0.019
VP-45	0.020
VP-46	0.005
VP-47	0.014
VP-48	0.028
VP-49	0.023
VP-50	0.151
VP-51	0.075
VP-52	0.036
VP-53	0.027
VP-54	0.022
VP-55	0.030
VP-56	0.017
VP-57	0.021
VP-58	0.157
VP-59	0.153
VP-60	0.106
VP-61	0.066
VP-62	0.037
VP-63	0.068
VP-64	0.055
VP-65	0.045
VP-66	0.008
VP-67	0.030
VP-68	0.055
VP-69	0.005
VP-70	0.017
VP-71	0.096
VP-72	0.034
VP-73	0.008
VP-74	0.016
VP-75	0.008
VP-76	0.017
VP-77	0.008
Wetland 1	0.561
Wetland 2	0.072
<b>Total Wetlands</b>	<b>5.636 Acres</b>
Other Waters	Acres/Linear Feet
Markham Ravine	0.617acres/ 1173.4feet
Drainage	0.207 acres/ 927.1 feet
Ephemeral Drainage	0.013 acres/ 187.1 feet
<b>Total Other Waters</b>	<b>0.837 Acres/2287.6 Linear Feet</b>

## 6 Findings

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Based on the findings of this delineation, the Study Area contains approximately 5.636-acre wetland and 0.837 acres (2287.6 linear feet) of other waters of the U.S. (Appendix A) that appear to be subject to the Corps' jurisdiction pursuant to the Clean Water Act for the following reasons:

- The vernal pools and seasonal wetlands in the Study Area meet the Corps' three-parameter wetland criteria (hydrophytic vegetation, hydric soils, and wetland hydrology); and
- Markham Ravine is hydrologically linked to a series of canals that convey water to the Sacramento River. Thus, the wetland has a significant nexus to a relatively permanent water that flows directly to a Traditional Navigable Water.

Acres of wetlands and other Waters of the United States in the Study Area are summarized in Table 1 and depicted graphically in Appendix A:

No additional wetlands or waters were identified in the Study Area. All wetlands and waters with the Study Area meet the broader criteria for Water of the State and should be considered RWQCB jurisdiction.

## 7 Supplemental Information

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### 7.1 Directions to the Study Area

From Sacramento, California, take Interstate-80 (I-80) East toward Roseville. Take exit for Highway 65 and head north until you reach Nelson Lane. Turn right on Nelson Lane and the project area is on the left of Nelson Lane. To reach the Study Area walk 250 feet east from Nelson Lane.

