

PHOTOGRAPH 3 View of Vegetation on New River Floodplain Dominated by Salt Cedar and Arroweed



PHOTOGRAPH 4 View of New River Floodplain Vegetated with Salt Cedar, Arroweed, and Common Reed



PHOTOGRAPH 5 View of Vegetation Growing Along Greeson Wash/Drain Low Flow Channel



PHOTOGRAPH 6 View of Greeson Wash/Drain Floodplain in a Location Lacking Significant Vegetation Cover, Note the Salt Crust Present on Soil Surface





PHOTOGRAPH 7 View of Narrow Portion of IID Greeson Drain Showing Vegetation Restricted to Lower Bank and Channel Bottom



PHOTOGRAPH 8 View of Wide and Deep IID Wistaria Drain with Vegetation Restricted to Lower Bank and Channel Bottom

RECON

4.2 Soils

Information on the soil types sampled in the survey area is summarized from the Soil Survey for Imperial County (U.S. Department of Agriculture [USDA] 1981), and the Hydric Soils of California list obtained from the Natural Resource Conservation Service (1995).

Seven soil types were encountered at sample points in the project area and are described below according to the classifications from the USDA characterizations of soil types in Imperial County (USDA 1981).

- Badland soils occur on steep to very steep areas of barren land on unconsolidated, stratified alluvium. Textures for this soil series range from clay to gravelly sand, but the finer textures are predominant. Badland soils tend to have surface runoff that is rapid or very rapid, and they have a high erosion hazard.
- Fluvaquents, saline soils are relatively deep soils found on floodplains and alluvial basin floors. Textures range from silty clay to fine sand. These soils occur in areas with a relatively high water table. Surface runoff is generally slow and the erosion hazard is slight. Salt accumulation in this soil type is common.
- Imperial silty clay soils consist of very deep, moderately well drained soils that occur on floodplains. Permeability is slow, salinity moderate, surface runoff is slow, and the erosion hazard is slight.
- Imperial-Glenbar silty clay loam soils generally occur on floodplains within irrigated areas of the Imperial Valley. These deep soils formed in clayey sediment from various sources. The permeability of this soil type is slow to moderately slow, surface runoff is slow, and the erosion hazard is slight. The soils can be slightly saline in locations.
- Indio Loam soils are very deep, well drained soils found on floodplains and basin floors of the Imperial Valley. These soils formed in alluvial and eolian sediments from various sources. The permeability of this soil type is moderate, surface runoff slow, and the erosion hazard slight.
- Indio-Vint Complex soils occur on floodplains and alluvial basin floors of the Imperial Valley. This soil type is very deep and well drained, forming from alluvial and eolian sources. The soil has a moderate to moderately rapid permeability, surface runoff rated slow, and an erosion hazard that is slight.

• Vint loamy very fine sand soils are generally deep soils that occur on level floodplains and basin floors of the Imperial Valley. These soils formed in alluvial and eolian sediments from various sources. The soils in this series have a permeability that is moderately rapid, surface runoff rated slow, and an erosion hazard that is slight.

Hydric soil indicators observed at sample points within wetland areas located on these soil types included depleted matrix (i.e., presence of mottles, low chroma colors), gleying, and hydrogen sulfide odor.

4.3 Hydrology

The project area contains two main relatively natural drainage systems: New River and Greeson Wash/Drain. It also contains a network of IID canals that function to bring water to the agricultural fields, and a series of drains that carry excess irrigation and storm water from the agricultural fields to the Salton Sea.

The primary source of the water that flows in these drainage courses, canals, and drains is water associated with the vast agricultural operations. Some seasonal storm water runoff occurs during the winter rains and summer monsoon seasons. Water for the agricultural operations is delivered by the larger canals (e.g., All American Canal) and conveyed to the fields through a series of smaller canals (e.g., Wistaria Canal, Woodbine Canal, etc.) which provide water to the agricultural ditches for distribution to the crops. Excess irrigation water from the agricultural fields is collected in a series of drains that convey the water to the north and eventually the Salton Sea. The New River remains a perennial stream mostly due to the supplemental runoff from the adjacent agricultural operations.

Hydrology indicators commonly observed in wetland areas within the project area included one or more of the following: surface water, high water table, saturation, water marks, riverine drift lines, or sediment deposits. Locations with prolonged saturation had additional hydrology indicators of oxidized rhizoshperes and hydrogen sulfide odor. Portions of the Greeson Wash/Drain floodplain also exhibited soil cracks and salt deposits which indicate periods of ponded water. Some salt deposits on the soil surface may also be due to evaporation of the relatively high ground water table along segments of the Greeson Wash/Drain floodplain, or due to the poor water quality of agricultural runoff.

5.0 Jurisdictional Delineation

Jurisdictional waters/wetlands were delineated and mapped within the Wistaria Ranch project area according to ACOE and CDFW/RWQCB guidelines. Figures 3a-d and 4a-d show the locations of the jurisdictional waters identified on-site by resource agency. These results are considered preliminary until review and acceptance by the ACOE. A Preliminary Jurisdictional Determination Form that addresses the natural drainage features is provided (Attachment 2).

5.1 ACOE Jurisdictional Waters

ACOE wetland and non-wetland waters were identified within the Wistaria Ranch project area. Drainage features that included existing farm ditches within the survey area are considered exempt from ACOE jurisdiction.

5.1.1 Wetlands

Wetlands that occur within the project area occur along the New River, Greeson Wash/Drain, and within the IID drains (see Figure 3a-d). These areas have hydrophytic vegetation that is supported by natural and agricultural runoff both on the surface and from high ground water tables. Hydric soils are maintained by the prolonged saturation from these water sources. The IID drains convey natural flows that originate from sources that have a direct or indirect connection to a traditional navigable water (e.g., Salton Sea).

Wetlands associated with the New River occur along and adjacent to the primary low flow channel, along secondary channels on the lower floodplain terraces, and in broader lower elevation areas of the lower floodplain terraces. Wetlands associated with Greeson Wash/Drain occur along the low flow channel and along the major secondary channels of the floodplain. Wetlands associated with the IID drains are restricted to the low flow channel and that portion of the lower banks subject to prolonged flooding or wetness due to the capillary fringe zone.

5.1.2 Non-wetland Waters of the U.S.

Jurisdictional non-wetland waters within the project area include a few small, singlethread ephemeral drainages within the Greeson Wash/Drain floodplain and the concretelined IID canals. These features lacked hydrophytic vegetation, but convey natural flows that originate from sources that have a direct or indirect connection to a traditional navigable water (e.g., Salton Sea). Image source: Copyright 2010 AerialsExpress, All Rights Reserved (flown March 2010)





Wistaria Ranch Project Boundary

Sample Location – Field Data Form Reference (see Attachment 1)

0 ACOE Waters of the U.S. Wetland Non-wetland Water FIGURE 3-A

Wistaria Ranch Location of ACOE Waters of the U.S.

1,000

Feet

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Wistaria Ranch Project Boundary

Sample Location – Field Data Form Reference (see Attachment 1)

0 ACOE Waters of the U.S. Wetland Non-wetland Water

Wistaria Ranch Location of ACOE Waters of the U.S.

1,000

Feet

FIGURE 3-B







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Wistaria Ranch Project Boundary

Sample Location – Field Data Form Reference (see Attachment 1)



Wistaria Ranch Location of ACOE Waters of the U.S.

Feet



Image source: NAIP (flown April 2010)



Wistaria Ranch Project Boundary	CDFG	Jurisdictional Resources
		Riparian
		Floodplain
		Streambed











Wistaria Ranch Location of CDFG Waters of the State

1,000

Image source: NAIP (flown April 2010)



staria Ranch Project Boundary	CDFG	Jurisdictional Resources
		Riparian
		Floodplain
		Streambed

5.1.3 Exemptions from ACOE Jurisdiction

Drainage features within the project survey area that were considered exempt from ACOE jurisdiction include farm ditches. The active farm fields where the photovoltaic solar field would be located contain a series of ditches and drains that convey irrigation water to the crops. These drainage features consist of mostly concrete lined and some earthen ditches. The farm drains were not considered ACOE jurisdictional waters because they do not convey natural flows, were excavated in upland areas, are mostly concrete lined, and function as part of an active agricultural operation.

5.2 CDFW/RWQCB Jurisdictional Waters

CDFW/RWQCB jurisdiction waters of the State include all the areas delineated as ACOE wetland (riparian) and non-wetland jurisdictional waters (streambed), but also include larger portions of the New River and Greeson Wash/Drain floodplains that support the xeroriparian habitat occurring outside of the limits of the ACOE jurisdiction (Figures 4a-d). These xeroriparian areas support hydrophytic vegetation dominated by salt cedar, arroweed, iodine bush, bush seepweed, and big saltbush stands of varying density and distribution. These riparian areas lack hydric soils and strong indicators of wetland hydrology.

6.0 Regulatory Issues

Due to a no-net-loss policy implemented by the resource agencies, a first consideration in project planning should be avoidance of jurisdictional waters. ACOE, CDFW, and the RWQCB jurisdictional waters are regulated by the federal and state governments under a no-net-loss policy, and all impacts are considered significant and need to be avoided to the greatest extent possible.

Unavoidable impact to jurisdictional waters may be authorized by ACOE, CDFW, and RWQCB, and would require a permit authorization from ACOE (Section 404 permit program), a 1600 Streambed Alteration Agreement from CDFW, and a 401 State Water Quality Certification from RWQCB. Approved impact to ACOE, CDFW, and RWQCB jurisdictional waters require mitigation through habitat creation, enhancement, and/or preservation to achieve a no-net-loss of jurisdictional waters, as determined by a qualified restoration specialist in consultation with the regulatory agencies. In addition, regulatory agencies often require that a buffer be maintained between jurisdictional waters and any development.

7.0 References Cited

Hickman, J. C., ed.

1993 *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley and Los Angeles.

Natural Resource Conservation Service

1995 Hydric Soils of California. Revised December 15.

U.S. Army Corps of Engineers (ACOE)

- 1987 *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, Department of the Army. January.
- 2008a Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Prepared by U.S. Army Engineer Research and Development Center.
- 2008b A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. Prepared by U.S. Army Engineer Research and Development Center. August.

U.S. Department of Agriculture (USDA)

- 1981 Soil Survey of Imperial County California, Imperial Valley Area. October.
- U.S. Fish and Wildlife Service (USFWS)
 - 1997 National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. Ecology Section National Wetlands Inventory. March 3, 1997.

ATTACHMENTS

ATTACHMENT 1 Field Data Forms

Project/Site: Wistaria Ranch	City/County: Imperial County Sampling Date: 09/18/12						
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-1						
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	2.68 ddLong: <u>-155.61 dd</u> Datum: <u>NAD83</u>						
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 Hydrologysignification	antly disturbed? No Are "Normal Circumstances" present? Yes X No						
Are Vegetation, Soil, or Hydrologynaturall	y 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesXNo					
Remarks: Greeson Drain/Wash low flow channel.								

