

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: GW-C
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 14 T17S, R13E
 Landform (hillslope, terrace, etc.): low flow channel Local relief (concave, convex, none): concave Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.69 dd Long: -115.62 dd Datum: NAD83
 Soil Map Unit Name: Imperial-Glenbar silty clay loam NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>) 1. <u>Tamarix chilensis</u> Absolute % Cover <u>60</u> Dominant Species? <u>Y</u> Indicator Status <u>FAC</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <div style="text-align: right;"><u>60</u> = Total Cover</div> Sapling/Shrub Stratum (Plot size: <u> </u>) 1. <u>Pluchea sericea</u> Absolute % Cover <u>20</u> Dominant Species? <u>Y</u> Indicator Status <u>FACW</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <div style="text-align: right;"><u>20</u> = Total Cover</div> Herb Stratum (Plot size: <u> </u>) 1. <u> </u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> <div style="text-align: right;"><u> </u> = Total Cover</div> Woody Vine Stratum (Plot size: <u> </u>) 1. <u> </u> 2. <u> </u> <div style="text-align: right;"><u> </u> = Total Cover</div> % Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u> </u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u> Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
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Remarks: Vegetation growing in Greeson Wash low flow channel.

SOIL

Sampling Point: GW-C

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	X	No
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in 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)

- ☐ 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 <u>X</u>	No <u> </u>	Depth (inches):	<u>12</u>
Water Table Present?	Yes <u>X</u>	No <u> </u>	Depth (inches):	<u>0</u>
Saturation Present? (includes capillary fringe)	Yes <u>X</u>	No <u> </u>	Depth (inches):	<u>0</u>

Wetland Hydrology Present? Yes X No

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

Remarks: Greenson Drain/Wash low flow channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: GW-D
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 14 T17S, R13E
 Landform (hillslope, terrace, etc.): IID Drain channel Local relief (concave, convex, none): concave Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.67 dd Long: -115.61 dd Datum: NAD83
 Soil Map Unit Name: Imperial silty clay NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation X, Soil X, or Hydrology significantly disturbed? Yes Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: IID channel vegetation and soils disturbed due to maintenance.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1.					
2.					
3.					
4.					
					= Total Cover
Sapling/Shrub Stratum (Plot size: <u> </u>)					
1.	<i>Pluchea sericia</i>	10	Y	FACW	
2.					
3.					
4.					
5.					
					10 = Total Cover
Herb Stratum (Plot size: <u> </u>)					
1.	<i>Sorghum halepense</i>	30	Y	FACU	
2.	<i>Reseda alba</i>	5	N	FAC	
3.					
4.					
5.					
6.					
7.					
8.					
					35 = Total Cover
Woody Vine Stratum (Plot size: <u> </u>)					
1.					
2.					
					= Total Cover
% Bare Ground in Herb Stratum <u>55</u>		% Cover of Biotic Crust <u> </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 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u> </u>	x 1 = <u> </u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u> </u>	x 5 = <u> </u>
Column Totals: <u>45</u>	(A) <u>155</u> (B)

Prevalence Index = B/A = 3.4

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

Hydrophytic Vegetation Present? Yes X No

Remarks: Vegetation in IID drain is periodically cleared during channel maintenance.

SOIL

Sampling Point: GW-D

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10 YR 3/1						clay loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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 checked="" 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <u>X</u> No _____
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Remarks:

HYDROLOGY

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

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Greeson Drain/Wash low flow channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-1
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Sectin 27 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.73 dd Long: -115.62 dd Datum: NAD83
 Soil Map Unit Name: Indio Loam NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Tamarix chilensis</u>	5	Y	FAC	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>5</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. <u>Pluchea sericea</u>	90	Y	FACW	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>90</u> = Total Cover				
Herb Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust <u> </u>				

Remarks: Vegetation growing in New River floodplain terrace.

SOIL

Sampling Point: NR-1

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?	Yes	No	X
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Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

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

Field Observations:

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

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

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

Wetland Hydrology Present?	Yes	No	X
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Upper floodplain terrace of the New River; above OHWM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/18/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-2
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 27 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.73 dd Long: -115.62 dd Datum: NAD83
 Soil Map Unit Name: Indio-Vint Complex NWI classification: Riverine

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

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

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VEGETATION – Use scientific names of plants.

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Remarks: Vegetation growing in New River floodplain terrace.

SOIL

Sampling Point: NR-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5 YR 3/3						sandy loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<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"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <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"/> 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 _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Upper floodplain terrace of the New River; above OHWM	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/18/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-3
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 27 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.73 dd Long: -115.62 dd Datum: NAD83
 Soil Map Unit Name: Badland NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks: Vegetation growing in New River floodplain terrace.

SOIL

Sampling Point: NR-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5 YR 3/3						sandy loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<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"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
--	--

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <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"/> 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 _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Upper floodplain terrace of the New River; above OHWM	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/18/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-4
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 27 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.73 dd Long: -115.62 dd Datum: NAD83
 Soil Map Unit Name: Fluvaquents, saline NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u>X</u> No <u> </u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Remarks: Lower floodplain terrace of the New River.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>) 1. <u>Tamarix chilensis</u> Absolute % Cover <u>5</u> Dominant Species? <u>Y</u> Indicator Status <u>FAC</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> <div style="text-align: right;"><u>5</u> = Total Cover</div> Sapling/Shrub Stratum (Plot size: <u> </u>) 1. <u>Pluchea sericea</u> Absolute % Cover <u>5</u> Dominant Species? <u>Y</u> Indicator Status <u>FACW</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> <div style="text-align: right;"><u>5</u> = Total Cover</div> Herb Stratum (Plot size: <u> </u>) 1. <u>Phragmites australis</u> Absolute % Cover <u>90</u> Dominant Species? <u>Y</u> Indicator Status <u>FACW</u> 2. <u> </u> 3. <u> </u> 4. <u> </u> 5. <u> </u> 6. <u> </u> 7. <u> </u> 8. <u> </u> <div style="text-align: right;"><u> </u> = Total Cover</div> Woody Vine Stratum (Plot size: <u> </u>) 1. <u> </u> 2. <u> </u> <div style="text-align: right;"><u> </u> = Total Cover</div>	Dominance Test worksheet: 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) Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>	

Remarks: Vegetation growing in New River lower floodplain terrace.

SOIL

Sampling Point: NR-4

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present?	Yes	X	No
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in 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)

- ☐ 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 <u>X</u>	No <u> </u>	Depth (inches): <u> 6 </u>
Water Table Present?	Yes <u>X</u>	No <u> </u>	Depth (inches): <u> 0 </u>
Saturation Present? (includes capillary fringe)	Yes <u>X</u>	No <u> </u>	Depth (inches): <u> 0 </u>

Wetland Hydrology Present? Yes X No

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

Remarks: Lower floodplain terrace of the New River; ACOE adjacent wetland.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-5
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.71 dd Long: -115.60 dd Datum: NAD83
 Soil Map Unit Name: Indio-Vint Complex NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
			= Total Cover	
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Pluchea sericea</u>	<u>90</u>	<u>Y</u>	<u>FACW</u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
			= Total Cover	
Herb Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
			= Total Cover	
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
			= Total Cover	
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust <u> </u>				

Remarks: Vegetation growing in New River upper floodplain terrace.

SOIL

Sampling Point: NR-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	7.5 YR 3/3						sandy loam	

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<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"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
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Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <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"/> 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 _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Upper floodplain terrace of the New River; Above OHWM	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-6
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.71 dd Long: -115.60 dd Datum: NAD83
 Soil Map Unit Name: Vint loamy very fine sand NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Tamarix chilensis</u>	90	Y	FAC	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
		90	= Total Cover	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Pluchea sericea</u>	10	Y	FACW	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
		10	= Total Cover	
Herb Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
		<u> </u>	= Total Cover	
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
		<u> </u>	= Total Cover	
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u> </u>				
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)				
Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u> ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				

Remarks: Vegetation growing in New River upper floodplain terrace.