### 7.2 Contact Information

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## 8 References

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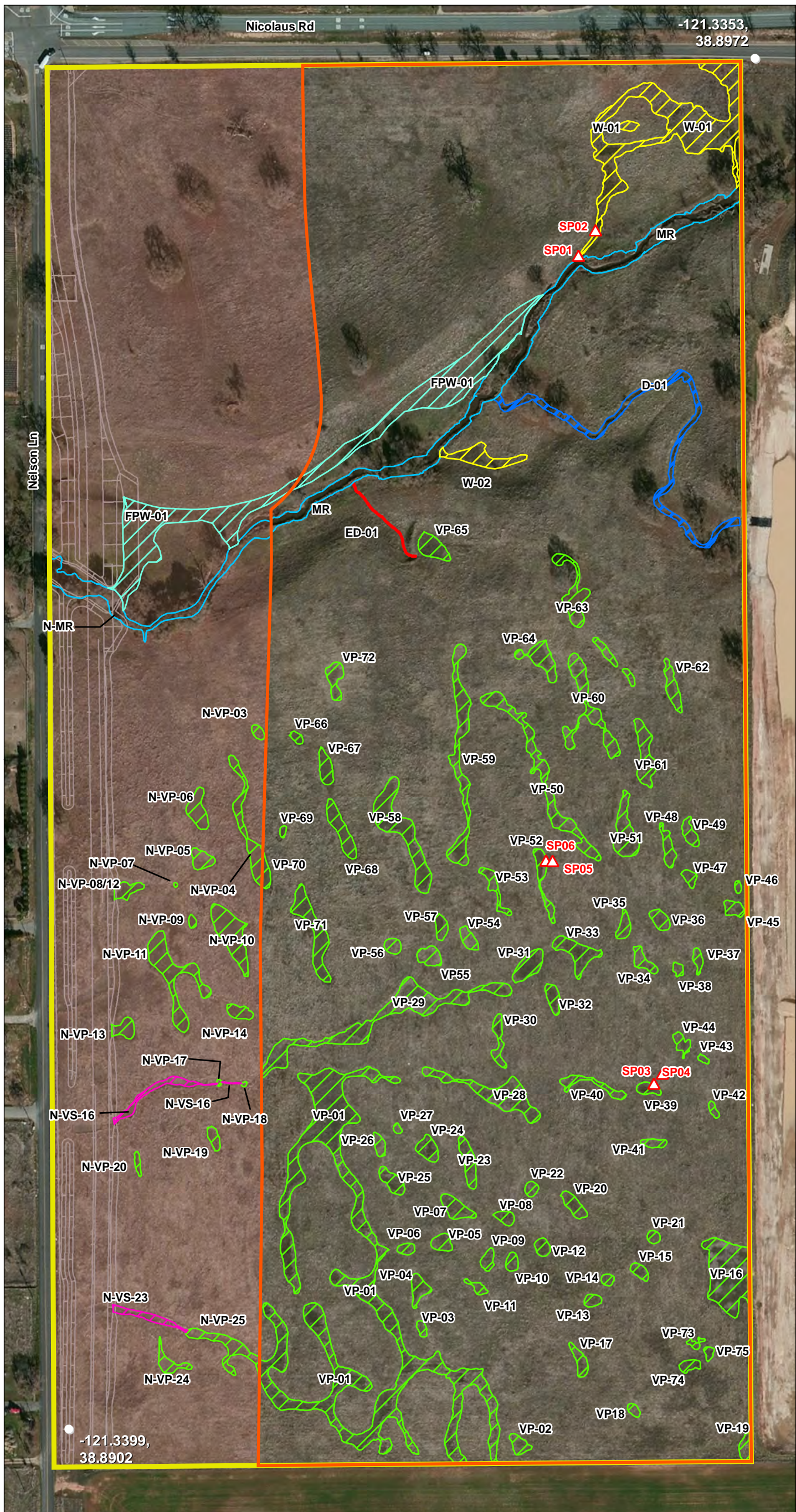
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Gill Property

APPENDIX

A

WETLANDS AND OTHER WATERS  
MAP



- WETLANDS**
- ▭ Floodplain Wetland
  - ▭ Vernal Pool
  - ▭ Vernal Swale
  - ▭ Wetland
- OTHER WATERS OF THE U.S.**
- ▭ Drainage
  - ▭ Ephemeral Drainage
  - ▭ Markham Ravine
- OTHER FEATURES**
- Project Site
  - Study Area
  - ▴ Soil Pit
  - Site Plan (Nelson)
- Previously Evaluated  
(Nelson Lane Bridge Replacement  
SPK SPK-2012-01017)

**Wetland Delineation\*\***

*Note: Nelson features extracted from Nelson Lane Bridge Replacement SPK-2012-01017*