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:) 1. None)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC	: 3 (A)	
23.				Total Number of Dominant Species Across All Strata:	3 (B)	
4.				Percent of Dominant Species		
		= Total Cove	r	That Are OBL, FACW, or FAC	: <u>100</u> (A/B)	
Sapling/Shrub Stratum (Plot size:)						
1. Phragmites australis	40	Y	FACW	Prevalence Index worksheet	:	
2. Atriplex lentiformis	40	Y	FAC	Total % Cover of:	Multiply by:	
3. Pluchea sericea	10	Ν	FACW	OBL species	x 1 =	
4.				FACW species	x 2 =	
5.				FAC species	x 3 =	
	90	= Total Cove	r	FACU species	x 4 =	
Herb Stratum (Plot size:)				UPL species	x 5 =	
1. Leptochloa uninervia	5	Y	FACW	Column Totals:	(A) (B)	
2.		<u> </u>		Drovolonoo Indov - P//		
3.				Prevalence index – D/F	· –	
4. Hydrophytic Vegetation Indicators:						
5.				X Dominance Test is >50%		
6.				Prevalence Index is $\leq 3.0^1$		
7.				Morphological Adaptatic	ns ¹ (Provide supporting	
8.				data in Remarks or o	n a separate sheet)	
	5	= Total Cov	er	Problematic Hydrophytic	: Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size:)					0 (1)	
1.				¹ Indicators of hydric soil and y	vetland hydrology must	
2.		·		be present, unless disturbed	or problematic.	
		= Total Cove	r	Hydrophytic		
				Vegetation		
% Bare Ground in Herb Stratum 5 % Co	ver of Biotic	Crust		Present? Yes	KNo	
Remarks: Vegetation within Greeson Drain channel.				1		

SOIL

Profile Desc	ription: (Describe to	the depth n	eeded to docum	ent the ind	icator or	confirm t	he absence	e of indicat	ors.)	
Depth	Matrix		R	edox Featur	res		-			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	re	Remarks	6
0-12	10 YR 3/1						clay loam			
				·	<u> </u>					
				·						
		<u> </u>		·						
				·						
				·						
¹ Type: C=Co	ncentration, D=Depletion	, RM=Reduced	Matrix, CS=Covere	d or Coated S	Sand Grains	s. ²	Location: PL=	Pore Lining,	RC=Root Channel, M	I=Matrix.
Hydric Soil	I Indicators: (Applica	able to all LR	Rs, unless othe	rwise noted	i.)		Indicat	ors for Pro	blematic Hydric S	oils³:
Histoso	l (A1)		Sandy	Redox (S5)			1 ci	n Muck (A9	9) (LRR C)	
Histic E	pipedon (A2)		Strippe	d Matrix (S6	5)		2 ci	m Muck (A1	0) (LRR B)	
Black Histic (A3)				Mucky Mine	eral (F1)		Rec	educed Vertic (F18)		
<u>x</u> Hydrogen Sulfide (A4)			Loamy	Gleyed Mat	rix (F2)		Rec	Parent Ma	aterial (TF2)	
Stratifie	d Layers (A5) (LRR C	:)	<u>x</u> Deplete	ed Matrix (F3	3) 		Oth	er (Explain	in Remarks)	
	UCK (A9) (LRR D) od Bolow Dark Surface	- (A11)		Dark Surfac	e (F0)					
Depiete Thick D	ark Surface (Δ12)	= (ATT)	Depiete	Denression	ace (17)		³ Indicat	ors of hydro	nhytic vegetation a	nd
Sandy I	Mucky Mineral (S1)		Vernal	Pools (F9)	3 (1 0)		wet	and hydrolo	av must be presen	it .
Sandy (Gleyed Matrix (S4)						unle	ss disturbe	d or problematic.	-,
Restrictive	l aver (if present)								•	
Type										
Denth (inc	hes).		_				Hydric Soi	Present?	Yes X	No
							l lyano ool	r resent.		<u> </u>
Remarks:										
HYDROLO	GY									
Wetland H	ydrology Indicators:							Secondary	Indicators (2 or n	nore required)
Primary Ind	licators (minimum of c	one required;	check all that app	ly)			<u> </u>	Water N	/larks (B1) (Riverin	le)
x Surface	e Water (A1)		Salt Cru	st (B11)			-	Sedime	nt Deposits (B2) (R	(iverine)
<u>x</u> High W	ater Table (A2)		Biotic Cr	ust (B12)			-	Drift De	posits (B3) (Riveri i	ne)
<u>x</u> Saturat	ion (A3)		Aquatic	nvertebrate	s (B13)		-	Drainag	e Patterns (B10)	
Water N	Marks (B1) (Nonriver	ine)	Hydroge	n Sulfide Oo	dor (C1)		-	Dry-Sea	ason Water Table (C2)
Sedime	ent Deposits (B2) (No	nriverine)	Oxidized	Rhizosphe	res along	Living Roo	ots (C3)	Thin Mu	uck Surface (C7)	

$O_{n-1} \in D_{n-1} \cup O_{n-1}$	
Cravtish Burrows (C8)	

 	•	,		
Saturation	Visible on	Aerial	Imagery	(C9)

- Shallow Aquitard (D3)
- EAC Noutral Toot (DE)

Water-Stained Leaves	(B9)		Other (Explain in I	Remarks)	FAC-Neutra	l Test (D5)
Field Observations:						
Surface Water Present?	Yes x	No	Depth (inches):	12		
Water Table Present?	Yes x	No	Depth (inches):	0	_	
Saturation Present? (includes capillary fringe)	Yes <u>x</u>	No	Depth (inches):	0	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Recorded Data (stre	eam gauge, m	nonitoring	well, aerial photos, pre	evious inspec	tions), if available:	
Remarks: OHWM 6-10 ft. up	bank; banks	steep 20	-30 ft. high			

Presence of Reduced Iron (C4)

Thin Muck Surface (C7)

Recent Iron Reduction in Tilled Soils (C6)

Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)

Inundation Visible on Aerial Imagery (B7)

Project/Site: Wistaria Ranch	City/County: I	mperial County	Sampling Date: 09/18/12
Applicant/Owner: Tenaska		State: CA	Sampling Point: <u>GW-2</u>
Investigator(s): G. Scheid	Section, Tow	nship, Range: Heber Quad: Se	ection 14 T17S R13E
Landform (hillslope, terrace, etc.): floodplain terrace	Local relief (concave, convex, none): <u>none</u>	Slope (%): 0-1%
Subregion (LRR): LRR-C	Lat: 32.68 dd	Long: -155.61 dd	Datum: NAD83
Soil Map Unit Name: Indio Loam		NWI classific	ation: Riverine
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	X No (If no, explain	n in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	No Are "Normal Circumsta	nces" 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland?	Yes	NoX
Remarks:					

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:) 1. None)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC	:: 2 (A)
2 3				Total Number of Dominant Species Across All Strata:	2 (B)
4.				Percent of Dominant Species	()
		= Total Cove	er	That Are OBL, FACW, or FAC	: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size:)					
1. Atriplex lentiformis	40	Y	FAC	Prevalence Index worksheet	
2. Sueda moquinii	20	Y	FACW	Total % Cover of:	Multiply by:
3.				OBL species	x 1 =
4.				FACW species	x 2 =
5.				FAC species	x 3 =
		= Total Cove	er	FACU species	x 4 =
Herb Stratum (Plot size:)				UPL species	x 5 =
1.				Column Totals:	(A) (B)
2.				Dravelence Index - D//	
3.				Prevalence index – D/F	·
4.				Hydrophytic Vegetation Indi	cators:
5.				X Dominance Test is >509	%
6.				Prevalence Index is ≤3.0	0 ¹
7.				Morphological Adaptatio	ons ¹ (Provide supporting
8.				data in Remarks or c	n a separate sheet)
		= Total Cov	er	Problematic Hydrophytic	c Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)					0 (1)
1.				¹ Indicators of hydric soil and	wetland hydrology must
2.				be present, unless disturbed	or problematic.
		= Total Cove	er	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 40 % Co	ver of Biotic	Crust		Present? Yes	XNo
Remarks: Vegetation sample within Greeson Wash floo	odplain.				

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Re	dox Featu	res					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Re	marks	
0-18	7.5 YR	3/3					clay loam			
		<u> </u>								
¹ Type: C=Cor	ncentration, D=Depletion	, RM=Reduce	ed Matrix, CS=Covered	or Coated	Sand Grains	s. 2	Location: PL=Pore Lini	ng, RC=Root Char	nnel, M=Matrix.	
Hydric Soil	Indicators: (Applica	ble to all L	RRs, unless other	vise note	d.)		Indicators for I	Problematic Hyd	dric Soils ³ :	
Histoso	(A1)		Sandy R	edox (S5)			1 cm Muck	(A9) (LRR C)		
Histic E	pipedon (A2)		Stripped	Matrix (Se	6)		2 cm Muck	(A10) (LRR B)		
Black H	istic (A3)		Loamy N	lucky Mine	eral (F1)		Reduced Ve	ertic (F18)		
Hydroge	en Sulfide (A4)		Loamy C	leyed Ma	trix (F2)		Red Parent	Material (TF2)		
Stratifie	d Layers (A5) (LRR C	;)	Depleted	Matrix (F	3)		Other (Expl	ain in Remarks)		
1 cm M	uck (A9) (LRR D)		Redox D	Redox Dark Surface (F6)						
Deplete	d Below Dark Surface	e (A11)	Depleted	Depleted Dark Surface (F7)						
Thick D	ark Surface (A12)		Redox D	Redox Depressions (F8) ³ Indicators of hydrophytic vegetation ar				ation and		
Sandy N	Aucky Mineral (S1)		Vernal P	Vernal Pools (F9)			wetland hydrology must be present,			
Sandy (Gleyed Matrix (S4)			unless disturbed or problematic.				atic.		
Restrictive	Layer (if present):									
Type:										
Depth (inc	hes):						Hydric Soil Presen	t? Yes	No >	<u>< </u>
Remarks: N	o hydric soil indicators	s observed.								

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimum of one required; che	ck all that apply)	Water Marks (B1) (Riverine)				
Surface Water (A1)	_x_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)	Dry-Season Water Table (C2)					
Sediment Deposits (B2) (Nonriverine)	Thin Muck Surface (C7)					
Drift Deposits (B3) (Nonriverine)	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)	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 <u>No</u> (includes capillary fringe)	x_Depth (inches): Wetland Hydr	rology Present? Yes No x				
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspections), if available					
Remarks: Sample area outside of the OHWM. CD	FG riparian?					

Project/Site: Wistaria Ranch 0	City/County: Imperial County Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-3
Investigator(s): G. Scheid	Section, Township, Range: Heber Quad: Section 14, T17S, R13E
Landform (hillslope, terrace, etc.): floodplain terrace	Local relief (concave, convex, none): none Slope (%): 0-1%
Subregion (LRR): LRR-C Lat: 32.6	8 dd Long: -155.62 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	r? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificant	ly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally p	oroblematic? 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? Hydric Soil Present?	Yes Yes	No No	x x	Is the Sampled Area within a Wetland?	Yes	No	X
Wetland Hydrology Present?	Yes	NO	X				
Remarks: Greeson Drain/Wash floodplain terrace un-vegetated ephemeral channels. Non-wetland water.							