SOIL

Sampling Point: NR-6

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	No	X
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Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

- _____ 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 Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

- ☐ 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 X Depth (inches): _____

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

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

Wetland Hydrology Present?	Yes	No	X
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Upper floodplain terrace of the New River; Above OHWM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-7
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.72 dd Long: -115.61 dd Datum: NAD*#
 Soil Map Unit Name: Vint Loamy very fine sand NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present? Yes <u> </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u>Tamarix chilensis</u>	20	Y	FAC	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	20	= Total Cover		Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Pluchea sericea</u>	60	Y	FACW	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	60	= Total Cover		
Herb Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
	<u> </u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	
	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>20</u>	% Cover of Biotic Crust <u> </u>			

Remarks: Vegetation growing in New River upper floodplain terrace.

SOIL

Sampling Point: NR-7

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	No	X
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Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

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

Field Observations:

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

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

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

Wetland Hydrology Present?	Yes	No	X
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Upper floodplain terrace of the New River; Above OHWM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-8
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.72 dd Long: -115.61 dd Datum: NAD83
 Soil Map Unit Name: Fluvaquents, saline NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u> </u>
Hydric Soil Present? Yes <u>X</u> No <u> </u>	
Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	
Remarks: Lower floodplain terrace of the New River with secondary channels.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u>Pluchea sericea</u>	<u>20</u>	<u>Y</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% <u> </u> Prevalence Index is ≤3.0 ¹ <u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>20</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Herb Stratum (Plot size: <u> </u>)				
1. <u>Phragmites australis</u>	<u>80</u>	<u>Y</u>	<u>FACW</u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u>80</u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u>	<u> </u>	<u> </u>	<u> </u>	
<u> </u> = Total Cover				Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u>
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u> </u>			

Remarks: Vegetation growing in New River lower floodplain terrace.

SOIL

Sampling Point: NR-8

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

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

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

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	X	No
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

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

<input type="checkbox"/>	Salt Crust (B11)
<input type="checkbox"/>	Biotic Crust (B12)
<input type="checkbox"/>	Aquatic Invertebrates (B13)
<input type="checkbox"/>	Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/>	Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/>	Presence of Reduced Iron (C4)
<input type="checkbox"/>	Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/>	Thin Muck Surface (C7)
<input type="checkbox"/>	Other (Explain in Remarks)

- ☐ 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 <u> </u>	No <u>X</u>	Depth (inches): <u> </u>
Water Table Present?	Yes <u> </u>	No <u>X</u>	Depth (inches): <u> </u>
Saturation Present? (includes capillary fringe)	Yes <u>X</u>	No <u> </u>	Depth (inches): <u> 12 </u>

Wetland Hydrology Present? Yes X No

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

Remarks: Lower floodplain terrace of the New River; secondary channels.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-9
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.72 dd Long: -115.61 dd Datum: NAD83
 Soil Map Unit Name: Vint Loamy very fine sand NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

<p>Tree Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Tamarix chilensis</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Y</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">20</td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p>Sapling/Shrub Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Pluchea sericea</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Y</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Atriplex lentiformis</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Y</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td style="text-align: center;">80</td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p>Herb Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p>Woody Vine Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: center;">= Total Cover</td> </tr> </tbody> </table> <p>% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u> </u></p>		Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Tamarix chilensis</u>	20	Y	FAC	2. <u> </u>				3. <u> </u>				4. <u> </u>					20	= Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u>Pluchea sericea</u>	40	Y	FACW	2. <u>Atriplex lentiformis</u>	40	Y	FAC	3. <u> </u>				4. <u> </u>				5. <u> </u>					80	= Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>				2. <u> </u>				3. <u> </u>				4. <u> </u>				5. <u> </u>				6. <u> </u>				7. <u> </u>				8. <u> </u>						= Total Cover			Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>				2. <u> </u>						= Total Cover		<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <p>Total % Cover of: <u> </u> Multiply by: <u> </u></p> <p>OBL species <u> </u> x 1 = <u> </u></p> <p>FACW species <u> </u> x 2 = <u> </u></p> <p>FAC species <u> </u> x 3 = <u> </u></p> <p>FACU species <u> </u> x 4 = <u> </u></p> <p>UPL species <u> </u> x 5 = <u> </u></p> <p>Column Totals: <u> </u> (A) <u> </u> (B)</p> <p>Prevalence Index = B/A = <u> </u></p> <p>Hydrophytic Vegetation Indicators:</p> <p><u>X</u> Dominance Test is >50%</p> <p><u> </u> Prevalence Index is ≤3.0¹</p> <p><u> </u> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u></p>
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Remarks: Vegetation growing in New River upper floodplain terrace.

SOIL

Sampling Point: NR-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-18	7.5 YR 3/3						sandy loam

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<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"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
--	--

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <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"/> 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 _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Upper floodplain terrace of the New River; Above OHWM	

Project/Site: <u>Wistaria Ranch</u>	City/County: <u>Imperial County</u>	Sampling Date: <u>09/19/12</u>
Applicant/Owner: <u>Tenaska</u>	State: <u>CA</u>	Sampling Point: <u>NR-10</u>
Investigator(s): <u>G. Scheid</u>	Section, Township, Range: <u>Heber Quad: Section 35 T16S, R13E</u>	
Landform (hillslope, terrace, etc.): <u>floodplain terrace</u>	Local relief (concave, convex, none): <u>none</u>	Slope (%): <u>0-1%</u>
Subregion (LRR): <u>LRR-C</u>	Lat: <u>32.72 dd</u>	Long: <u>-115.61 dd</u>
		Datum: <u>NAD83</u>
Soil Map Unit Name: <u>Indio-Vint Complex</u>		NWI classification: <u>Riverine</u>

Are Vegetation, Soil, or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present? Yes <u> X </u> No <u> </u> Hydric Soil Present? Yes <u> X </u> No <u> </u> Wetland Hydrology Present? Yes <u> X </u> No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u> X <u> </u> No <u> </u>
Remarks: Lower floodplain terrace of the New River adjacnet to Lyons Road.		

Tree Stratum (Plot size: _____)		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Tamarix chilensis</i>	90	Y	FAC
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		90	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				
1.	<i>Pluchea sericea</i>	10	Y	FACW
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
		10	= Total Cover	
Herb Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
		_____	= Total Cover	
Woody Vine Stratum (Plot size: _____)				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
		_____	= Total Cover	
% Bare Ground in Herb Stratum _____ 0		% Cover of Biotic Crust _____		

Remarks: Vegetation growing in New River lower floodplain terrace.

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ 100 _____ (A/B)

Prevalence Index worksheet:

Total % Cover of: _____ Multiply by: _____

OBL species _____ x 1 = _____

FACW species _____ x 2 = _____

FAC species _____ x 3 = _____

FACU species _____ x 4 = _____

UPL species _____ x 5 = _____

Column Totals: _____ (A) _____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☐ Prevalence Index is $\leq 3.0^1$

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

☐ Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: NR-10

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

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.

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

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input 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) | | |
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problem area

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present?	Yes	X	No
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Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

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

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input checked="" type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in 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 <u> </u>	No <u>X</u>	Depth (inches): <u> </u>
Water Table Present?	Yes <u> </u>	No <u>X</u>	Depth (inches): <u> </u>
Saturation Present? (includes capillary fringe)	Yes <u>X</u>	No <u> </u>	Depth (inches): <u> 12 </u>

Wetland Hydrology Present? Yes X No

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

Remarks: Lower floodplain terrace of the New River receives runoff from Lyons Road.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Wistaria Ranch City/County: Imperial County Sampling Date: 09/19/12
 Applicant/Owner: Tenaska State: CA Sampling Point: NR-11
 Investigator(s): G. Scheid Section, Township, Range: Heber Quad: Section 35 T16S, R13E
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): none Slope (%): 0-1%
 Subregion (LRR): LRR-C Lat: 32.72 dd Long: -115.61 dd Datum: NAD83
 Soil Map Unit Name: Indio-Vint Complex NWI classification: Riverine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (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 <u>X</u> No <u> </u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: Upper floodplain terrace of the New River; CDFG riparian only.	

VEGETATION – Use scientific names of plants.