Wetlands**		<i>(continued)</i>	
ID	Acres		
<b>Floodplain Wetland</b>			
<b>Gill</b>			
FPW-01	0.847	VP-59	0.153
<b>Nelson</b>			
(none)	0.000	VP-60	0.106
<b>Vernal Pool</b>			
<b>Gill</b>			
VP-01	1.237	VP-61	0.066
VP-02	0.022	VP-62	0.037
VP-03	0.010	VP-63	0.068
VP-04	0.030	VP-64	0.055
VP-05	0.023	VP-65	0.045
VP-06	0.013	VP-66	0.008
VP-07	0.040	VP-67	0.030
VP-08	0.017	VP-68	0.055
VP-09	0.017	VP-69	0.005
VP-10	0.015	VP-70	0.017
VP-11	0.012	VP-71	0.096
VP-12	0.017	VP-72	0.034
VP-13	0.014	VP-73	0.008
VP-14	0.010	VP-74	0.016
VP-15	0.016	VP-75	0.008
VP-16	0.214	VP-76	0.017
VP-17	0.024	VP-77	0.008
VP-18	0.010	<b>Nelson</b>	
VP-19	0.023	N-VS-16	0.041
VP-20	0.029	N-VS-23	0.033
VP-21	0.011	<b>Wetland</b>	
VP-22	0.013	<b>Gill</b>	
VP-23	0.042	W-01	0.561
VP-24	0.032	W-02	0.072
VP-25	0.032	<b>Nelson</b>	
VP-26	0.016	(none)	0.000
VP-27	0.005	<b>OTHER WATERS**</b>	
VP-28	0.129	<b>ID</b>	
VP-29	0.268	<b>Acres</b>	
VP-30	0.030	<b>Drainage</b>	
VP-31	0.048	<b>Gill</b>	
VP-32	0.025	D-01	0.207
VP-33	0.064	<b>Nelson</b>	
VP-34	0.025	(none)	0.000
VP-35	0.021	<b>Ephemeral Drainage</b>	
VP-36	0.024	<b>Gill</b>	
VP-37	0.014	ED-01	0.013
VP-38	0.009	<b>Nelson</b>	
VP-39	0.018	(none)	0.000
VP-40	0.033	<b>Markham Ravine</b>	
VP-41	0.014	<b>Gill</b>	
VP-42	0.008	MR	0.617
VP-43	0.005	<b>Nelson</b>	
VP-44	0.019	N-MR	0.238
VP-45	0.020	<b>(continued)</b>	
VP-46	0.005		
VP-47	0.014		
VP-48	0.028		
VP-49	0.023		
VP-50	0.151		
VP-51	0.075		
VP-52	0.036		
VP-53	0.027		
VP-54	0.022		
VP-55	0.030		
VP-56	0.017		
VP-57	0.021		
VP-58	0.157		

**Wetland Delineation - Acreage Summary**

	Gill	Nelson	All features
<b>Wetlands</b>			
Floodplain Wetland	0.847	0.000	0.847
Vernal Pool	4.156	0.601	4.757
Vernal Swale	0.000	0.074	0.074
Wetland	0.633	0.000	0.633
<b>Subtotal:</b>	<b>5.636</b>	<b>0.675</b>	<b>6.311</b>
<b>Other Waters</b>			
Drainage	0.207	0.000	0.207
Ephemeral Drainage	0.013	0.000	0.013
Markham Ravine	0.617	0.238	0.855
<b>Subtotal:</b>	<b>0.837</b>	<b>0.238</b>	<b>1.075</b>
<b>TOTAL</b>	<b>6.473</b>	<b>0.913</b>	<b>7.386</b>

**NOTES**

Gross Site Acreage: +/- 79 ac. (Study Area is +/- 53 ac.)  
Aerial Photo Source: © February, 2012 Microsoft Corporation and its data suppliers

\*This exhibit depicts information and data produced in strict accord with the U.S. Army Corps of Engineers wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and conforms to specifications per the Corps Sacramento District. However, wetland boundaries have not been legally surveyed and may be subject to minor adjustments if exact locations are required.

\*\*The acreage value for each feature has been rounded to the nearest 1/1000 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.