	Absolute	Dominant	Indicator	Dominance Test works	neet:	
Tree Stratum (Plot size:) 1. None	% Cover	Species?	Status	Number of Dominant Spe That Are OBL, FACW, or	ecies FAC:	0 (A)
2 3				Total Number of Dominal Species Across All Strata	nt ::	0 (B)
4.		= Total Cove	er	Percent of Dominant Spe That Are OBL, FACW, or	cies FAC:	0(A/B)
Sapling/Shrub Stratum (Plot size:)						
1. none				Prevalence Index works	sheet:	
2.				Total % Cover of:	Mul	tiply by:
3.				OBL species	x 1 =	
4.				FACW species	x 2 =	
5.				FAC species	x 3 =	
		= Total Cove	er	FACU species	x 4 =	
Herb Stratum (Plot size:)				UPL species	x 5 =	
1.				Column Totals:	(A)	(B)
2.				Prevalence Index	= B/A =	
3					<u> </u>	
4.				Hydrophytic Vegetation	Indicators:	
5.				Dominance Test is	>50%	
6.				Prevalence Index is	s ≤3.0 ¹	
7.				Morphological Ada	ptations ¹ (Prov	vide supporting
8.				data in Remarks	s or on a sepa	rate sheet)
		= Total Cov	rer	Problematic Hydro	phytic Vegetat	tion ¹ (Explain)
<u>Woody Vine Stratum</u> (Plot size:)						
1.				¹ Indicators of hydric soil	and wetland h	nydrology must
2.				be present, unless distu	rbed or proble	matic.
		= Total Cove	er	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum % Co	over of Biotic	Crust		Present? Yes	6 I	No <u>X</u>
Remarks: No vegetation growing on saline soils of floo	dplain terrac	æ.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix		Re	dox Featur	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	10 YR 3/3						clay loam		
				<u> </u>					
					<u> </u>				
¹ Type: C=Cor	ncentration, D=Depletion	, RM=Reduce	d Matrix, CS=Covered	or Coated S	Sand Grains	s. ²	Location: PL=Pore Lining,	RC=Root Channel, M=M	atrix.
Hydric Soil	Indicators: (Applica	able to all LI	RRs, unless otherv	vise noted	i.)		Indicators for Pro	blematic Hydric Soils	s ³ :
Histosol	l (A1)		Sandy R	edox (S5)			1 cm Muck (As	9) (LRR C)	
Histic E	pipedon (A2)		Stripped	Matrix (S6	5)		2 cm Muck (A	10) (LRR B)	
Black H	istic (A3)		Loamy N	lucky Mine	eral (F1)		Reduced Verti	c (F18)	
Hydroge	en Sulfide (A4)		Loamy G	leyed Mat	rix (F2)		Red Parent Ma	aterial (TF2)	
Stratifie	d Layers (A5) (LRR C	;)	Depleted	Matrix (F3	3)		Other (Explain	in Remarks)	
1 cm Mi	uck (A9) (LRR D)		Redox D	ark Surfac	e (F6)				
Deplete	d Below Dark Surface	e (A11)	Depleted	I Dark Surf	ace (F7)				
Thick D	ark Surface (A12)		Redox D	epressions	s (F8)		³ Indicators of hydro	phytic vegetation and	
Sandy N	Mucky Mineral (S1)		Vernal P	ools (F9)			wetland hydrold	ogy must be present,	
Sandy C	Gleyed Matrix (S4)						unless disturbe	d or problematic.	
Restrictive	Laver (if present):								
Type:									
Depth (inc	hes) [.]						Hydric Soil Present?	Yes N	οX
								<u> </u>	• <u> </u>
Remarks: N	o hydric soils indicate	ors observed							

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)			
Drive and high store (crisisters of and a main duck		Weter Marks (D4) (Diverine)			
Primary Indicators (minimum of one required; ch	eck all that apply)				
Surface Water (A1)	X 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)	Dry-Season Water Table (C2)				
Sediment Deposits (B2) (Nonriverine)	3) Thin Muck Surface (C7)				
Drift Deposits (B3) (Nonriverine)	Crayfish Burrows (C8)				
Surface Soil Cracks (B6)	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 <u>No</u> (includes capillary fringe)	X Depth (inches): Wetland Hy	rdrology Present? Yes No X			
Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous inspections), if availab	le:			
Remarks: Small tributary channels on floodplain te	errace of Greeson Drain/Wash. Salt crust due to evap	poration of groundwater.			

Project/Site: Wistaria Ranch 0	City/County: Imperial County Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-4
Investigator(s): G. Scheid	Section, Township, Range: Heber Quad: Section 14 T17S R13E
Landform (hillslope, terrace, etc.): floodplain terrace	Local relief (concave, convex, none): none Slope (%): 0-1%
Subregion (LRR): LRR-C Lat: 32.6	9 dd Long: <u>-115.62</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Imperial-Glenbar silty clay loam	NWI classification: Riverine
Are climatic / hydrologic conditions on the site typical for this time of yea	r? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificant	tly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	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	No	х	Is the Complete Area			
Hydric Soil Present?	Yes	No	Х	Is the Sampled Area	Yes	No	Х
Wetland Hydrology Present?	Yes	No	Х				
Remarks: Greeson Drain/Wash floodplain terrace un-vegetated ephemeral channels. Non-wetland water.							

	Absolute	Dominant	Indicator	Dominance Test works	heet:		
Tree Stratum (Plot size:) 1. None	% Cover	Species?	Status	Number of Dominant Spe That Are OBL, FACW, or	ecies FAC:	0	(A)
2. 3.				Total Number of Dominant Species Across All Strata: 0		(B)	
4.				Percent of Dominant Spe	ecies		
		= Total Cove	er	That Are OBL, FACW, or	FAC:	0	_(A/B)
Sapling/Shrub Stratum (Plot size:)							
1. none				Prevalence Index works	sheet:		
2.				Total % Cover of:	M	lultiply by:	
3.	_			OBL species	x 1 =		_
4.				FACW species	x 2 =		_
5.				FAC species	x 3 =		-
		= Total Cove	er	FACU species	x 4 =		-
Herb Stratum (Plot size:)				UPL species	x 5 =		-
1.				Column Totals:	(A)		(B)
2.							
3.				Prevalence Index	= B/A =		_
4.				Hydrophytic Vegetation	Indicators	:	
5.				Dominance Test is	s >50%		
6.				Prevalence Index i	s ≤3.0 ¹		
7.	_			Morphological Ada	ptations ¹ (Pi	rovide suppo	ortina
8.	_			data in Remark	s or on a se	parate sheet)
		= Total Cov	/er	Problematic Hydro	phytic Veae	tation ¹ (Expl	ain)
Woody Vine Stratum (Plot size:					- J		- /
1.				¹ Indicators of hydric soil	and wetland	d hvdroloav i	must
2.				be present, unless distu	rbed or prob	lematic.	
		= Total Cove	er	Hydrophytic			
% Bare Ground in Herb Stratum % C	over of Biotic	: Crust		Vegetation Present? Ye	S	No X	
Remarks: No vegetation growing on saline soils of floo	ndnlain terra		<u> </u>				_
Terrains. No vegetation growing on saille solls of hot		JC.					

SOIL		
------	--	--

Profile Desc Depth	cription: (Describe to Matrix	o the depth	needed to docum	ent the indicator edox Features	or confirm t	the absence of indicator	rs.)
(inches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
0-12	10 YR 3/3			·		clay loam	
				·			
				·			
				·			
¹ Tumpi 0=0-			d Matrix CC-C		2		
Hydric Soi	il Indicators: (Applic	able to all L	RRs. unless other	wise noted.)	ains.	Indicators for Probl	ematic Hvdric Soils ³ :
Histoso	bl (A1)		Sandy I	Redox (S5)		1 cm Muck (A9)	(LRR C)
Histic E	Epipedon (A2)		Strippe	d Matrix (S6)		2 cm Muck (A10) (LRR B)
Black H	Histic (A3)		Loamy	Mucky Mineral (F1)	Reduced Vertic ((F18)
Hydrog	jen Sulfide (A4)		Loamy	Gleyed Matrix (F2)		Red Parent Mate	erial (TF2)
Stratifie	ed Layers (A5) (LRR (C)	Deplete	d Matrix (F3)		Other (Explain in	Remarks)
1 cm M	luck (A9) (LRR D)		Redox	Dark Surface (F6)			
Deplete	ed Below Dark Surfac	e (A11)	Deplete	d Dark Surface (F	7)		
Thick D	Dark Surface (A12)		Redox	Depressions (F8)		³ Indicators of hydrop	hytic vegetation and
Sandy	Mucky Mineral (S1)		Vernal	Pools (F9)		wetland hydrolog	y must be present,
Sandy	Gleyed Matrix (S4)					unless disturbed	or problematic.
Restrictive	Layer (if present):						
Туре:							
Depth (inc	ches):					Hydric Soil Present?	Yes <u>No X</u>
Remarks: N	No hydric soils indicate	ors observed	1.				
HYDROLO	GY						

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)		
Primary Indicators (minimum of one required; che	eck all that apply)		Water Marks (B1) (Riverine)		
Surface Water (A1)	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 Livi	ing 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 Se	oils (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 <u>No</u> (includes capillary fringe)	X Depth (inches):	Wetland Hydro	blogy Present? Yes No X		
Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous inspectio	ns), if available:			
Remarks: Small tributary channels on floodplain te	errace of Greeson Drain/Wash. Salt crus	st due to evapora	ation of groundwater.		
			Arid Mast Marsian 2.0		
US Army Corps of Engineers			Aria vvest – version 2.0		

Project/Site: Wistaria Ranch	City/County: Imperial County	City/County: Imperial County			
Applicant/Owner: Tenaska		State: CA	Sampling Point: GW-5		
Investigator(s): G. Scheid	Section, Township, Range:	Heber Quad : Sect	ion 14 T17S, R13E		
Landform (hillslope, terrace, etc.): floodplain	Local relief (concave, conve	x, none): <u>none</u>	Slope (%): 0-1%		
Subregion (LRR): LRR-C L	at: 32.69 dd Long	: <u>-115.62 dd</u>	Datum: NAD83		
Soil Map Unit Name: Imperial-Glenbar Silty Clay Loam		NWI classificatio	n: Riverine		
Are climatic / hydrologic conditions on the site typical for this tin	ne of year? Yes <u>X</u> No	(If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrologys	ignificantly disturbed? No Are "No	ormal Circumstance	s" present? Yes X No		
Are Vegetation, Soil, or Hydrologyn	aturally problematic? No (If need	led, explain any ans	wers in Remarks.)		