<p>Tree Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">Tree Stratum</th> <th style="width: 15%;">Absolute % Cover</th> <th style="width: 15%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>3. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>4. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr> <td colspan="2" style="text-align: right;"><u> </u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <p>Sapling/Shrub Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u>Pluchea sericea</u></td><td style="text-align: center;">60</td><td style="text-align: center;">Y</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Atriplex lentiformis</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Y</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>4. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>5. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr> <td colspan="2" style="text-align: right;"><u>90</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <p>Herb Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>3. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>4. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>5. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>6. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>7. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>8. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr> <td colspan="2" style="text-align: right;"><u> </u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <p>Woody Vine Stratum (Plot size: <u> </u>)</p> <table style="width: 100%; border-collapse: collapse;"> <tbody> <tr><td>1. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr><td>2. <u> </u></td><td><u> </u></td><td><u> </u></td><td><u> </u></td></tr> <tr> <td colspan="2" style="text-align: right;"><u> </u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <p>% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u> </u></p>	Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		= Total Cover		1. <u>Pluchea sericea</u>	60	Y	FACW	2. <u>Atriplex lentiformis</u>	30	Y	FAC	3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>90</u>		= Total Cover		1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		= Total Cover		1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>		= Total Cover		<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)</p> <p>Prevalence Index worksheet:</p> <p>Total % Cover of: <u> </u> Multiply by: <u> </u></p> <p>OBL species <u> </u> x 1 = <u> </u></p> <p>FACW species <u> </u> x 2 = <u> </u></p> <p>FAC species <u> </u> x 3 = <u> </u></p> <p>FACU species <u> </u> x 4 = <u> </u></p> <p>UPL species <u> </u> x 5 = <u> </u></p> <p>Column Totals: <u> </u> (A) <u> </u> (B)</p> <p>Prevalence Index = B/A = <u> </u></p> <p>Hydrophytic Vegetation Indicators:</p> <p><u>X</u> Dominance Test is >50%</p> <p><u> </u> Prevalence Index is ≤3.0¹</p> <p><u> </u> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><u> </u> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p>Hydrophytic Vegetation Present? Yes <u>X</u> No <u> </u></p>
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Remarks: Vegetation growing in New River upper floodplain terrace.

SOIL

Sampling Point: NR-11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-18	7.5 YR 3/3						sandy loam

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<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"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<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"/> 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)	

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

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No <u>X</u>
--	--

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply) <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"/> 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 _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Upper floodplain terrace of the New River; Above OHWM	

ATTACHMENT 2
Preliminary Jurisdictional Determination Form

ATTACHMENT 2

PRELIMINARY JURISDICTIONAL DETERMINATION FORM: Imperial Solar Energy Center South Project

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD):

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD: Wistaria Ranch Solar, LLC; 1044 N. 115th Street, Suite 400; Omaha, NE,

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION: The review area contains the proposed Wistaria Ranch Solar Energy Center project which consists of photovoltaic (solar power) facilities and an electrical transmission line corridor. The site of the proposed photovoltaic facilities is located on 3,177 acres of privately owned, agricultural lands, in the unincorporated Mt. Signal area of the County of Imperial, approximately 4.5 miles southwest of the city of El Centro (Figures 1 and 2). The photovoltaic facilities would interconnect to the utility grid at the 230 kilovolt (kV) side of the Imperial Valley Substation via a transmission line that will connect to an existing transmission line to the west that leads to the substation.

(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: California

County/parish/borough: Imperial County

City: N/A

Center coordinates of site (lat/long in degree decimal format): Lat. 32.70 N, Long. -115.62 W.

Universal Transverse Mercator:

Name of nearest waterbody: New River, Greeson Drain

Identify (estimate) amount of waters in the review area:

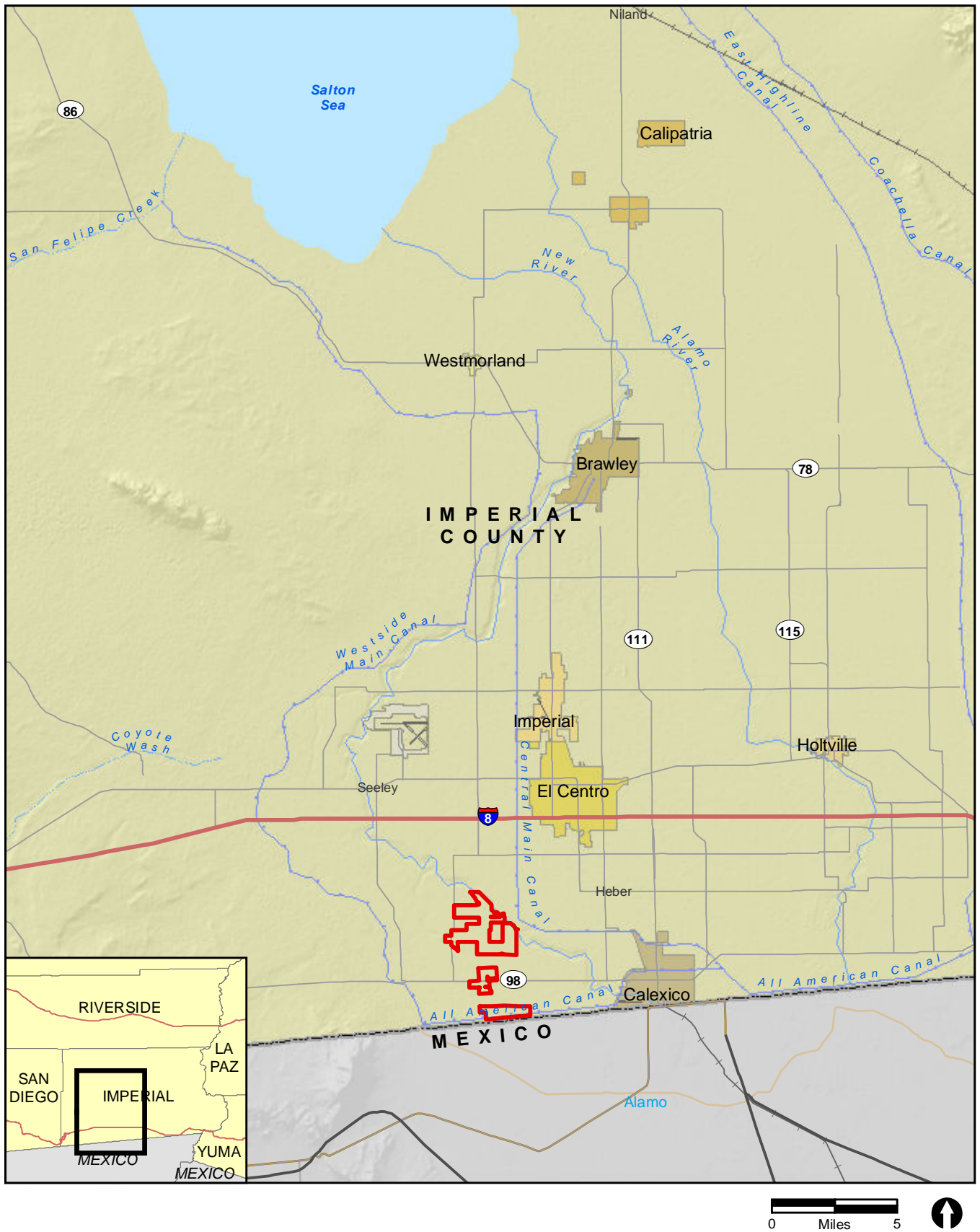
Non-wetland waters: linear feet: 58,265 width (ft) and/or 12.7 acres.