**Delineators:**  
Sam Bacchini, Cardno  
Alexandra Topor, Cardno

**Delineation Date:**  
4/3/2014

**Preparation Date:**  
4/20/2014 M.Nugent

**Revision Date:**  
n/a

**Cardno**

**Gill Annexation  
Appendix A  
Wetland Delineation\***

1 inch = 200 feet  
Projection: Cal. Stateplane, Zone 2  
Datum: NAD 83



Gill Property

APPENDIX

# B

REPERSENTATIVE SITE  
PHOTOGRAPHS



Photo 1: Typical nonnative grassland and vernal pool habitat found in Study Area



Photo 2: Typical view of riparian habitat by Markham Ravine



Photo 3: Typical view of Markham Ravine flood plain



Photo 4: Drainage from Markham Ravine into Wetland 1



Photo 5: Typical view of Wetland 1



Photo 6: Wetland 2



Photo 7: Typical view of vernal pool that was unaffected by the 2013 grass fire



Photo 8: Typical view of vernal pool that was affected by the 2013 grass fire



Photo 9: Drainage, near Markham Ravine outlet



Photo 10: Ephemeral Drainage, near Markham Ravine inlet

Gill Property

APPENDIX

C

DATA SHEETS



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP01  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	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: <b>Currently in a drought year, however, vegetation and hydrology were not problematic.</b>					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test Worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of :</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>7</u></td> <td>x3 = <u>21</u></td> </tr> <tr> <td>FACU species <u>7</u></td> <td>x4 = <u>28</u></td> </tr> <tr> <td>UPL species <u>79</u></td> <td>x5 = <u>395</u></td> </tr> <tr> <td>Column Totals: <u>93</u> (A)</td> <td><u>435</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.68</u></td> </tr> </table>	<u>Total % Cover of :</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>7</u>	x3 = <u>21</u>	FACU species <u>7</u>	x4 = <u>28</u>	UPL species <u>79</u>	x5 = <u>395</u>	Column Totals: <u>93</u> (A)	<u>435</u> (B)	Prevalence Index = B/A = <u>4.68</u>	
<u>Total % Cover of :</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>7</u>	x3 = <u>21</u>																			
FACU species <u>7</u>	x4 = <u>28</u>																			
UPL species <u>79</u>	x5 = <u>395</u>																			
Column Totals: <u>93</u> (A)	<u>435</u> (B)																			
Prevalence Index = B/A = <u>4.68</u>																				
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Herb Stratum (Plot size: 1M2)</b>																				
1. <u>Elymus caput-medusae</u>	<u>58</u>	<u>yes</u>	<u>UPL</u>																	
2. <u>Bromus hordeaceus</u>	<u>7</u>	<u>no</u>	<u>FACU</u>																	
3. <u>Rumex crispus</u>	<u>7</u>	<u>no</u>	<u>FAC</u>																	
4. <u>Galium porrigens</u>	<u>7</u>	<u>no</u>	<u>UPL</u>																	
5. <u>Erodium cicutarium</u>	<u>7</u>	<u>no</u>	<u>UPL</u>																	
6. <u>Geranium dissectum</u>	<u>7</u>	<u>no</u>	<u>UPL</u>																	
7. <u>Astragalus sp.</u>	<u>7</u>	<u>no</u>	<u>-</u>																	
8. _____	_____	_____	_____																	
50% = _____, 20% = _____	<u>100</u>	= Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____																			

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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

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

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Vegetation dominated by upland plant species

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5yr 3/3	100	_____	_____	_____	_____	sandy loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

**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>3</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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: n/a  
 Depth (Inches): \_\_\_\_\_

**Hydric Soils Present?** Yes  No

Remarks: Hydric soils not observed

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1)                          | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b>        |
| <input type="checkbox"/> High Water Table (A2)                       | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b>  |
| <input type="checkbox"/> Saturation (A3)                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input 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"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Surface Soil Cracks (B6)                    | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)   | <input type="checkbox"/> Thin Muck Surface (C7)                        | <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Water-Stained Leaves (B9)                   | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

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

**Wetland Hydrology Present?** Yes  No

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

Remarks: No surface water, water table, saturation or primary hydrology indicators observed  
 US Army Corps of Engineers

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP02  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
California  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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"/>	<b>Is the Sampled Area within a Wetland?</b>	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 checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks: **Currently in a drought year, however, vegetation and hydrology were not problematic.**