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes Yes	No NoX NoX	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					

	Absolute	Dominant	Indicator	Dominance Test worksheet	:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	3	
1. Tamarix chilensis	95	Y	FAC	That Are OBL, FACW, or FAC	C: <u> </u>	
2.				Total Number of Dominant		
3.				Species Across All Strata:	1 (B)	
4.				Percent of Dominant Species	(,	
	95	= Total Cove	r	That Are OBL, FACW, or FAC	C: <u>100</u> (A/B)	
Sapling/Shrub Stratum (Plot size:						
1.				Prevalence Index workshee	et:	
2				Total % Cover of:	Multiply by:	
3				OBL species	x 1 =	
					x 2 -	
4					×2 =	
5					x 3 =	
		= Total Cove	r		x 4 =	
Herb Stratum (Plot size:)				UPL species	x 5 =	
1				Column Totals:	(A)(B)	
2				Prevalence Index = B/	A =	
3						
4.				Hydrophytic Vegetation Ind	licators:	
5.				X Dominance Test is >50	1%	
6.				Prevalence Index is ≤3	.0 ¹	
7.				Morphological Adaptati	ons ¹ (Provide supporting	
8.				data in Remarks or on a separate sheet)		
		= Total Cov	er	Problematic Hydrophyt	ic Vegetation ¹ (Explain)	
Woody Vine Stratum (Plot size:			01			
1				¹ Indiactors of hydric soil and	watland bydralagy must	
				be present, unless disturbed	or problematic.	
2						
		= Total Cove	r	Hydrophytic		
% Bare Ground in Herb Stratum 5 % Co	ver of Riotic	Crust		Vegetation Present? Ves	X No	
Remarks: Vegetation within Greeson Wash floodplain.						

Profile Des	cription: (Describe t	o the depth	needed to docum	ent the indi	cator or	confirm t	the absence of indicator	rs.)		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	arks	
0-18	10 YR 3/3						clay loam			
				· ·						
		· ·		· ·						
		· ·		· ·						
¹ Type: C=Co	oncentration, D=Depletio	n, RM=Reduce	ed Matrix, CS=Covere	d or Coated S	and Grains	3. 2	Location: PL=Pore Lining, R	C=Root Chann	el, M=Matrix.	
Hydric So	il Indicators: (Applic	able to all L	RRs, unless othe	wise noted	.)		Indicators for Problem	ematic Hydri	ic Soils ³ :	
Histoso	ol (A1)		Sandy I	Redox (S5)			1 cm Muck (A9)	(LRR C)		
Histic E	Epipedon (A2)		Strippe	d Matrix (S6))		2 cm Muck (A10)) (LRR B)		
Black I	Histic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)			
Hydrog	gen Sulfide (A4)		Loamy	Loamy Gleyed Matrix (F2)			Red Parent Material (TF2)			
Stratifie	ed Layers (A5) (LRR	C)	Deplete	d Matrix (F3)		Other (Explain in	Remarks)		
1 cm N	/luck (A9) (LRR D)		Redox	Dark Surface	e (F6)					
Deplet	ed Below Dark Surfac	æ (A11)	Deplete	d Dark Surfa	ace (F7)					
Thick [Dark Surface (A12)		Redox	Depressions	(F8)		³ Indicators of hydroph	nytic vegetati	on and	
Sandy	Mucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,			
Sandy	Gleyed Matrix (S4)						unless disturbed	or problemati	С.	
Restrictive	Layer (if present):									
Туре:										
Depth (in	ches):						Hydric Soil Present?	Yes	NoX	
Remarks: I	No hydric soil indicato	rs observed.								

HYDROLOGY

Wetland Hydrology Indica	ators.					Secondary Indi	cators (2 c	or more re	equired)
Primary Indicators (minimum of one required: check all that apply)						Water Marks (B1) (Piverine)			
rimary indicators (minimum of one required, check an triat appry)									
Surface Water (A1) Salt Crust (B11)						Sediment De	eposits (B2) (Riverin	∙e)
High Water Table (A2)				Biotic Crust (B12)		Drift Deposit	.s (B3) (Riv	erine)	
Saturation (A3)			_	Aquatic Invertebrates (B13)		Drainage Pa	itterns (B10))	
Water Marks (B1) (Nor	riverine)			Hydrogen Sulfide Odor (C1)		Dry-Season	Water Tab	le (C2)	
Sediment Deposits (B2) (Nonriverine	:)	_	Oxidized Rhizospheres along Livin	ig Roots (C3)	Thin Muck S	urface (C7)	
Drift Deposits (B3) (No	nriverine)			Presence of Reduced Iron (C4)		Crayfish Bur	rows (C8)		
Surface Soil Cracks (B	6)			Recent Iron Reduction in Tilled So	ils (C6)	Saturation V	isible on A	erial Imag	ery (C9)
Inundation Visible on A	erial 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	Х	Depth (inches):					
Water Table Present?	Yes	No	Х	Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes	_ No	Х	_Depth (inches):	Wetland Hydro	logy Present?	Yes	No	<u> </u>
Describe Recorded Data (stre	eam gauge, m	onitorir	ng w	ell, aerial photos, previous inspection	s), if available:				
			-						
Remarks: Sample area outsi	de of the OHW	/M. CE	DFG	riparian?					

Project/Site: Wistaria Ranch	City/County: Imperial County	,	Sampling Date: 09/18/12
Applicant/Owner: Tenaska		State: CA	Sampling Point: GW-6
Investigator(s): G. Scheid	Section, Township, Range:	Heber Quad: SEct	ion 14 T17S, R13E
Landform (hillslope, terrace, etc.): floodplain	Local relief (concave, conve	ex, none): <u>none</u>	Slope (%): 0-1%
Subregion (LRR): LRR-C Lat	: <u>32.69 dd</u> Lon	g: <u>-115.62</u> dd	Datum: NAD83
Soil Map Unit Name: Imperial-Glenbar silty clay loam		NWI classification	on: 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 Hydrologysign	nificantly disturbed? No Are "N	ormal Circumstance	es" present? Yes X No
Are Vegetation, Soil, or Hydrologynat	urally problematic? No (If nee	ded, explain any ans	swers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes <u>X</u> No
Remarks: Greeson Drain/Wash low	flow channel.		

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:) 1.)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC): <u> </u>	(A)
2				Total Number of Dominant Species Across All Strata:	1	(B)
4.				Percent of Dominant Species		
		= Total Cove	r	That Are OBL, FACW, or FAC	: 100	(A/B)
Sapling/Shrub Stratum (Plot size:)						
1. Tamarix chilensis	5	Ν	FAC	Prevalence Index workshee	t:	
2. Pluchea sericia	40	Y	FACW	Total % Cover of:	Multiply by:	
3. Atriplex lentiformis	5	Ν	FAC	OBL species	x 1 =	
4.				FACW species	x 2 =	
5.				FAC species	x 3 =	
		= Total Cove	r	FACU species	x 4 =	
Herb Stratum (Plot size:)				UPL species	x 5 =	
1.				Column Totals:	(A) (i	B)
2.				Provalance Index - P/	۸ –	
3.					·	
4.				Hydrophytic Vegetation Indi	icators:	
5.				X Dominance Test is >50	%	
6.				Prevalence Index is ≤3.	0 ¹	
7.				Morphological Adaptatio	ons ¹ (Provide support	ing
8.				data in Remarks or c	on a separate sheet)	•
		= Total Cov	er	Problematic Hydrophytic	c Vegetation ¹ (Explair	n)
Woody Vine Stratum (Plot size:)					0	,
1.				¹ Indicators of hydric soil and	wetland hydrology mi	ust
2.				be present, unless disturbed	or problematic.	
		= Total Cove	r	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 5 % Co	ver of Biotic	Crust		Present? Yes	X No	
Remarks: Vegetation within Greeson Drain channel.						

SOIL

Profile Desc	cription: (Describe to tl	he depth n	eeded to docum	ent the inc	licator or	confirm t	he absend	e of indicat	ors.)		
Depth	Matrix		Re	edox Featu	res		_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	ire	R	emarks	
0-18	10 YR 3/1						clay loan	า			
				·							
	·										
				·							
				·	·						
			Matrix CS-Covora	d or Costod	Sand Grain	2	ocation: Pl	-Poro Lining	PC-Poot Ch	annol M	-Matrix
Hydric Soi	I Indicators: (Applicabl	le to all I R	Rs. unless other	wise note		о. I	Indicat	ors for Pro	blematic H	dric Se	oils ³
Histoso	h (A1)		Sandy I	Redox (S5)	,		1 c	m Muck (A9) (I RR C)	, and e	
Histic E	Epipedon (A2)		Stripped	d Matrix (Se	5)		2 0	m Muck (A1	0) (LRR B)		
Black H	Histic (A3)		Loamy	Mucky Min	, eral (F1)		Re	duced Vertio	; (F18)		
x Hydrog	en Sulfide (A4)		Loamy	Gleyed Ma	trix (F2)		Re	d Parent Ma	terial (TF2)		
Stratifie	ed Layers (A5) (LRR C)		x Deplete	d Matrix (F	3)		Ot	ner (Explain	in Remarks)	
1 cm M	luck (A9) (LRR D)		Redox	Dark Surfac	ce (F6)						
Deplete	ed Below Dark Surface (A11)	Deplete	d Dark Sur	face (F7)		3				
	Dark Sufface (A12)			Jepression	s (F8)		Indica	ors of hydro	phytic veger	tation a	na
Sandy i	Gleved Matrix (S1)			-00IS (F9)			wei	anu nyuruu	d or problem	presen	ι,
Oanuy							un				
Restrictive	Layer (if present):										
Туре:			_								
Depth (inc	ches):		_				Hydric So	il Present?	Yes	X	No
Remarks:											
HYDROLO	GY										
Wetland H	vdrology Indicators:							Secondary	Indicators	(2 or m	ore required)
Primary Ind	dicators (minimum of one	e required:	check all that app	IV)				Water N	larks (B1) (I	Riverin	e)
x Surface	e Water (A1)		Salt Crus	st (B11)				Sedime	nt Deposits	(B2) (R	iverine)
x High W	/ater Table (A2)		Biotic Cr	ust (B12)				Drift De	posits (B3) (Riverir	ne)
x Saturat	tion (A3)		Aquatic I	nvertebrate	es (B13)			Drainad	e Patterns (B10)	- /
Water I	Marks (B1) (Nonriverine	e)	Hydroae	n Sulfide O	dor (C1)			Drv-Sea	son Water	Table (C2)
Sedime	ent Deposits (B2) (Nonri	verine)	Oxidized	Rhizosphe	eres along	Living Roo	ots (C3)	Thin Mu	ick Surface	(C7)	,

Presence of Reduced Iron (C4)

Thin Muck Surface (C7)

Other (Explain in Remarks)

Recent Iron Reduction in Tilled Soils (C6)

12

0

0

Yes <u>x</u> No Depth (inches): Yes <u>x</u> No Depth (inches):

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

Yes <u>x</u> No Depth (inches):

Remarks: OHWM 10 ft. up bank. Steep banks, 20 ft. deep.

Drift Deposits (B3) (Nonriverine)

Inundation Visible on Aerial Imagery (B7)

Surface Soil Cracks (B6)

Water-Stained Leaves (B9)

Field Observations: Surface Water Present?

Water Table Present?

Saturation Present?

Crayfish Burrows (C8)

Shallow Aquitard (D3)

FAC-Neutral Test (D5)

Wetland Hydrology Present?

Saturation Visible on Aerial Imagery (C9)

Yes X No

Project/Site: Wistaria Ranch 0	City/County: Imperial County Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-7
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: 32.3	9 dd Long: <u>-115.62 dd</u> Datum: <u>NAD83</u>
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	r? Yes X No (If no, explain in Remarks.)
Are Vegetation	tly disturbed? Yes Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesX No
Remarks: IID drain vegetation and so	ils disturbed due to channel mainte	enance.	