Cowardin Class: Riverine:Streambed

Stream Flow: Ephemeral/Perennial

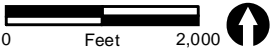
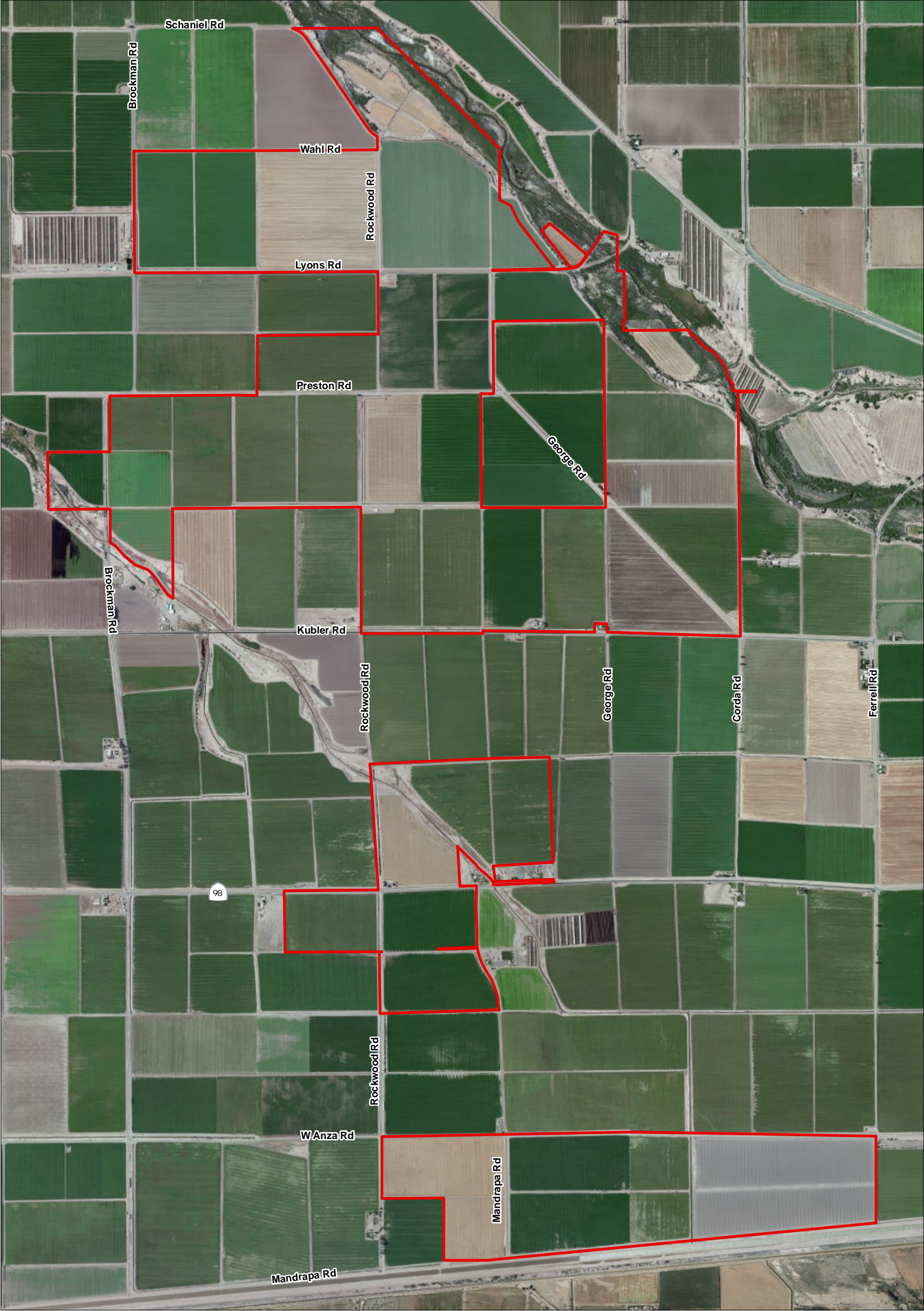
Wetlands: Linear feet: 68,762; 67.5 acres.

Cowardin Class: Riverine



Wistaria Ranch Project Boundary

ATTACHMENT 2 FIGURE 1
Regional Location



 Wistaria Ranch Project Boundary

ATTACHMENT 2 FIGURE 2

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A

Non-Tidal: New River, Greeson Drain

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site,

or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable. This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply) -

checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: see “Jurisdictional Waters Delineation Report for the Wistaria Ranch Solar Project” prepared by RECON Environmental, Inc.; August 2010.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters’ study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: Mt. Signal 7.5-minute, 1976, 1:24000; Heber 7.5 minute, 1957, 1:24000.
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: .
- ☐ National wetlands inventory map(s). Cite name: .
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): 2010.
or ☐ Other (Name & Date): .
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining the
signature is impracticable)

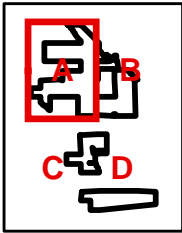
Wistaria Ranch

Site number*	Latitude	Longitude	Cowardin Code**/HGM Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
(1) A.A. Drain No. 12	32.66	-115.58	R4SB/Riverine	1.3 acres (3,944 linear ft.)	Non-section 10 – wetland
(2) A.A. Drain No. 13	32.66	-115.61	R4SB/Riverine	1.8 acres (3,844 linear ft.)	Non-section 10 – wetland
(3) Carpenter Drain No. 1	32.67	-115.65	R4SB/Riverine	0.66 acres (2,846 linear ft.)	Non-section 10 – wetland
(4) Greeson Drain (segment A)	32.70	-115.64	R4SB/Riverine	0.48 acres (1,530 linear ft.)	Non-section 10 – wetland
(5) Greeson Drain (segment B)	32.68	-115.62	R4SB/Riverine	1.2 acres (3,855 linear ft.)	Non-section 10 – wetland
(6) Greeson Drain (segment C)	32.67	-115.61	R4SB/Riverine	0.68 acres (1,563 linear ft.)	Non-section 10 – wetland
(7) Greeson Wash (segment A)	32.70	-115.64	R5/Riverine	2.2 acres (1,385 linear ft.)	Non-section 10 – wetland
(8) Greeson Wash: Drainages A, B, C, D, E, F	A, B, C = 32.69 D, E, F = 32.68	A – F = -115.62	R4SB/Riverine	A = 0.01 acre (238 linear ft.) B = 0.01 acre (290 linear ft.) C = 0.02 acre (433 linear ft.) D = 0.01 acre (195 linear ft.) E = 0.01 acre (176 linear ft.) F = 0.06 acre (865 linear ft.)	Non-section 10 – non-wetland
(9) New River (segment A)	32.73	-115.62	R5/Riverine	31.2 acres (6,570 linear ft.)	Non-section 10 – wetland
(10) New River (segment B)	32.72	-115.60	R5/Riverine	5.1 acres (2,902 linear ft.)	Non-section 10 – wetland
(11) New River (segment C)	32.71	-115.60	R5/Riverine	7.8 acres (4,616 linear ft.)	Non-section 10 – wetland
(12) Wells Drain	32.67	-115.64	R4SB/Riverine	0.02 acre (67 linear ft.)	Non-section 10 – wetland
(13) Wistaria Lateral 5	32.70	-115.61	R4SB/Riverine	2.4 acres (9,271 linear ft.)	Non-section 10 – wetland
(14) Wistaria Canal (segment A)	32.72	-115.62	R4SB/Riverine	3.28 acres (10,632 linear ft.)	Non-section 10 – non-wetland

Site number*	Latitude	Longitude	Cowardin Code**/HGM Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
(15) Wistaria Canal (segment B)	32.70	-115.60	R4SB/Riverine	1.3 acres (5,245 linear ft.)	Non-section 10 – non-wetland
(16) Wistaria Canal (segment C)	32.70	-115.60	R4SB/Riverine	1.6 acres (4,176 linear ft.)	Non-section 10 – non-wetland
(17) Wistaria Drain (segment A)	32.69	-115.62	R4SB/Riverine	2.3 acres (6,321 linear ft.)	Non-section 10 – wetland
(18) Wistaria Drain (segment B)	32.67	-115.62	R4SB/Riverine	1.3 acres (3,763 linear ft.)	Non-section 10 – wetland
(19) Wistaria Drain 5	32.70	-115.62	R4SB/Riverine	1.93 acres (7,973 linear ft.)	Non-section 10 – wetland
(20) Wistaria Drain 7	32.72	-115.63	R4SB/Riverine	1.16 acres (3,816 linear ft.)	Non-section 10 – wetland
(21) Wistaria Lateral 2	32.68	-115.61	R4SB/Riverine	0.4 acres (1,509 linear ft.)	Non-section 10 – wetland
(22) Wistaria Lateral 2 Drain	32.68	-115.61	R4SB/Riverine	0.35 acre (1,239 linear ft.)	Non-section 10 – wetland
(23) Wistaria Lateral 4 Spill	32.69	-115.61	R4SB/Riverine	4.1 acres (8,042 linear ft.)	Non-section 10 – non-wetland
(24) Wistaria Lateral 6	32.71	-115.62	R4SB/Riverine	1.5 acres (5,209 linear ft.)	Non-section 10 – wetland
(25) Wistaria Lateral 1 Spill	32.66	-115.59	R4SB/Riverine	1.9 acres (6,586 linear ft.)	Non-section 10 – non-wetland
(26) Woodbine Lateral 2	32.67	-115.62	R4SB/Riverine	1.85 acres (6,484 linear ft.)	Non-section 10 – wetland
(27) Woodbine Lateral 4	32.67	-115.64	R4SB/Riverine	0.01 acre (62 linear ft.)	Non-section 10 – wetland
(28) Woodbine Spill Canal	32.68	-115.61	R4SB/Riverine	0.84 acre (2,776 linear ft.)	Non-section 10 – non-wetland
(29) Woodbine Spill Lateral 2	32.68	-115.62	R4SB/Riverine	1.45 acres (4,772 linear ft.)	Non-section 10 – non-wetland
(30) Greeson Wash (segment B)	32.70	-115.64	R5/Riverine	4.1 acres (1,600 linear ft.)	Non-section 10 – non-wetland
(31) Greeson Drain (segment D)	32.70	-115.64	R4SB/Riverine	2.3 acres (2,346 linear ft.)	Non-section 10 – wetland