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	<u>Total % Cover of :</u>	<u>Multiply by:</u>
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 1M2)				Column Totals: _____ (A)	_____ (B)
1. <u>Festuca pratensis</u>	90	yes	FACU	Prevalence Index = B/A = _____	
2. <u>Rumex crispus</u>	10	no	FAC		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
50% = _____, 20% = _____	100	= Total Cover			
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____			

Remarks: Vegetation dominated by wetland plant species

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5yr 3/1	80	7.5yr 4/4	20	C	M	clay	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

**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)
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- 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>3</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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: n/a  
 Depth (Inches): \_\_\_\_\_

**Hydric Soils Present?** Yes  No

Remarks: Hydric soils not observed

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) <b>(Riverine)</b>
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input 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 checked="" type="checkbox"/> Drift Deposits (B3) <b>(Nonriverine)</b>	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

**Wetland Hydrology Present?** Yes  No

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

Remarks: Surface water, water table, saturation or primary hydrology indicators observed  
 US Army Corps of Engineers

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP03  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	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: <b>Currently in a drought year, however, vegetation and hydrology were not problematic.</b>					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Total % Cover of :</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x3 = <u>60</u></td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species <u>75</u></td> <td>x5 = <u>375</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>435</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.58</u></td> </tr> </table>	Total % Cover of :	Multiply by:	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species <u>20</u>	x3 = <u>60</u>	FACU species _____	x4 = _____	UPL species <u>75</u>	x5 = <u>375</u>	Column Totals: <u>95</u> (A)	<u>435</u> (B)	Prevalence Index = B/A = <u>4.58</u>	
Total % Cover of :	Multiply by:																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species <u>20</u>	x3 = <u>60</u>																			
FACU species _____	x4 = _____																			
UPL species <u>75</u>	x5 = <u>375</u>																			
Column Totals: <u>95</u> (A)	<u>435</u> (B)																			
Prevalence Index = B/A = <u>4.58</u>																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Herb Stratum (Plot size: 1M2)</b>																				
1. <u>Elymus caput-medusae</u>	<u>55</u>	<u>yes</u>	<u>UPL</u>																	
2. <u>Holocarpha virgata</u>	<u>5</u>	<u>no</u>	<u>UPL</u>																	
3. <u>Vulpia bromoides</u>	<u>20</u>	<u>no</u>	<u>FAC</u>																	
4. <u>Erodium cicutarium</u>	<u>10</u>	<u>no</u>	<u>UPL</u>																	
5. <u>Vicia sp.</u>	<u>5</u>	<u>no</u>	<u>:</u>																	
6. <u>Geranium dissectum</u>	<u>5</u>	<u>no</u>	<u>UPL</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
50% = _____, 20% = _____	<u>100</u>	= Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____																		
Remarks: <u>Vegetation dominated by upland plant species</u>																				

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5yr 3/4	100	_____	_____	_____	_____	clay loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<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"/> Redox 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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>n/a</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: Hydric soils not observed

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) ( <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 Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )
	<input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )
	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Surface Water Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	

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

Remarks: No surface water, water table, saturation or primary hydrology indicators observed

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP04  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
California  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b>	Yes <input type="checkbox"/>	No <input checked="" 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: **Currently in a drought year, however, vegetation and hydrology were not problematic.**

### VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <span style="float: right;">1 (A)</span>  Total Number of Dominant Species Across All Strata: <span style="float: right;">3 (B)</span>  Percent of Dominant Species That Are OBL, FACW, or FAC: <span style="float: right;">33 (A/B)</span>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of :</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species <u>10</u></td> <td>x1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>50</u></td> <td>x5 = <u>250</u></td> </tr> <tr> <td>Column Totals: <u>100 (A)</u></td> <td><u>480 (B)</u></td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.8</u></td> </tr> </table>	<u>Total % Cover of :</u>	<u>Multiply by:</u>	OBL species <u>10</u>	x1 = <u>10</u>	FACW species <u>20</u>	x2 = <u>40</u>	FAC species <u>20</u>	x3 = <u>60</u>	FACU species <u>20</u>	x4 = <u>120</u>	UPL species <u>50</u>	x5 = <u>250</u>	Column Totals: <u>100 (A)</u>	<u>480 (B)</u>	Prevalence Index = B/A = <u>4.8</u>	
<u>Total % Cover of :</u>	<u>Multiply by:</u>																			
OBL species <u>10</u>	x1 = <u>10</u>																			
FACW species <u>20</u>	x2 = <u>40</u>																			
FAC species <u>20</u>	x3 = <u>60</u>																			
FACU species <u>20</u>	x4 = <u>120</u>																			
UPL species <u>50</u>	x5 = <u>250</u>																			
Column Totals: <u>100 (A)</u>	<u>480 (B)</u>																			
Prevalence Index = B/A = <u>4.8</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<u>Herb Stratum</u> (Plot size: 1M2)				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Elymus caput-medusae</i></u>	45	yes	UPL																	
2. <u><i>Festuca pratensis</i></u>	20	yes	FACU																	
3. <u><i>Plagiobothrys stipitatus</i></u>	20	yes	FACW																	
4. <u><i>Ranunculus aquatilis</i></u>	10	no	OBL																	
5. <u><i>Trifolium dubium</i></u>	5	no	UPL																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
50% = _____, 20% = _____	100	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____																			

Remarks: Vegetation dominated by upland plant species

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	7.5yr 3/2	90	7.5yr 4/4	10	C	M	clay loam	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

**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>3</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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: hardpan

Depth (Inches): 6

**Hydric Soils Present?**

Yes  No

Remarks: Hydric soils observed

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) <b>(Riverine)</b>
<input 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 checked="" type="checkbox"/> Aquatic Invertebrates (B13)	<input 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 checked="" 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"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

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

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

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

**Wetland Hydrology Present?** Yes  No

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

Remarks: Surface water, water table, saturation or primary hydrology indicators observed  
US Army Corps of Engineers



## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP05  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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"/>	<b>Is the Sampled Area within a Wetland?</b>	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: <b>Currently in a drought year, however, vegetation and hydrology were not problematic.</b>					

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test Worksheet:</b>	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	1 (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	1 (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	100 (A/B)
4. _____	_____	_____	_____		
50% = _____, 20% = _____	_____	= Total Cover			
Sapling/Shrub Stratum (Plot size: _____)				<b>Prevalence Index worksheet:</b>	
1. _____	_____	_____	_____	<u>Total % Cover of :</u>	<u>Multiply by:</u>
2. _____	_____	_____	_____	OBL species _____	x1 = _____
3. _____	_____	_____	_____	FACW species _____	x2 = _____
4. _____	_____	_____	_____	FAC species _____	x3 = _____
5. _____	_____	_____	_____	FACU species _____	x4 = _____
50% = _____, 20% = _____	_____	= Total Cover		UPL species _____	x5 = _____
Herb Stratum (Plot size: 1M2)				Column Totals: _____ (A)	_____ (B)
1. <u>Vulpia bromoides</u>	60	yes	FAC	Prevalence Index = B/A = _____	
2. <u>Erodium cicutarium</u>	15	no	UPL		
3. <u>Briza minor</u>	10	no	FAC		
4. <u>Lupinus bicolor</u>	5	no	UPL		
5. <u>Vicia sp.</u>	6	no	:		
6. <u>Holocarpha virgata</u>	2	no	UPL		
7. <u>Centaurea solstitialis</u>	2	no	UPL		
8. _____	_____	_____	_____		
50% = _____, 20% = _____	100	= Total Cover			
Woody Vine Stratum (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b>	
1. _____	_____	_____	_____	<input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
2. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
50% = _____, 20% = _____	_____	= Total Cover			
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: Vegetation dominated by wetland species

**SOIL**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	7.5yr 3/4	100	_____	_____	_____	_____	clay loam	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)				Indicators for Problematic Hydric Soils <sup>3</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 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"/>	Redox 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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>n/a</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: No hydric soils observed