	Absolute	Dominant	Indicator	Dominance Test workshee	et:		
Tree Stratum (Plot size:) 1.)	% Cover	Species?	Status	Number of Dominant Specie That Are OBL, FACW, or FA	s .C:	1	(A)
23.				Total Number of Dominant Species Across All Strata:		2	(B)
4.				Percent of Dominant Specie	s		(4 (D)
		= Total Cove	er	That Are OBL, FACW, or FA	.C:	50	_(A/B)
Sapling/Shrub Stratum (Plot size:)							
1. Pluchea sericia	80	Y	FACW	Prevalence Index workshe	et:		
2.				Total % Cover of:	Mu	Itiply by:	
3.				OBL species	x 1 =		
4.				FACW species 80	x 2 =	160	
5.				FAC species	x 3 =		
		= Total Cove	er	FACU species 10	x 4 =	40	
Herb Stratum (Plot size:)				UPL species	x 5 =		
1. Sorghum halepense	10	Y	FACU	Column Totals: 90	(A)	200	(B)
2.				Daviala a a la davi – D			
3.				Prevalence Index = E	S/A = 2.2		_
4.				Hydrophytic Vegetation In	dicators:		
5.				Dominance Test is >5	0%		
6.				X Prevalence Index is <	3.0^{1}		
7.				Morphological Adapta	tions ¹ (Pro	vide supp	ortina
8.				data in Remarks or	on a sepa	arate shee	t)
		= Total Cov	ver	Problematic Hydrophy	tic Vegeta	tion ¹ (Exp	lain)
Woody Vine Stratum (Plot size:					lio vegeta		
/				¹ Indicators of hydric soil and	dwetland	hydrology	must
2				be present, unless disturbe	d or proble	ematic.	maor
		= Total Cove	or	Undraubritie			
			21	Vegetation			
% Bare Ground in Herb Stratum10 % Co	ver of Biotic	Crust		Present? Yes	Х	No	
Remarks: Vegetation within IID drain channel.							

Profile Desc	ription: (Describe	e to the depth	needed to doc	ument the i	ndicator or	confirm t	he absence of i	indicators.)
Depth	Matri	x		Redox Feat	tures	2	_	
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remarks
0-18	10 YR 3/1						clay loam	
					•			
					·			
					·			
¹ Type: C=Co	ncentration D=Deple	tion RM=Reduc	ed Matrix CS=Co	vered or Coate	d Sand Grains	2	ocation: PI =Pore	Lining RC=Root Channel M=Matrix
Hydric Soi	Indicators: (App	licable to all I	_RRs. unless of	herwise not	ted.)		Indicators f	or Problematic Hydric Soils ³ :
Histoso	(A1)		San	ty Reday (S	5)		1 cm Mi	ick (A9) (I BB C)
Histic E	pipedon (A2)		Strip	ped Matrix (S6)		2 cm Mi	uck (A10) (LRR B)
Black H	listic (A3)		Loar	ny Mucky Mi	ineral (F1)		Reduce	d Vertic (F18)
Hydrog	en Sulfide (A4)		Loar	ny Gleyed M	latrix (F2)		Red Par	rent Material (TF2)
Stratifie	d Layers (A5) (LR	R C)	x Dep	eted Matrix ((F3)		Other (E	Explain in Remarks)
1 cm M	uck (A9) (LRR D)		Red	ox Dark Surf	ace (F6)			
Deplete	d Below Dark Surf	ace (A11)	Dep	eted Dark S	urface (F7)		2	
Thick D	ark Surface (A12)		Red	ox Depressio	ons (F8)		°Indicators o	f hydrophytic vegetation and
Sandy I	Mucky Mineral (S1)	Verr	al Pools (F9)		wetland	hydrology must be present,
Sandy G	Sleyed Matrix (S4)						uniess d	isturbed or problematic.
Restrictive	Layer (if present)	:						
Туре:								
Depth (inc	hes):						Hydric Soil Pres	sent? Yes X No
Remarks [.]								
	CV.							
Wetland Hy	o i vdrology Indicato	re.					Sec	andary Indicators (2 or more required)
Primary Ind	icators (minimum (n s. Of one require	t check all that a	annly)			<u>oecc</u>	Nater Marks (B1) (Riverine)
v Surfoor	λ (A1)			ruot (P11)				Sediment Denosite (B2) (Biverine)
	otor Table (A1)		Sail C	Cruct (P12)			°	Sediment Deposits (B2) (Riverine)
	d(ef T dD(e (A2)))			Glusi (DIZ)	taa (D12)		Ľ	Drainaga Dettarma (D10)
	IOTI (A3) Marka (B1) (Nanri i	(orino)	Aqua		Oder(C1)		Ľ	Drainage Fallerins (BTU)
			Hyulu			Living Do	L	This Music Surface (CZ)
	(B2)				neres along			Crowfish Rurrows (C?)
Dhit De	POSILS (D3) (NOTIT	verme)	Fiese	at Iron Dodu	otion in Tillo	r) d Saila (C((Clayinsh Burlows (Co)
	tion Visible on Apri	al Imagony (P	Thin I				·)	Shallow Aquitard (D3)
	Stained Leaves (P	ai iiriayery (Di)		E(CI)			EAC Neutral Test (D5)
	Stailleu Leaves (D:	9)			Remarks)			AC-Neutral Test (DS)
Field Obser	vations:							
Surface Wat	ter Present?	Yes <u>x</u>	No Depth	(inches):	12			
Water Table	Present?	Yes <u>x</u>	No Depth	(inches):	0	_		
Saturation P	resent?	Yes <u>x</u>	No Depth	(inches):	0	Wetla	and Hydrology	Present? Yes X No
(includes ca	pillary fringe)					- +:		
Describe Rec	corded Data (stream	m gauge, mon	itoring well, aeria	al photos, pre	evious inspe	ctions), if a	available:	
Remarks: OI	HWM 10 ft. up ban	k. Steep bank	s, +20 ft. deep.					

Project/Site: Wistar	ia Ranch		City/County: Im	perial County	Sampling Date: 09/18/12
Applicant/Owner: T	enaska			State: C	CA Sampling Point: <u>GW-8</u>
Investigator(s): G.S.	Scheid		Section, Town	ship, Range: Mt. Singal Qu	uad: Section 4 T17S, R13E
Landform (hillslope,	terrace, etc.):	floodplain terracel	Local relief (co	oncave, convex, none): <u>non</u>	eSlope (%): 0-1%
Subregion (LRR): L	RR-C		Lat: 32.70 dd	Long: -115.64 dd	Datum: NAD83
Soil Map Unit Name	e: Badland			NWI class	ification: Riverine
Are climatic / hydrol	ogic conditions	s on the site typical for t	his time of year? Yes X	No(If no, expl	lain in Remarks.)
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	No Are "Normal Circums	stances" present? Yes X No
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	No (If needed, explain an	ny answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesXNo
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test workshee	it:
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Specie	s
1. Tamarix chilensis	80	Y	FAC	That Are OBL, FACW, or FA	.C: <u>3</u> (A)
2.				Total Number of Dominant	
3.				Species Across All Strata:	3 (B)
4.				Percent of Dominant Specie	s(, ,
	80	= Total Cove	er	That Are OBL, FACW, or FA	.C: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size:					
1 Allenrolfea occidentalis	5	Y	FACW	Prevalence Index workshe	et:
2				Total % Cover of	Multiply by:
2					v 1 =
3					_ <u> </u>
4					x 2 =
5				FAC species	X3=
	5	= Total Cove	er	FACU species	x 4 =
Herb Stratum (Plot size:)				UPL species	x 5 =
1. Phragmites australis	5	Y	FACW	Column Totals:	(A) (B)
2.				Prevalence Index = F	$R/\Delta =$
3.					
4.				Hydrophytic Vegetation In	dicators:
5					
5.				X Dominance Test is >5	0%
6				X Dominance Test is >5 Prevalence Index is ≤	0% 3 0 ¹
6. 7.				X Dominance Test is >5 Prevalence Index is ≤ Morphological Adapta	0% 3.0 ¹ tions ¹ (Provide supporting
5. 6. 7. 8				X Dominance Test is >5 Prevalence Index is ≤3 Morphological Adapta data in Remarks or	0% 3.0 ¹ tions ¹ (Provide supporting r on a separate sheet)
5. 6. 7. 8.	5	= Total Cov		X Dominance Test is >5 Prevalence Index is < Morphological Adapta data in Remarks or Problematic Hydrophy	0% 3.0 ¹ tions ¹ (Provide supporting r on a separate sheet) tic Vegetation ¹ (Evplain)
6	5	= Total Cov	er	X Dominance Test is >5 Prevalence Index is ≤3 Morphological Adapta data in Remarks or Problematic Hydrophy	0% 3.0 ¹ tions ¹ (Provide supporting r on a separate sheet) tic Vegetation ¹ (Explain)
5. 6. 7. 8. Woody Vine Stratum (Plot size:)	5	= Total Cov		X Dominance Test is >5 Prevalence Index is ≤3 Morphological Adapta data in Remarks or Problematic Hydrophy	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain)
5. 6. 7. 8. <u>Woody Vine Stratum</u> (Plot size:) 1. 2.	5	 = Total Cov	er	X Dominance Test is >5 Prevalence Index is ≤ Morphological Adaptar data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present unless disturbed	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic
5. 6. 7. 8. <u>Woody Vine Stratum</u> (Plot size:) 1. 2.	5		er	X Dominance Test is >5 Prevalence Index is ≤ Morphological Adaptar data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present, unless disturbed	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic.
3.	5	= Total Cov	er	X Dominance Test is >5 Prevalence Index is ≤3 Morphological Adaptar data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present, unless disturber Hydrophytic	0% 3.0 ¹ tions ¹ (Provide supporting ⁻ on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic.
5. 6. 7. 8. <u>Woody Vine Stratum</u> (Plot size:) 1. 2. % Bare Ground in Herb Stratum 10 % Comparison	5	= Total Cov	er	X Dominance Test is >5 Prevalence Index is ≤3 Morphological Adapta data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present, unless disturbe Hydrophytic Vegetation Prosent?	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic.
3.	5	= Total Cov	er 	X Dominance Test is >5 Prevalence Index is ≤4 Morphological Adapta data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present, unless disturbed Hydrophytic Vegetation Present?	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic.
5.	5	= Total Cov = Total Cove = Total Cove c Crust lower floodpla	er er er	X Dominance Test is >5 Prevalence Index is ≤4 Morphological Adaptar data in Remarks or Problematic Hydrophy ¹ Indicators of hydric soil and be present, unless disturber Hydrophytic Vegetation Present? Yes	0% 3.0 ¹ tions ¹ (Provide supporting on a separate sheet) tic Vegetation ¹ (Explain) d wetland hydrology must d or problematic. XNo