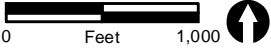
* - Refer to Figures 3a-d showing locations of sites.

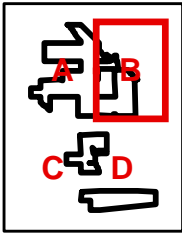
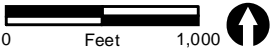
** - Cowardin Code: R4SB – Riverine Intermittent; R5 – Riverine Perennial



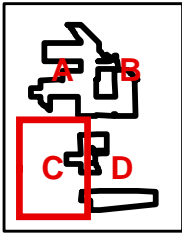
- Wistaria Ranch Project Boundary
- Pre-JD Form Site Location
- New River

- Greeson Wash
- IID Canal
- IID Drain



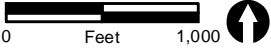


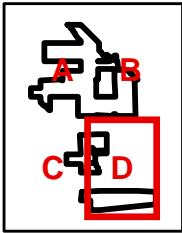
- Wistaria Ranch Project Boundary
- Pre-JD Form Site Location
- New River
- IID Canal
- IID Drain



- Wistaria Ranch Project Boundary
- Pre-JD Form Site Location
- Greeson Wash

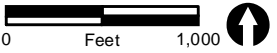
- Greeson Wash Drainage
- IID Canal
- IID Drain





- Wistaria Ranch Project Boundary
- Pre-JD Form Site Location
- Greeson Wash

- Greeson Wash Drainage
- IID Canal
- IID Drain



Appendix B – Burrowing Owl Survey Dates, Personnel, and Weather Conditions

Appendix B
Burrowing Owl Survey Dates, Personnel, and Weather Conditions

Survey Number	Date	Survey Personnel	Time	Weather Conditions
Habitat Assessment	4/4/2012	Rocky Brown, Shelly Dayman	0812–1406	Start: 65°F, wind 1 mph, 20% cover End: 85°F, wind 3 mph, 5% cover
1*	4/10/2012	Rob Conohan	1519–1705	Start: 89°F, wind 7 mph, 0% cover End: 89°F, wind 8-5 mph, 0% cover
1*	4/10/2012	Brennan Mulrooney, Shelly Dayman	1614–1702	Start: 89°F, wind 7 mph, 0% cover End: 89°F, wind 8 mph, 0% cover
1*	4/11/2012	Shelly Dayman	1521–1935	Start: 76°F, wind 11 mph, 30% cover End: 64°F, wind 13 mph, 25% cover
1*	4/11/2012	Brennan Mulrooney	1545–1933	Start: 76°F, wind 11 mph, 30% cover End: 64°F, wind 13 mph, 5% cover
1*	4/11/2012	Rob Conohan	1552–1934	Start: 75°F, wind 11 mph, 30% cover End: 64°F, wind 13 mph, 25% cover
1*	4/12/2012	Brennan Mulrooney	0749–1011	Start: 52°F, wind 14 mph, 5% cover End: 70°F, wind 11 mph, 0% cover
1*	4/12/2012	Shelly Dayman	0750–1012	Start: 52°F, wind 14 mph, 8% cover End: 70°F, wind 11 mph, 0% cover
1*	4/12/2012	Rob Conohan	0753–1012	Start: 58°F, wind 14 mph, 10% cover End: 70°F, wind 11 mph, 0% cover
1*	4/12/2012	Shelly Dayman	1556–1716	Start: 68°F, wind 5 mph, 40% cover End: 73°F, wind 12 mph, 25% cover
1*	4/12/2012	Rob Conohan	1603–1716	Start: 80°F, wind 10 mph, 25% cover End: 73°F, wind 12 mph, 50% cover
1*	4/12/2012	Brennan Mulrooney	1827–1915	Start: 70°F, wind 14-5 mph, 80% cover End: 66°F, wind 13 mph, 80% cover
1*	4/12/2012	Shelly Dayman	1828–1934	Start: 70°F, wind 14-5 mph, 40% cover End: 66°F, wind 13 mph, 70% cover
1*	4/12/2012	Rob Conohan	1829–1927	Start: 70°F, wind 14 mph, 80% cover End: 66°F, wind 13 mph, 90% cover
1*	4/13/2012	Shelly Dayman	0621–0709	Start: 59°F, wind 13-2 mph, 65% cover End: 57°F, wind 7 mph, 10% cover
1*	4/13/2012	Brennan Mulrooney	0637–0712	Start: 57°F, wind 13-2 mph, 60% cover End: 57°F, wind 7 mph, 30% cover
1	4/10/2012	Brennan Mulrooney	0628–1000	Start: 58°F, wind 1 mph, 5% cover End: 78°F, wind 2 mph, 10% cover
1	4/10/2012	Shelly Dayman	0630–1002	Start: 58°F, wind 1 mph, 5% cover End: 78°F, wind 2 mph, 10% cover
1	4/10/2012	Rob Conohan	0630–1002	Start: 58°F, wind 1 mph, 5% cover End: 78°F, wind 2 mph, 10% cover
1	4/10/2012	Brennan Mulrooney, Shelly Dayman	1705–1920	Start: 83°F, wind 8-5 mph, 0% cover End: 73°F, wind 5 mph, 0% cover
1	4/10/2012	Rob Conohan	1707–1921	Start: 89°F, wind 8-5 mph, 0% cover End: 73°F, wind 5 mph, 0% cover
1	4/11/2012	Brennan Mulrooney	0635–0947	Start: 58°F, wind 8 mph, 30% cover End: 62°F, wind 8-5 mph, 80% cover
1	4/11/2012	Shelly Dayman	0638–0946	Start: 58°F, wind 8 mph, 30% cover End: 62°F, wind 8-5 mph, 80% cover