**HYDROLOGY**

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

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

Remarks: No surface water, water table, saturation or primary hydrology indicators observed

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Gill Annexation City/County: Lincoln/Placer Sampling Date: 04/03/14  
 Applicant/Owner: Genesis Engineering State: CA Sampling Point: SP06  
 Investigator(s): Sam Bacchini Section, Township, Range: Section 17, Township 12N, Range 6E  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR): C Lat: 38.896364° Long: -121.389688° Datum: NAD83  
 Soil Map Unit Name: Cometa-Fiddymnt complex; Cometa-Romona sandy loams, 1 to 5 percent slope; Ramona sandy loam, 2 to 9 percent slope; and Xerofluvents, frequently flooded NWI classification: N/A

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"/>	<b>Is the Sampled Area within a Wetland?</b>	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: **Currently in a drought year, however, vegetation and hydrology were not problematic.**

### VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of :</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of :</u>	<u>Multiply by:</u>	OBL species _____	x1 = _____	FACW species _____	x2 = _____	FAC species _____	x3 = _____	FACU species _____	x4 = _____	UPL species _____	x5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
<u>Total % Cover of :</u>	<u>Multiply by:</u>																			
OBL species _____	x1 = _____																			
FACW species _____	x2 = _____																			
FAC species _____	x3 = _____																			
FACU species _____	x4 = _____																			
UPL species _____	x5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
<b>Herb Stratum (Plot size: 1M2)</b>																				
1. <u>Plagiobothrys stipitatus</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>Lasthenia glaberrima</u>	<u>20</u>	<u>yes</u>	<u>OBL</u>																	
3. <u>Ranunculus aquatilis</u>	<u>25</u>	<u>yes</u>	<u>OBL</u>																	
4. <u>Eryngium castrense</u>	<u>10</u>	<u>no</u>	<u>OBL</u>																	
5. <u>Lythrum hyssopifolium</u>	<u>10</u>	<u>no</u>	<u>OBL</u>																	
6. <u>Pilularia americana</u>	<u>5</u>	<u>no</u>	<u>OBL</u>																	
7. <u>Erodium cicutarium</u>	<u>5</u>	<u>no</u>	<u>UPL</u>																	
8. _____	_____	_____	_____																	
50% = _____, 20% = _____	<u>100</u>	= Total Cover																		
<b>Woody Vine Stratum (Plot size: _____)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
50% = _____, 20% = _____	_____	= Total Cover																		
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____																			

**Hydrophytic Vegetation Indicators:**

Dominance Test is >50%

Prevalence Index is ≤3.0<sup>1</sup>

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

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

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

**Hydrophytic Vegetation Present?** Yes  No

Remarks: Vegetation dominated by wetland species

**SOIL**

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	7.5yr 3/2	80	7.5yr 4/4	20	C	M	clay	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

<b>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<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 checked="" 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"/> Redox 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>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: <u>n/a</u> Depth (Inches): _____	<b>Hydric Soils Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Hydric soils observed

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input checked="" type="checkbox"/> Surface Water (A1)	<input 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"/> High Water Table (A2)	<input checked="" type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> )
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )
<input checked="" type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )	<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"/> Sediment Deposits (B2) ( <b>Nonriverine</b> )	<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"/> Drift Deposits (B3) ( <b>Nonriverine</b> )	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Water-Stained Leaves (B9)	<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): _____ Water Table Present?      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe)    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Surface water, water table, saturation or primary hydrology indicators observed