Profile Des	scription: (Describe t	o the dep	th needed to docum	ent the in	dicator or c	confirm f	the absence of indicators.)			
Depth Matrix Redox Features				ures	0	_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks			
0-6	10 YR 2/1	100					clay loam			
6-18	7.5 YR 3/2	95	Gray mottles	5	RM	М				
			<u> </u>							
¹ Type: C=C	Concentration, D=Depletio	n, RM=Red	uced Matrix, CS=Covere	d or Coated	d Sand Grains	. 2	² Location: PL=Pore Lining, RC=Root Channel, M=Matrix.			
Hydric So	oil Indicators: (Applic	able to al	I LRRs, unless other	wise note	ed.)		Indicators for Problematic Hydric Soils ³ :			
Histos	ol (A1)		Sandy Redox (S5)				1 cm Muck (A9) (LRR C)			
Histic	Epipedon (A2)		Stripped Matrix (S6)				2 cm Muck (A10) (LRR B)			
Black	Histic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)			
<u>x</u> Hydro	gen Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent Material (TF2)			
Stratifi	ied Layers (A5) (LRR	C)	<u>x</u> Depleted Matrix (F3)				Other (Explain in Remarks)			
1 cm M	Muck (A9) (LRR D)		Redox Dark Surface (F6)							
Deplet	ted Below Dark Surfac	ce (A11)	Depleted Dark Surface (F7)				3			
Thick	Dark Surface (A12)		Redox Depressions (F8)				Indicators of hydrophytic vegetation and			
Sandy	/ Mucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,			
Sandy	Gleyed Matrix (S4)						unless disturbed or problematic.			
Restrictive	e Layer (if present):									
Туре:										
Depth (in	iches):						Hydric Soil Present? Yes X No			
Remarks:										
	JG f						Cooperatory in diastory (2 or more rea			
Wetland I	Hydrology Indicators)			Secondary Indicators (2 or more required)			
Primary Indicators (minimum of one required; check all that apply)										

Primary Indicators (minimu	m of one requir	Water Marks (B1) (Riverine)					
x Surface Water (A1)			Salt Crust (B11)			Sediment Deposits (B2) (Riverine)	
x High Water Table (A2)			Biotic Crust (B12))		Drift Deposits (B3) (Riverine)	
x Saturation (A3)			Aquatic Invertebra	ates (B13)		Drainage Patterns (B10)	
Water Marks (B1) (Nor	riverine)		x Hydrogen Sulfide	Odor (C1)		Dry-Season Water Table (C2)	
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizosp	heres along Liv	ving Roots (C3)	Thin Muck Surface (C7)	
Drift Deposits (B3) (No	nriverine)		Presence of Redu	uced Iron (C4)		Crayfish Burrows (C8)	
Surface Soil Cracks (B	6)		Recent Iron Redu	ction in Tilled S	Soils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Visible on A	erial Imagery (I	37)	Thin Muck Surfac	e (C7)		Shallow Aquitard (D3)	
Water-Stained Leaves	(B9)		Other (Explain in Remarks)		FAC-Neutral Test (D5)		
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (stru Remarks: Greeson Drain/Wa	Yes X Yes X Yes X eam gauge, mo	No Depth (inches): 6 No Depth (inches): 0 No Depth (inches): 0 with one of the second s			ology Present? Yes X No		

Project/Site: Wistaria Ranch 0	Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-9
Investigator(s): G. Scheid	Section, Township, Range: Mt. Signal Quad: Section 4 T17S, R13E
Landform (hillslope, terrace, etc.): Channel	Local relief (concave, convex, none): <u>concave</u> Slope (%): <u>0-1%</u>
Subregion (LRR): LRR-C Lat: 32.70	dd Long: -115.64 dd Datum: NAD83
Soil Map Unit Name: Fluvaquents, saline	NWI classification: Riverine
Are climatic / hydrologic conditions on the site typical for this time of yea	? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificant	y disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally p	roblematic? 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesXNo
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test worksheet	:
Tree Stratum (Plot size:) 1. none)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC	s C: <u> </u>
23.				Total Number of Dominant Species Across All Strata:	1 (B)
4.		= Total Cove	r	Percent of Dominant Species That Are OBL, FACW, or FAC	C: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size:			•1		
1				Prevalence Index workshee	
2				Total % Cover of	Multiply by:
2		<u> </u>		OBL species	x 1 =
а		<u> </u>		EACW species	x 2 =
4				FAC species	x 3 =
		- Total Cause	-		× 0 -
Llorb Stratum (Diot size)		= Total Cove	! [`		× 4 =
<u>Herb Stratum</u> (Flot Size)	00	V			(A) (D)
	90	<u> </u>	FACW		(A)(D)
3.				Prevalence Index = B/	A =
4.				Hydrophytic Vegetation Ind	licators:
5.				X Dominance Test is >50	1%
6.				Prevalence Index is ≤3	.0 ¹
7.				Morphological Adaptati	ons ¹ (Provide supporting
8.				data in Remarks or	on a separate sheet)
	90	= Total Cov	er	Problematic Hydrophyt	ic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)					
1				¹ Indicators of hydric soil and	wetland hydrology must
2				be present, unless disturbed	or problematic.
		= Total Cove	r	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust Present? Yes X No					X No
Remarks: Vegetation growing in Greeson Drain/Wash	ow flow cha	annel.			

SOIL

Profile Desc	cription: (Describe to Matrix	the dept	n needed to docume	ent the in	dicator or c	onfirm f	he absen	ce of indica	ators.)	
(inches)	Color (moist)	%	Color (moist)	%		Loc ²	_ Tex	ure	Remarks	
0-18	10 YR 2/1	90	gray mottles	10	RM	М	clay loa	m		
					·		 			
¹ Type: C=Co	ncentration, D=Depletion	, RM=Redu		d or Coatec			Location: P	L=Pore Lining	, RC=Root Channel, M=Matrix.	
Hydric Soil	I Indicators: (Applica	ble to all	LRRs, unless other	wise note	∋d.)		Indica	ators for Pro	oblematic Hydric Soils ³ :	
 Histosol (A1) Histosol (A2) Black Histic (A3) X 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) x 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. 				
Type: Depth (inc	ches):						Hydric S	oil Present?	Yes X No	
Remarks:										
HYDROLO	GY									
Wetland H	ydrology Indicators:							<u>Secondar</u>	y Indicators (2 or more required)	
Primary Ind	licators (minimum of o	ne require	d; check all that appl	y)				Water	Marks (B1) (Riverine)	
<u>x</u> Surface	e Water (A1)		Salt Crus	t Crust (B11)				Sedim	ent Deposits (B2) (Riverine)	
<u>x</u> High W	ater Table (A2)		Biotic Cru	Biotic Crust (B12)					Drift Deposits (B3) (Riverine)	
<u>x</u> Saturat	tion (A3)		Aquatic In	Aquatic Invertebrates (B13)					ige Patterns (B10)	
Water M	Marks (B1) (Nonriver i	ne)	<u>x</u> Hydroger	n Sulfide C	Odor (C1)			Dry-Se	eason Water Table (C2)	
Sedime	ent Deposits (B2) (Noi	nriverine)	Oxidized	Oxidized Rhizospheres along Living Roots (C3)					luck Surface (C7)	

		•	
Cravfish	Burrows	(C8)	

	•	,		
Saturation	Visible on	Aerial	Imagery	(C9)

- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Water-Stained Leaves (B9)		Other (Explain in Remarks)		FAC-Neutral Test (D5)			
Field Observations:							
Surface Water Present?	Yes X No	Depth (inches):	8-	_			
Water Table Present?	Yes X No	Depth (inches):	0	_			
Saturation Present? (includes capillary fringe)	Yes X No	Depth (inches):	0	Wetland Hydrology Present?	Yes <u>X</u> No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: Greeson Drain/Wa	ash low flow channel.						

Presence of Reduced Iron (C4)

Thin Muck Surface (C7)

Recent Iron Reduction in Tilled Soils (C6)

Drift Deposits (B3) (Nonriverine)

Inundation Visible on Aerial Imagery (B7)

Surface Soil Cracks (B6)

Project/Site: Wistaria Ranch 0	City/County: Imperial County Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-10
Investigator(s): G. Scheid	Section, Township, Range: Mt. Signal Quad: Section 4 T17S, R13E
Landform (hillslope, terrace, etc.): Channel	Local relief (concave, convex, none): concave Slope (%): 0-1%
Subregion (LRR): LRR-C Lat: 32.7	0 dd Long: <u>-115.64 dd</u> Datum: <u>NAD83</u>
Soil Map Unit Name: Badland	NWI classification: Riverine
Are climatic / hydrologic conditions on the site typical for this time of year	r? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificant	ly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynaturally p	oroblematic? 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesX No
Remarks:			

Absolute	Dominant	Indicator	Dominance Test worksheet		
% Cover	Species?	Status	Number of Dominant Species		
5	Y	FAC	That Are OBL, FACW, or FAC	2: <u>4</u> (A	()
			Total Number of Dominant		
			Species Across All Strata:	4 (B	3)
			Percent of Dominant Species		
5	= Total Cove	er	That Are OBL, FACW, or FAC	: <u>100</u> (A	/B)
30	Y	FACW	Prevalence Index workshee	t:	
30	Y	FACW	Total % Cover of:	Multiply by:	
20	Y	FAC	OBL species	x 1 =	
			FACW species	x 2 =	
			FAC species	x 3 =	
80	= Total Cove	er.	FACU species	x 4 =	
			UPL species	x 5 =	
			Column Totals:	(A) (B)	
			Prevalence Index = B/	A =	
			Hydrophytic Vegetation Ind	icators:	
			X Dominance Test is >50	%	
			Prevalence Index is ≤3.	0 ¹	
			Morphological Adaptati	ons ¹ (Provide supporting	a
			data in Remarks or o	on a separate sheet)	0
90	= Total Cov	/er	Problematic Hydrophyti	c Vegetation ¹ (Explain)	
			¹ Indicators of hydric soil and	wetland hvdrology must	t
			be present, unless disturbed	or problematic.	
	= Total Cove	er	Hydrophytic		
			Vegetation		
% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust Present? Yes X No					
tributary low	/ flow channel	•			
	Absolute % Cover 5 30 30 20 80 90 90 wer of Biotic	Absolute $\%$ CoverDominant Species?5Y5Y5= Total Cover30Y30Y20Y80= Total Cover80= Total Cover90= Total Cover90 <td>Absolute % Cover Dominant Species? Indicator Status 5 Y FAC 5 Y FAC 30 Y FACW 30 Y FACW 30 Y FACW 20 Y FAC 80 = Total Cover </td> <td>Absolute Dominant Indicator S Y FAC 5 Y FAC 0 Y FAC 1 Indicator Number of Dominant Species 5 Y FAC 1 Indicator Number of Dominant Species 5 = Total Cover Total Number of Dominant Species 30 Y FACW 30 Y FACW 20 Y FAC 20 Y FAC 80 = Total Cover 80 = Total Cover 80 = Total Cover 90 = Total Cover Hydrophytic Yeget</td> <td>Absolute % Cover Dominant Species? Indicator Status Dominance Test worksheet: Number of Dominant Species 5 Y FAC That Are OBL, FACW, or FAC: 4 (A </td>	Absolute % Cover Dominant Species? Indicator Status 5 Y FAC 5 Y FAC 30 Y FACW 30 Y FACW 30 Y FACW 20 Y FAC 80 = Total Cover	Absolute Dominant Indicator S Y FAC 5 Y FAC 0 Y FAC 1 Indicator Number of Dominant Species 5 Y FAC 1 Indicator Number of Dominant Species 5 = Total Cover Total Number of Dominant Species 30 Y FACW 30 Y FACW 20 Y FAC 20 Y FAC 80 = Total Cover 80 = Total Cover 80 = Total Cover 90 = Total Cover Hydrophytic Yeget	Absolute % Cover Dominant Species? Indicator Status Dominance Test worksheet: Number of Dominant Species 5 Y FAC That Are OBL, FACW, or FAC: 4 (A