Survey Number	Date	Survey Personnel	Time	Weather Conditions
1	4/11/2012	Rob Conohan	0638–0946	Start: 58°F, wind 8 mph, 30% cover End: 62°F, wind 8-5 mph, 80% cover
1	4/12/2012	Brennan Mulrooney	0620–0748	Start: 58°F, wind 10 mph, 25% cover End: 52°F, wind 14 mph, 5% cover
1	4/12/2012	Shelly Dayman	0623–0749	Start: 58°F, wind 10 mph, 15% cover End: 52°F, wind 14 mph, 8% cover
1	4/12/2012	Rob Conohan	0623–0751	Start: 58°F, wind 10 mph, 20% cover End: 52°F, wind 14 mph, 10% cover
1	4/12/2012	Brennan Mulrooney	1714–1826	Start: 73°F, wind 12 mph, 50% cover End: 70°F, wind 14-5 mph, 80% cover
1	4/12/2012	Rob Conohan	1717–1829	Start: 73°F, wind 12 mph, 50% cover End: 70°F, wind 14 mph, 80% cover
1	4/12/2012	Shelly Dayman	1717–1827	Start: 73°F, wind 12 mph, 25% cover End: 70°F, wind 14-5 mph, 40% cover
1	4/13/2012	Shelly Dayman	0710–1016	Start: 57°F, wind 7 mph, 5% cover End: 68°F, wind 6 mph, 25% cover
1	4/13/2012	Brennan Mulrooney	0712–1000	Start: 57°F, wind 7 mph, 30% cover End: 68°F, wind 6 mph, 75% cover
1	4/13/2012	Rob Conohan	0810–0946	Start: 58°F, wind 14 mph, 75% cover End: 62°F, wind 5 mph, 74% cover
1	4/17/2012	Andrew Fisher	0640–1000	Start: 59.5°F, wind 2 mph, 0% cover End: 82°F, wind 0 mph, 0% cover
1	4/17/2012	Shelly Dayman	0643–1010	Start: 59.2°F, wind 2 mph, 0% cover End: 82°F, wind 1 mph, 0% cover
1	4/17/2012	Rob Conohan	0655–1024	Start: 59.5°F, wind 2 mph, 0% cover End: 82°F, wind 0 mph, 0% cover
1	4/17/2012	Andrew Fisher	1704–1932	Start: 91°F, wind 2 mph, 0% cover End: 83°F, wind 2 mph, 0% cover
1	4/17/2012	Rob Conohan	1717–1941	Start: 91°F, wind 0 mph, 0% cover End: 83°F, wind 0 mph, 0% cover
1	4/17/2012	Shelly Dayman	1719–1938	Start: 91°F, wind 0 mph, 0% cover End: 83°F, wind 2 mph, 2% cover
1	4/18/2012	Shelly Dayman	0612–1041	Start: 53°F, wind 2 mph, 0% cover End: 80°F, wind 1 mph, 0% cover
1	4/18/2012	Andrew Fisher	0615–0959	Start: 61°F, wind 2 mph, 5% cover End: 82°F, wind 3 mph, 5% cover
1	4/18/2012	Rob Conohan	0617–0959	Start: 61°F, wind 0 mph, 10% cover End: 78°F, wind 5 mph, 5% cover
1	4/18/2012	Shelly Dayman	1711–1922	Start: 78°F, wind 3 mph, 60% cover End: 87°F, wind 1 mph, 15% cover
1	4/18/2012	Andrew Fisher	1713–1934	Start: 89°F, wind 4 mph, 90% cover End: 74°F, wind 4 mph, 10% cover
1	4/18/2012	Rob Conohan	1721–1940	Start: 94°F, wind 5 mph, 50% cover End: 74°F, wind 3 mph, 10% cover
2	5/7/2012	Rob Conohan	1751–1948	Start: 91°F, wind 1 mph, 2% cover End: 86°F, wind 0 mph, 10% cover
2	5/7/2012	Robbie Sweet	1755–1948	Start: 91°F, wind 1 mph, 2% cover End: 86°F, wind 0 mph, 10% cover
2	5/7/2012	Shelly Dayman	1755–2008	Start: 91°F, wind 1 mph, 2% cover End: 86°F, wind 2 mph, 5% cover

Survey Number	Date	Survey Personnel	Time	Weather Conditions
2	5/7/2012	Rocky Brown	1757–1954	Start: 91°F, wind 1 mph, 2% cover End: 86°F, wind 0 mph, 10% cover
2	5/8/2012	Robbie Sweet	0554–0946	Start: 66°F, wind 1 mph, 20% cover End: 87°F, wind 6 mph, 2% cover
2	5/8/2012	Shelly Dayman	0558–0947	Start: 66°F, wind 1 mph, 20% cover End: 87°F, wind 6 mph, 2% cover
2	5/8/2012	Rocky Brown	0602–1006	Start: 57°F, wind 0 mph, 15% cover End: 86°F, wind 7 mph, 2% cover
2	5/8/2012	Rob Conohan	0602–1004	Start: 71°F, wind 3 mph, 25% cover End: 87°F, wind 7 mph, 2% cover
2	5/8/2012	Shelly Dayman	1758–1952	Start: 89°F, wind 1 mph, 2% cover End: 79°F, wind 2 mph, 0% cover
2	5/8/2012	Rob Conohan	1801–1947	Start: 93°F, wind 0 mph, 5% cover End: 79°F, wind 2 mph, 0% cover
2	5/8/2012	Robbie Sweet	1801–1950	Start: 89°F, wind 1 mph, 2% cover End: 79°F, wind 2 mph, 0% cover
2	5/8/2012	Rocky Brown	1805–1957	Start: 89°F, wind 1 mph, 2% cover End: 79°F, wind 1 mph, 0% cover
2	5/9/2012	Rob Conohan	0547–0951	Start: 60°F, wind 2 mph, 0% cover End: 93°F, wind 2 mph, 0% cover
2	5/9/2012	Robbie Sweet	0550–1010	Start: 60°F, wind 2 mph, 0% cover End: 93°F, wind 1 mph, 0% cover
2	5/9/2012	Shelly Dayman	0551–1013	Start: 60°F, wind 2 mph, 3% cover End: 84°F, wind 2 mph, 0% cover
2	5/9/2012	Rocky Brown	0554–0958	Start: 60°F, wind 2 mph, 0% cover End: 84°F, wind 2 mph, 0% cover
2	5/9/2012	Shelly Dayman	1745–1956	Start: 89°F, wind 2 mph, 2% cover End: 82°F, wind 1 mph, 0% cover
2	5/9/2012	Rocky Brown	1802–1957	Start: 98°F, wind 2 mph, 5% cover End: 82°F, wind 1 mph, 0% cover
2	5/9/2012	Rob Conohan	1808–2005	Start: 98°F, wind 4 mph, 0% cover End: 84°F, wind 0 mph, 0% cover
2	5/9/2012	Robbie Sweet	1814–1950	Start: 97°F, wind 4 mph, 1% cover End: 83°F, wind 2 mph, 0% cover
2	5/10/2012	Robbie Sweet	0556–1011	Start: 62°F, wind 1 mph, 0% cover End: 84°F, wind 2 mph, 0% cover
2	5/10/2012	Rob Conohan	0557–1001	Start: 62°F, wind 1 mph, 0% cover End: 88°F, wind 2 mph, 0% cover
2	5/10/2012	Shelly Dayman	0558–1013	Start: 57°F, wind 2 mph, 0% cover End: 84°F, wind 3 mph, 0% cover
2	5/10/2012	Rocky Brown	0606–1006	Start: 62°F, wind 1 mph, 0% cover End: 88°F, wind 2 mph, 0% cover
2	5/10/2012	Shelly Dayman	1814–1959	Start: 95°F, wind 8 mph, 0% cover End: 83°F, wind 9 mph, 10% cover
2	5/10/2012	Rocky Brown	1831–1958	Start: 95°F, wind 11 mph, 0% cover End: 87°F, wind 11 mph, 10% cover
2	5/10/2012	Robbie Sweet	1836–2000	Start: 90°F, wind 11 mph, 0% cover End: 83°F, wind 9-2 mph, 10% cover
2	5/10/2012	Rob Conohan	1836–1958	Start: 90°F, wind 11 mph, 0% cover End: 83°F, wind 9-2 mph, 10% cover