Gill Property

APPENDIX

# D

PLANT SPECIES OBSERVED WITHIN  
STUDY AREA

Family	Scientific Name	Common Name	Wetland Indicator
Apiaceae	<i>Eryngium castrense</i>	Great Valley button celery	OBL
Asteraceae	<i>Agoseris</i> sp.	Chicory species	
Asteraceae	<i>Centaurea solstitialis</i>	Yellow star thistle	UPL
Asteraceae	<i>Lasthenia glaberrima</i>	Smooth goldfields	OBL
Asteraceae	<i>Leontodon saxatilis</i>	Hawkbit	FACU
Asteraceae	<i>Xanthium strumarium</i>	Cocklebur	FAC
Boraginaceae	<i>Amsinckia menziesii</i>	Fiddleneck	UPL
Boraginaceae	<i>Plagiobothrys stipitatus</i>	Popcornflower	FACW
Brassicaceae	<i>Brassica nigra</i>	Black mustard	UPL
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's purse	UPL
Caryophyllaceae	<i>Cerastium fontanum</i>	Mouse ear chickweed	FACU
Caryophyllaceae	<i>Spergula arvensis</i>	Corn spurry	UPL
Cyperaceae	<i>Eleocharis macrostachya</i>	Creeping spike rush	UPL
Fabaceae	<i>Astragalus</i> sp.		
Fabaceae	<i>Lupinus bicolor</i>	Miniature lupine	UPL
Fabaceae	<i>Trifolium dubium</i>	Shamrock clover	UPL
Fabaceae	<i>Trifolium hirtum</i>	Rose clover	UPL
Fabaceae	<i>Vicia benghalensis</i>	Purple vetch	UPL
Fabaceae	<i>Vicia bithynica</i>	Bithynian vetch	UPL
Fagaceae	<i>Quercus lobata</i>	Valley oak	FACU
Fagaceae	<i>Quercus wislizenii</i>	Interior live oak	UPL
Geraniaceae	<i>Erodium cicutarium</i>	Coastal Heron's bill	UPL
Geraniaceae	<i>Geranium dissectum</i>	Cranebill	UPL
Juncaceae	<i>Juncus effusus</i>	Bog rush	FACW
Juncaceae	<i>Juncus xiphioides</i>	Iris leaved rush	OBL
Limnanthaceae	<i>Limnantes alba</i>	White meadowfoam	FACW
Lythraceae	<i>Lythrum hyssopifolium</i>	Hyssop loosestrife	OBL
Marsileaceae	<i>Pilularia americana</i>	Pillwort	OBL
Montiaceae	<i>Calandrinia ciliata</i>	Red maids	FACU
Onagraceae	<i>Epilobium brachycarpum</i>	Annual fireweed	UPL
Onagraceae	<i>Ludwigia peploides</i>	Floating primrose	OBL
Orobanchaceae	<i>Castilleja campestris</i>	Owl's clover	FACW
Plantaginaceae	<i>Callitriche heterophylla</i>	Water startwort	OBL
Plantaginaceae	<i>Plantago erecta</i>	English plantain	UPL
Poaceae	<i>Avena fatua</i>	Common wild oats	UPL
Poaceae	<i>Briza minor</i>	Little rattlesnake grass	FAC
Poaceae	<i>Bromus hordeaceus</i>	Soft chess	FACU
Poaceae	<i>Elymus caput-medusae</i>	Medusa head	UPL
Poaceae	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Foxtail barley	FAC
Poaceae	<i>Stipa pulchra</i>	Purple needle grass	UPL
Poaceae	<i>Vulpia bromoides</i>	Foxtail	FAC
Polygonaceae	<i>Persicaria lapathifolia</i>	Comon knotweed	FACW
Polygonaceae	<i>Rumex crispus</i>	Curly dock	FAC
Polygonaceae	<i>Rumex pulcher</i>	Fiddle dock	FAC
Ranunculaceae	<i>Ranunculus aquatilis</i>	Whitewater crowfoot	OBL
Ranunculaceae	<i>Ranunculus muricatus</i>	Buttercup	FACW
Rubiaceae	<i>Galium porrigens</i>	Climbing bedstraw	UPL

Themidaceae	<i>Triteleia hyacinthina</i>	Wild hyacinthina	FAC
Themidaceae	<i>Triteleia ixioides</i> ssp. <i>ixioides</i>	Golden brodiaea	FAC
Typhaceae	<i>Typha latifolia</i>	Common cattail	OBL