SOIL

Profile Des	cription: (Describe to	the dep	th needed to docum	ent the in	dicator or	confirm	the absence of i	ndicato	rs.)	
Depth	Matrix		R	edox Feat	ures		_			
(inches)	Color (moist)	%	Color (moist)	%	Туре'	Loc ²	Texture		Rema	arks
0-18	7.5 YR 3/2	95	5 YR 6/8	5	RM	Μ	clay loam			
			_							
				· ·						
				<u> </u>						
¹ Type: C=Co	 oncentration. D=Depletion.	RM=Red	uced Matrix. CS=Covere	d or Coated	Sand Grains	3.	² Location: PL=Pore	Linina. R	C=Root Channe	I. M=Matrix.
Hydric So	il Indicators: (Applica	ble to all	LRRs, unless other	rwise note	ed.)		Indicators for	or Probl	ematic Hydri	c Soils ³ :
Histoso	ol (A1)		Sandy I	Redox (S5	5)		1 cm Mu	ick (A9)		
Histic E	Epipedon (A2)		Stripped	d Matrix (S	, 6)		2 cm Mu	ick (A10) (LRR B)	
Black H	Histic (A3)		Loamy	Mucky Mir	neral (F1)		Reduced	d Vertic (F18)	
Hydrog	gen Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Red Par	ent Mate	erial (TF2)	
Stratifie	ed Layers (A5) (LRR C	;)	x Deplete	d Matrix (I	F3)		Other (E	xplain in	Remarks)	
1 cm N	luck (A9) (LRR D)	()	Redox I	Dark Surfa	ace (F6)					
Deplete	ed Below Dark Surface	e (A11)	Deplete	d Dark Su			³ Indiactora a	fbudrood		and and
Thick L	Jark Surface (ATZ) Mucky Mineral (S1)		Redox	Depression Poole (EQ)	ns (F8)		indicators o	r nyaropi vydrologi	nytic vegetatic	in and sent
Sandy	Gleved Matrix (S4)			F 0015 (1 9)			unless di	sturbed	or problematic	Sent,
Outrie (
Restrictive	Layer (if present):									
Type:	-1).						Libertaile Orail Dave		Vee V	N -
Depth (Inc	cnes):						Hydric Soli Pres	sent?	Yes X	NO
Remarks:										
HYDROLO	GY									
Wetland H	lydrology Indicators:						Seco	ondary li	ndicators (2 c	or more required)
Primary Inc	dicators (minimum of o	ne requir	ed; check all that app	ly)			x V	Vater Ma	urks (B1) (Rive	erine)
Surfac	e Water (A1)		Salt Crus	st (B11)			xS	ediment	Deposits (B2) (Riverine)
High V	Vater Table (A2)		Biotic Cr	ust (B12)			C	Drift Depo	osits (B3) (Riv	erine)
Satura	ition (A3)		Aquatic I	nvertebrat	tes (B13)		x D)rainage	Patterns (B10	J)
Water	Marks (B1) (Nonriveri	ne)	Hydroge	n Sulfide (Odor (C1)		C)ry-Seas	on Water Tab	le (C2)
Sedim	ent Deposits (B2) (Nor	nriverine) Oxidized	Rhizosph	eres along	Living Ro	oots (C3) T	hin Muc	k Surface (C7)
Drift D	eposits (B3) (Nonriver	ine)	Presence	e of Reduc	ced Iron (C4	- -	c	rayfish I	Burrows (C8)	

Saturation	Visible on	Aerial	Imagery (C9)

	-	-	
Shallow Aquitard (D3)			

	•		
FAC	-Neutral Te	est (D5)	

Field Observations:							
Surface Water Present?	Yes	No X Depth (inches):					
Water Table Present?	Yes	No X Depth (inches):					
Saturation Present? (includes capillary fringe)	Yes	No X Depth (inches):	Wetland Hydrology Present?	Yes X No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks: Greeson Drain/Wa	ash tributary	low flow channel.					
1							

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)
Other (Explain in Remarks)

Surface Soil Cracks (B6)

Water-Stained Leaves (B9)

Inundation Visible on Aerial Imagery (B7)

Project/Site: Wistar	ia Ranch		City/County: In	perial County		Sampling Date: 09/18/12
Applicant/Owner: T	enaska			State:	CA	Sampling Point: <u>GW-11</u>
Investigator(s): G.S.	Scheid		Section, Towr	nship, Range: <u>Mt. Sigr</u>	al Quad:	Section 3 T17S, R13E
Landform (hillslope,	terrace, etc.):	floodplain terrace	Local relief (co	oncave, convex, none):	none	Slope (%): 0-1%
Subregion (LRR): L	RR-C		Lat: 32.70 dd	Long: <u>-115.6</u>	4 dd	Datum: NAD83
Soil Map Unit Name	e: Imperial-Gle	enbar silty clay loam		NWI	classifica	tion: Riverine
Are climatic / hydrol	ogic conditions	s on the site typical for th	nis time of year? Yes X	<u>(</u> No <u>(</u> If no	, explain i	in Remarks.)
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	No Are "Normal Cir	cumstand	ces" present? Yes X No
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	No (If needed, expl	ain any a	nswers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size:) 1.)	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC	: 1	(A)
23.				Total Number of Dominant Species Across All Strata:	1	(B)
4.	-			Percent of Dominant Species		
	5	= Total Cove	r	That Are OBL, FACW, or FAC	: <u>100</u>	_(A/B)
Sapling/Shrub Stratum (Plot size:)						
1. Sueada moquinii	50	Y	FACW	Prevalence Index worksheet	t:	
2.	-			Total % Cover of:	Multiply by:	
3.			FAC	OBL species	x 1 =	-
4.				FACW species	x 2 =	-
5.				FAC species	x 3 =	-
	50	= Total Cove	r	FACU species	x 4 =	-
Herb Stratum (Plot size:)			-	UPL species	x 5 =	-
<u> </u>				Column Totals:	(A)	(B)
2.						_ ` `
3.				Prevalence Index = B/A	A =	-
4.		·		Hydrophytic Vegetation Indi	cators:	
5.				X Dominance Test is >50 ^o	%	
6.				Prevalence Index is ≤3.	0 ¹	
7.				Morphological Adaptatio	ons ¹ (Provide suppo	rtina
8.				data in Remarks or c	on a separate sheet))
	50	= Total Cov	er	Problematic Hydrophytic	c Vegetation ¹ (Expla	in)
Woody Vine Stratum (Plot size:)					e regetation (_rpie)
<u> </u>				¹ Indicators of hydric soil and	wetland hydrology n	nust
2.				be present, unless disturbed	or problematic.	
Bare Ground in Herb Stratum 50 % Cover of Biotic Crust Hydrophytic Vegetation Present? Yes X						
Remarks: Vegetation growing adjacnet to Greeson Dra						

SOIL

Profile Des	cription: (Describe to the d	epth needed to docum	ent the ind	icator or	confirm t	the absence of	indicat	ors.)
Depth	Matrix	Re	edox Featur	es		_		
(inches)	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-12	7.5 YR 3/2 95	gray mottles	5	RM	М	clay loam		
				·				
	,,,			<u> </u>				
				·				
	<u> </u>							
				<u> </u>				
¹ T			d an Oa ata d (2			
	Indicators: (Applicable to	all L PPs unloss other	d or Coated a		5.	Location: PL=Por	for Pro	RC=Root Channel, M=Matrix.
History				.,				
	DI (AT) Eninadan (A2)	Sanuy F	(CO) (SO) Matrix (S6	:)		1 CH1 M	luck (A9 luck (A1	
Flack E	-pipedon (A2)		Mucky Minc	') vrol (E1)		2 CIT IV	nuck (Ai ad Vortic	(ERR B)
Black T	$\operatorname{Hole}\left(AS\right)$		Cloved Mat	riv (E2)		Reduct	aront Ma	terial (TE2)
Stratifie	ad Lavers (A5) (LRR C)	v Denlete	d Matrix (E	NA (1 2) R)		Other (Evolain i	in Remarks)
000000000	luck (A9) (I RR D)	Depicte Redox [Dark Surfac	e (F6)				in Kemaika)
Deplete	ed Below Dark Surface (A11) Deplete	d Dark Surf	ace (F7)				
Thick F	Dark Surface (A12)	,Bepiete Redox [Depressions	s (F8)		³ Indicators	of hvdro	phytic vegetation and
Sandy	Mucky Mineral (S1)	Vernal F	Pools (F9)			wetland	l hvdrolo	av must be present.
Sandy	Gleyed Matrix (S4)					unless	disturbed	d or problematic.
Restrictive	Laver (if present):							•
Type	Layer (in present).							
Denth (in	chec).					Hydric Soil Pr	acont?	
Deptil (int							coent:	
Remarks:								
HYDROLO	GY							
Wetland H	ydrology Indicators:					Sec	ondary	Indicators (2 or more required)
Primary Inc	dicators (minimum of one rec	uired; check all that appl	y)				Water M	larks (B1) (Riverine)
Surfac	e Water (A1)	x Salt Crus	st (B11)			x	Sedime	nt Deposits (B2) (Riverine)
High W	/ater Table (A2)	Biotic Cru	ust (B12)				Drift De	posits (B3) (Riverine)
Satura	tion (A3)	Aquatic I	nvertebrate	s (B13)		x	Drainad	e Patterns (B10)
Water	Marks (B1) (Nonriverine)	Hydroger	n Sulfide Or	dor(C1)			Dry-Sea	uson Water Table (C2)
Sedim	ent Deposits (B2) (Nonriver i	ne) Ovidized	Rhizoenho	res alona	Living Ro	ots (C3)	Thin Mu	ck Surface (C7)
	enosite (B3) (Nonriverino)		of Reduce	d Iron (C			Cravfieb	Burrows (C8)
	o Soil Crocks (PS)	I ICSCIUC		on in Tillo	r) 1 Saila (C	<u> </u>	Caturati	on Visible on Agric Imagon (CO)
	tion Visible on Aerial Imagor	(B7) This Mus	k Surface (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): Yes X No Depth (inches): Yes X No Saturation Present? 6 Wetland Hydrology Present? (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Greeson Drain/Wash loweer floodplain terrace drainage.

Project/Site: Wistaria Ranch	City/County: Imperial County Sampling Date: 09/18/12	
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-12	
Investigator(s): G. Scheid	Section, Township, Range: Mt. Signal Quad: Section 3 T17S, R13E	
Landform (hillslope, terrace, etc.): low flow channel	Local relief (concave, convex, none): <u>concave</u> Slope (%): <u>0-1</u>	%
Subregion (LRR): LRR-C Lat: 32.7	70 dd Long: <u>-115.64 dd</u> Datum: <u>NAD83</u>	
Soil Map Unit Name: Fluvaquents, saline	NWI classification: Riverine	
Are climatic / hydrologic conditions on the site typical for this time of year	ear? Yes X No (If no, explain in Remarks.)	
Are Vegetation	ntly disturbed? Yes Are "Normal Circumstances" present? Yes X No	
Are Vegetation, Soil, or Hydrologynaturally	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? Hydric Soil Present? Wetland Hydrology Present?	Yes _ Yes _ Yes _	x x x	No No No	Is the Sampled Area within a Wetland?	Yes_	x	_ No
Remarks: Greeson Drain/Wash vegetation and soils disturbed peridocally due to maintenance.							