Survey Number	Date	Survey Personnel	Time	Weather Conditions
2	5/11/2012	Rob Conohan	0550–1113	Start: 56°F, wind 2-5 mph, 0% cover End: 86°F, wind 2 mph, 0% cover
2	5/11/2012	Robbie Sweet	0553–1038	Start: 56°F, wind 2-5 mph, 0% cover End: 86°F, wind 2 mph, 0% cover
2	5/11/2012	Rocky Brown	0556–1037	Start: 56°F, wind 2-5 mph, 0% cover End: 84°F, wind 2 mph, 0% cover
2	5/11/2012	Shelly Dayman	0616–1032	Start: 62°F, wind 1 mph, 0% cover End: 84°F, wind 2 mph, 0% cover
2	5/11/2012	Shelly Dayman	1524–1727	Start: 87°F, wind 1 mph, 0% cover End: 89°F, wind 2 mph, 0% cover
3	5/29/2012	Andrew Fisher	1800–2003	Start: 96.5°F, wind 4 mph, 0% cover End: 85°F, wind 2 mph, 0% cover
3	5/29/2012	Michael Anguiano	1803–2006	Start: 96.5°F, wind 4 mph, 0% cover End: 85°F, wind 2 mph, 0% cover
3	5/29/2012	Rocky Brown	1811–2002	Start: 93°F, wind 5-5 mph, 0% cover End: 83°F, wind 4 mph, 0% cover
3	5/29/2012	Shelly Dayman	1811–2005	Start: 93°F, wind 5-5 mph, 0% cover End: 83°F, wind 4 mph, 0% cover
3	5/30/2012	Andrew Fisher	0525–1000	Start: 59°F, wind 0 mph, 0% cover End: 89°F, wind 1 mph, 0% cover
3	5/30/2012	Michael Anguiano	0529–1009	Start: 59°F, wind 0-5 mph, 0% cover End: 90°F, wind 1 mph, 0% cover
3	5/30/2012	Rocky Brown	0536–1025	Start: 66°F, wind 2 mph, 1% cover End: 92°F, wind 1-5 mph, 0% cover
3	5/30/2012	Shelly Dayman	0537–1022	Start: 66°F, wind 2 mph, 0% cover End: 92°F, wind 1-5 mph, 0% cover
3	5/30/2012	Andrew Fisher	1800–2009	Start: 96°F, wind 0 mph, 0% cover End: 78°F, wind 5 mph, 0% cover
3	5/30/2012	Michael Anguiano	1803–2013	Start: 96°F, wind 0 mph, 0% cover End: 89.6°F, wind 7-4 mph, 0% cover
3	5/30/2012	Rocky Brown	1810–2015	Start: 100°F, wind 0-5 mph, 0% cover End: 91°F, wind 2-4 mph, 0% cover
3	5/30/2012	Shelly Dayman	1810–2015	Start: 100°F, wind 0-5 mph, 0% cover End: 91°F, wind 2-4 mph, 0% cover
3	5/31/2012	Andrew Fisher	0513–1001	Start: 66°F, wind 0 mph, 0% cover End: 96°F, wind 2 mph, 0% cover
3	5/31/2012	Michael Anguiano	0518–0529	Start: 66°F, wind 0 mph, 0% cover End: 96°F, wind 1-7 mph, 0% cover
3	5/31/2012	Shelly Dayman	0550–1042	Start: 68°F, wind 2 mph, 0% cover End: 91°F, wind 1 mph, 0% cover
3	5/31/2012	Rocky Brown	0558–1020	Start: 68°F, wind 2 mph, 0% cover End: 101°F, wind 4 mph, 0% cover
3	5/31/2012	Shelly Dayman	1746–2019	Start: 103°F, wind 2 mph, 0% cover End: 94°F, wind 2 mph, 0% cover
3	5/31/2012	Rocky Brown	1747–2018	Start: 110°F, wind 2 mph, 0% cover End: 92°F, wind 1-5 mph, 0% cover
3	5/31/2012	Andrew Fisher	1807–2009	Start: 103°F, wind 2 mph, 0% cover End: 92°F, wind 0 mph, 0% cover
3	5/31/2012	Michael Anguiano	1813–2021	Start: 105°F, wind 0 mph, 0% cover End: 91.3°F, wind 0 mph, 0% cover

Survey Number	Date	Survey Personnel	Time	Weather Conditions
3	6/1/2012	Michael Anguiano	0520–1006	Start: 66°F, wind 0 mph, 0% cover End: 104°F, wind 0 mph, 0% cover
3	6/1/2012	Marie Barrett	0524–1000	Start: 69°F, wind 3 mph, 0% cover End: 107°F, wind 0 mph, 0% cover
3	6/1/2012	Andrew Fisher	0526–1000	Start: 69°F, wind 3 mph, 0% cover End: 101°F, wind 1 mph, 0% cover
3	6/1/2012	Rocky Brown	0528–1016	Start: 74.5°F, wind 1-5 mph, 15% cover End: 109°F, wind 2-5 mph, 0% cover
3	6/1/2012	Andrew Fisher	1950–2009	Start: 97°F, wind 9-5 mph, 0% cover End: 95°F, wind 7-7 mph, 0% cover
3	6/1/2012	Michael Anguiano	1950–2015	Start: 97°F, wind 9-5 mph, 0% cover End: 95°F, wind 8 mph, 0% cover
3	6/2/2012	Marie Barrett	0504–0653	Start: 68°F, wind 0 mph, 5% cover End: 68°F, wind 0 mph, 5% cover
3	6/2/2012	Andrew Fisher	0510–0714	Start: 64°F, wind 3 mph, 2% cover End: 73°F, wind 2 mph, 0% cover
3	6/2/2012	Michael Anguiano	0516–0717	Start: 67°F, wind 2-5 mph, 5% cover End: 78°F, wind 1-5 mph, 0% cover
3	6/2/2012	Rocky Brown	0520–0716	Start: 70.5°F, wind 3 mph, 20% cover End: 78°F, wind 1-5 mph, 60% cover
4	6/25/2012	James McMorran	1805–2023	Start: 97°F, wind 1 mph, 0% cover End: 91°F, wind 10 mph, 0% cover
4	6/25/2012	Shelly Dayman	1805–2034	Start: 100°F, wind 4-3 mph, 0% cover End: 90°F, wind 8 mph, 0% cover
4	6/25/2012	Rocky Brown	1808–2035	Start: 100.3°F, wind 4-3 mph, 0% cover End: 90°F, wind 8-3 mph, 0% cover
4	6/25/2012	Michael Anguiano	1959–2022	Start: 92°F, wind 5 mph, 0% cover End: 91°F, wind 10 mph, 0% cover
4	6/26/2012	Rocky Brown	0519–1006	Start: 74.3°F, wind 6-1 mph, 0% cover End: 97.5°F, wind 1-6 mph, 0% cover
4	6/26/2012	James McMorran	0519–1001	Start: 73°F, wind 6 mph, 0% cover End: 96°F, wind 1 mph, 0% cover
4	6/26/2012	Michael Anguiano	0520–1000	Start: 73°F, wind 6 mph, 0% cover End: 96°F, wind 0 mph, 0% cover
4	6/26/2012	Shelly Dayman	0533–1006	Start: 74°F, wind 6 mph, 0% cover End: 96°F, wind 2 mph, 0% cover
4	6/26/2012	James McMorran	1803–2020	Start: 106°F, wind 1 mph, 0% cover End: 91°F, wind 3 mph, 0% cover
4	6/26/2012	Michael Anguiano	1804–2022	Start: 106°F, wind 1 mph, 0% cover End: 91°F, wind 3 mph, 0% cover
4	6/26/2012	Rocky Brown	1808–2023	Start: 99.5°F, wind 1-9 mph, 0% cover End: 86.3°F, wind 3-4 mph, 0% cover
4	6/26/2012	Shelly Dayman	1808–2022	Start: 101°F, wind 1 mph, 0% cover End: 93°F, wind 2 mph, 0% cover
4	6/27/2012	Rocky Brown	0522–1003	Start: 73.4°F, wind 0-7 mph, 2% cover End: 97°F, wind 3-2 mph, 1% cover
4	6/27/2012	James McMorran	0532–1006	Start: 76°F, wind 0 mph, 5% cover End: 96°F, wind 1 mph, 0% cover
4	6/27/2012	Michael Anguiano	0532–1002	Start: 76°F, wind 0 mph, 0% cover End: 96°F, wind 3 mph, 0% cover

Survey Number	Date	Survey Personnel	Time	Weather Conditions
4	6/27/2012	Shelly Dayman	0534–1016	Start: 74°F, wind 2 mph, 0% cover End: 96°F, wind 3 mph, 9% cover
4	6/27/2012	Michael Anguiano	1752–2016	Start: 108°F, wind 1 mph, 0% cover End: 90°F, wind 0 mph, 0% cover
4	6/27/2012	James McMorran	1756–2015	Start: 110°F, wind 1 mph, 0% cover End: 96°F, wind 4 mph, 0% cover
4	6/28/2012	Michael Anguiano	0538–0719	Start: 79°F, wind 0 mph, 0% cover End: 84°F, wind 2 mph, 0% cover
4	6/28/2012	James McMorran	0543–0731	Start: 82°F, wind 0 mph, 0% cover End: 84°F, wind 2 mph, 0% cover

* Surveys consisted of mapping potential BUOW burrows (with and without sign) during periods where surveys were not according to protocol due to high winds. All burrows mapped during these surveys were visited during protocol conditions.

Appendix C – California Department of Fish and Wildlife Correspondence

Anguiano, Michael

From: Anguiano, Michael
Sent: Thursday, May 03, 2012 7:34 AM
To: 'mcrodriguez@dfg.ca.gov'
Cc: Riley, Erin
Subject: Western Burrowing Owl - Proposed Solar Project in Imperial County

Hi Magdalena,

Thanks for speaking with me on the phone yesterday regarding burrowing owl surveys for the proposed solar project in the Imperial Valley. I'm emailing to outline the suggested modification that I proposed to you over the phone. We'd like CDFG to consider allowing AECOM to substitute walking transects with driving surveys for the last two surveys (rounds 3 and 4) conducted for this project given the unique canal/drain nesting habitat in the agroecosystem of the Imperial Valley. The basis for this suggested modification is discussed below.

For historical background, we completed the first round of surveys April 18th. As CDFG knows, the Imperial Valley has an exceptionally high number of burrowing owls along the canals and drains in the agricultural system. During round 1 surveys, over 200 suitable owl burrows (not all of these were occupied) and over 100 owls were detected. As ornithologists approached groups of owls they could estimate pairs of owls present by scanning with binoculars, but burrows were difficult to locate on the sides of canals/drains at a distance. As ornithologists moved closer to determine where the occupied burrow was located, multiple owls would flush making it difficult to accurately associate owls with burrows. To this end we propose the following:

1. As stated in the guidance, we will conduct walking surveys for round 1 (already completed) and round 2. We understand the importance of walking surveys in order to find potential suitable burrows, so that follow-up surveys can be conducted at those burrows for future surveys. In addition, it is understood that new suitable burrows could be found during the second round of surveys. All potential suitable burrows could not be located from a vehicle.
2. For rounds 3 and 4 we would like to request permission to conduct driving surveys along the canals/drains. Ornithologists would drive canal/drain roads no faster than 7 miles per hour and would check all suitable burrows marked with GPS in rounds 1 and 2. Ornithologists would exit the car, as needed, to investigate suitable burrows for burrowing owl sign and/or individuals. While newly created unoccupied suitable burrows could be missed, after rounds 1 and 2 ornithologists will have a general idea where most suitable burrows are located and the number of new suitable burrows is likely to be minimal. Given the conspicuousness of burrowing owls in the canal/drain habitat, it is unlikely a newly created suitable burrow that became occupied would be missed. Since mitigation will be based on occupied burrows, missing newly created unoccupied suitable burrows will have no impact on mitigation requirements

The driving approach for rounds 3 and 4 has three key benefits. First, owls in this region have habituated to vehicle/machinery activity and survey methods with ornithologists on foot are 3 times more likely to displace an owl than when an ornithologist remains inside a vehicle (Manning and Kaler 2011). The vehicle essentially acts as a blind and will allow ornithologists to maneuver in close proximity to occupied burrows before owls retreat to their burrow or flush. This will allow for accurate estimation of occupied burrows and owl numbers. This will be especially important for survey rounds 3 and 4 because juveniles may also be present. Juveniles tend to retreat quickly to the burrow when they are young, but as they get older the entire family may flush. In both cases it will make it difficult to determine the number of juveniles using a specific burrow. Second, this method will minimize disturbance to nesting owls. Due to the linear nature of the canals/drains ornithologists on foot have to walk by occupied burrows which in most cases flushes the owls from burrows whereas ornithologists within a vehicle may not flush an owl at all. Third, this method will allow

ornithologists to get to occupied burrows faster so that more time can be spent discerning the number of territories in high density owl areas along each canal/drain.

Thanks for taking the time to consider this modified approach.

Mike

Manning, J. A. and Kaler, R. S. A. (2011), Effects of survey methods on burrowing owl behaviors. The Journal of Wildlife Management, 75: 525–530.

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Anguiano, Michael

From: Magdalena Rodriguez <MCRodriguez@dfg.ca.gov>
Sent: Friday, May 18, 2012 2:33 PM
To: Anguiano, Michael
Cc: Riley, Erin
Subject: Re: Western Burrowing Owl - Proposed Solar Project in ImperialCounty

Michael,

I went over your proposal to adjust the survey method with some colleagues. What I'm willing to compromise on is allowing you to drive the canals for Round 4 only. The canals must be driven on both sides to ensure you see all owls. Please be aware that this is a one time exception for this project and does not constitute a variation for any future projects. In addition when you present your data can you please separate out each survey round and note what was found each time. This will help us evaluate the driving survey with the walking surveys.

To answer your other question. That's fine to survey that area twice. Please just note that in your results. And if you still don't have access just continue to survey as best you can from a safe distance and note the variance in the results.

Thanks,
Magdalena

-----Original Message-----

From: "Anguiano, Michael" <Michael.Anguiano@aecom.com>
Cc: Riley, Erin <Erin.Riley@aecom.com>
To: Rodriguez, Magdalena <MCRodriguez@dfg.ca.gov>

Sent: 5/18/2012 11:19:22 AM

Subject: RE: Western Burrowing Owl - Proposed Solar Project in ImperialCounty

Hi Magdalena,

Were you able to get a few more opinions on the deviation that we requested? If you could let us know by early next week, it would help us for planning Round 3 surveys which are scheduled to start on May 29th.

I also wanted to discuss a small issue that occurred during Round 2 surveys. During Round 2, we were unable to access all roads with irrigation drains/canals for one small parcel that is currently being used for active agriculture and bordered by active agriculture. This parcel was surveyed during Round 1 and no suitable burrows were found. During Round 2 this parcel was surveyed to the extent feasible from adjacent public access roads that ran parallel to irrigation drains/canals; however, two, approximately 700 meter long, dirt roads with irrigation drains/canals could not be walked and were only scoped with binoculars.

Assuming we gain access to this parcel for Round 3 surveys, we would like to propose that we survey this parcel twice during Round 3 surveys in order to ensure that this parcel receives four full coverage surveys. We would accomplish this by surveying the parcel once at the beginning of Round 3 surveys (i.e., Tuesday) and a second time at the end of Round 3 surveys (i.e., Saturday). Please let us know if this will suffice for this one parcel.

Let me know if you have questions about anything.

Thanks,

Mike

Michael Anguiano

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michael.anguiano@aecom.com<<mailto:michael.anguiano@aecom.com>>

From: Magdalena Rodriguez [<mailto:MCRodriguez@dfg.ca.gov>]

Sent: Monday, May 14, 2012 4:53 PM

To: Anguiano, Michael

Subject: RE: Western Burrowing Owl - Proposed Solar Project in ImperialCounty

Michael,

I'm trying to consult with some other colleagues to get a few more opinions on the deviation that you requested. I will get back to you by Wednesday.

Magdalena

Appendix D – Site Photographs

Appendix D Wistaria Site Photographs



View of the existing Mount Signal Solar transmission line corridor looking east from Brockman Road. The photo shows the existing disturbed ground and the existing transmission interconnection structures and the solar facilities under construction.



View of the existing Mount Signal Solar transmission line corridor looking west from Brockman Road. The photo shows the existing disturbed ground and the existing transmission interconnection structures and the solar facilities under construction.



View to south from UTM 628466 3620237. Dirt road with an earthen berm on one side.



View of Brockman to south at UTM 627525 3619680. The area consists of an elevated dirt road, a concrete-lined channel and an elevated dirt berm on the opposite side.



View to south from UTM 628730 3619847. Habitat here consists of dirt road and a concrete-lined channel with slightly elevated earthen sides.



View from Preston Road to west at UTM 628878 3619869. Habitat consisted of a dirt road adjacent to a raised dirt road, concrete-lined channel, raised earthen road, and a dirt channel with an earthen berm on the other side.



UTM 630015 3620682. Lyons at George. Looking to west. Habitat consists of an earthen berm, dirt road, wide concrete-lined channel, second raised earthen road, and second concrete-lined channel.



Example of IID maintenance activities. UTM 629162 3619615. Looking to south.