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	
1. Tamarix chilensis	40	Y	FAC	That Are OBL, FACW, or FAC	: <u> </u>
2				Total Number of Dominant	
3.				Species Across All Strata:	3 (B)
4.				Percent of Dominant Species	
	40	= Total Cove	er	That Are OBL, FACW, or FAC	:: <u>100</u> (A/B)
Sapling/Shrub Stratum (Plot size:)					
1. Atriplex lentiformis	20	Y	FAC	Prevalence Index worksheet	
2.				Total % Cover of:	Multiply by:
3.				OBL species	x 1 =
4.				FACW species	x 2 =
5.				FAC species	x 3 =
	20	= Total Cove	er	FACU species	x 4 =
Herb Stratum (Plot size:)				UPL species	x 5 =
1. Leptochloa uninervia	5	Y	FACW	Column Totals:	(A) (B)
2.					··· <u> </u>
3.				Prevalence Index = B/A	/ =
4.				Hydrophytic Vegetation Indi	cators:
5.				X Dominance Test is >50°	%
6.				Prevalence Index is ≤3.	D ¹
7.	-			Morphological Adaptatio	ons ¹ (Provide supporting
8.				data in Remarks or c	on a separate sheet)
	5	= Total Cov	rer	Problematic Hydrophytic	c Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)					
1.				¹ Indicators of hydric soil and	wetland hydrology must
2.	-			be present, unless disturbed	or problematic.
		= Total Cove	er	Hydrophytic	
		. .		Vegetation	
% Bare Ground in Herb Stratum 35 % Co	ver of Biotic	Crust		Present? Yes	X No
Remarks: Vegetation growing in Greeson Drain/Wash	low flow cha	annel.		1	

SOIL

Depth	Matrix		R	edox Featu	ires			
(inches)	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2 7.5	5 YR 3/1						clay loam	
2-6 7.5	5 YR 2/1	95 gray	mottles	5	RM	Μ	clay loam	muck
							<u></u>	
¹ Tvpe: C=Concer	ntration. D=Depletion, RM	Reduced Ma	atrix. CS=Covere	ed or Coated	Sand Grain	s. 2	Location: PL=Por	e Lining. RC=Root Channel, M=Matrix.
Hydric Soil Ind	licators: (Applicable	to all LRRs	, unless othe	rwise note	ed.)	<u></u>	Indicators	for Problematic Hydric Soils ³ :
Histosol (A	1)		Sandy	Redox (S5))		<u>x</u> 1 cm M	1uck (A9) (LRR C)
Histic Epipe	edon (A2)		Strippe	d Matrix (S	6)		2 cm N	luck (A10) (LRR B)
Black Histic	: (A3)		Loamy	Mucky Min	eral (F1)		Reduc	ed Vertic (F18)
x Hydrogen S	Sulfide (A4)		Loamy	Gleyed Ma	ıtrix (F2)		Red Pa	arent Material (TF2)
Stratified La	ayers (A5) (LRR C)		x Deplete	ed Matrix (⊢	·3)		Other (Explain in Remarks)
1 CM IVIUCK	(A9) (LKK D) clow Dark Surface (Δ'	11)	Redux	Dark Suna Dark Su	CE (Fb)			
Depieted D	Surface (A12)	1)	Depiete Redox	Dank Sui Denressior			³ Indicators	of hydrophytic vegetation and
Sandy Muc	kv Mineral (S1)		Vernal	Pools (F9)	is (i 0)		wetland	I hydrology must be present.
Sandy Gley	/ed Matrix (S4)						unless	disturbed or problematic.
Restrictive Lav	er (if present):							
Type:	•••••••••••••••••••••••••••••••••••••••							
Depth (inches	,):						Hydric Soil Pre	esent? Yes X No
Pomarke:								
Remains.								
IYDROLOGY								
IYDROLOGY Wetland Hydro	logy Indicators:						Sec	condary Indicators (2 or more requir
IYDROLOGY Wetland Hydro Primary Indicate)logy Indicators: ors (minimum of one re	equired; che	ck all that app	<u>ыу)</u>			<u>Sec</u>	condary Indicators (2 or more requir Water Marks (B1) (Riverine)
IYDROLOGY Wetland Hydro Primary Indicate x Surface Wa	Jogy Indicators: ors (minimum of one mater (A1)	equired; che	<u>ck all that app</u> _Salt Cru	<u>אוע)</u> st (B11)			<u>Sec</u>	condary Indicators (2 or more requir Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
IYDROLOGY Wetland Hydro Primary Indicato x Surface Wa x High Water	Diogy Indicators: ors (minimum of one r ater (A1) Table (A2)	equired; che	<u>ck all that app</u> Salt Cru: Biotic Cr	<u>bly)</u> st (B11) ⁻ ust (B12)			<u>Sec</u>	condary Indicators (2 or more requir Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
HYDROLOGY Wetland Hydro Primary Indicato x Surface Water x High Water x Saturation (ology Indicators: ors (minimum of one r ater (A1) • Table (A2) (A3)	equired; che	<u>ck all that app</u> Salt Cru Biotic Cr Aquatic	oly) st (B11) rust (B12) Invertebrate			<u>Sec</u>	condary Indicators (2 or more requir Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
IYDROLOGY Wetland Hydro Primary Indicate x Surface Wa x High Water x Saturation (Water Mark	ology Indicators: ors (minimum of one r ater (A1) • Table (A2) (A3) (s (B1) (Nonriverine)	equired; che	<u>ck all that app</u> Salt Cru Biotic Cr Aquatic <u>x</u> Hydroge	און st (B11) rust (B12) Invertebrate n Sulfide C				condary Indicators (2 or more requir Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
IYDROLOGY Wetland Hydro Primary Indicate x Surface Wa x High Water x Saturation (Water Mark Sediment E	ology Indicators: ors (minimum of one r ater (A1) • Table (A2) (A3) (s (B1) (Nonriverine))eposits (B2) (Nonrive	equired; che	<u>ck all that app</u> Salt Cru Biotic Cr Aquatic X Hydroge Oxidized	oly) st (B11) rust (B12) Invertebrate in Sulfide C J Rhizosphe	es (B13) Idor (C1) eres along	Living Ro		condary Indicators (2 or more requir Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
HYDROLOGY Wetland Hydro Primary Indicate x Surface Wa x High Water x Saturation (Water Mark Sediment D Drift Depos Drift Depos	ology Indicators: ors (minimum of one r ater (A1) • Table (A2) (A3) (s (B1) (Nonriverine))eposits (B2) (Nonriverine)	equired; che #rine)	<u>ck all that app</u> Salt Cru Biotic Cr Aquatic X Hydroge Oxidized	oly) st (B11) rust (B12) Invertebrate in Sulfide C J Rhizosphe e of Reduc	es (B13))dor (C1) эres along ed Iron (C4	Living Ro	Sec 	condary Indicators (2 or more requir 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)
HYDROLOGY Wetland Hydro Primary Indicate x Surface Wa x High Water x Saturation (Water Mark Sediment D Drift Depos Surface So	ology Indicators: ors (minimum of one r ater (A1) • Table (A2) (A3) (s (B1) (Nonriverine) Deposits (B2) (Nonrive its (B3) (Nonriverine) il Cracks (B6)	equired; che	ck all that app Salt Cru Biotic Cr Aquatic X Hydroge Oxidized Presenc Recent I	bly) st (B11) rust (B12) Invertebrate in Sulfide C J Rhizosphe e of Reduc ron Reduct	es (B13))dor (C1) eres along ed Iron (C4 ion in Tilleo	Living Ro	Dets (C3)	condary Indicators (2 or more requined 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 (1)
HYDROLOGY Wetland Hydro Primary Indicate x Surface Wa x High Water x Saturation (Water Mark Sediment D Drift Depos Surface So Inundation (Surface So	Dlogy Indicators: ors (minimum of one r ater (A1) [•] Table (A2) (A3) (s (B1) (Nonriverine) Deposits (B2) (Nonriverine) its (B3) (Nonriverine) il Cracks (B6) Visible on Aerial Imag	equired; che #rine) ery (B7)	<u>ck all that app</u> Salt Cru Biotic Cr Aquatic X Hydroge Oxidized Presenc Recent I Thin Mu	bly) st (B11) rust (B12) Invertebrate en Sulfide C J Rhizosphe e of Reduct ron Reduct ck Surface	es (B13))dor (C1) eres along ed Iron (C4 ion in Tilleo (C7)	Living Ro) J Soils (Cl	Dots (C3)	condary Indicators (2 or more requin 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 (Shallow Aquitard (D3)

Field Observations:					
Surface Water Present?	Yes X	No Depth (inches):	12		
Water Table Present?	Yes X	No Depth (inches):	0		
Saturation Present? (includes capillary fringe)	Yes X	No Depth (inches):	0	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Recorded Data (strea	am gauge, mor	nitoring well, aerial photos	, previous inspectio	ns), if available:	
Remarks: Greeson Drain/Was	sh low flow cha	annel. OHWM 10 ft. up bar	nk; steep banks 20 t	ft.	

Project/Site: Wistaria Ranch Ci			City/County: Im	perial County	Sampling Date: 09/18/12
Applicant/Owner: 1	enaska			State:	CA Sampling Point: <u>GW-13</u>
Investigator(s): G.S.	Scheid		Section, Town	ship, Range: Mt, Signal Q	uad: Section 4 T17S, R13E
Landform (hillslope,	terrace, etc.):	low flow channel	Local relief (co	oncave, convex, none): <u>cor</u>	Slope (%): 0-1%
Subregion (LRR): LRR-C Lat: 32.70			Lat: 32.70 dd	Long: <u>-115.64 dd</u>	Datum: NAD83
Soil Map Unit Name	e: Fluvaquents	s, saline		NWI class	ification: Riverine
Are climatic / hydrol	logic conditions	s on the site typical for t	his time of year? Yes X	No(If no, exp	lain in Remarks.)
Are Vegetation	, Soil	, or Hydrology	significantly disturbed?	No Are "Normal Circum	stances" present? Yes <u>X</u> No
Are Vegetation	, Soil	, or Hydrology	naturally problematic?	No (If needed, explain a	ny answers in Remarks.)

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	YesX No
Remarks:			

	Absolute	Dominant	Indicator	Dominance Test worksheet	t:	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species	s	
1. Tamarix chilensis	60	Y	FAC	That Are OBL, FACW, or FA	C: <u>1</u>	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	1	(B)
4				Percent of Dominant Species	S	(A/D)
	60	= Total Cove	er	That are OBL, FACW, of FA	0: 100	(AVB)
Sapling/Shrub Stratum (Plot size:)						
1.				Prevalence Index workshee	et:	
2.				Total % Cover of:	Multiply by:	
3.				OBL species	x 1 =	
4.				FACW species	x 2 =	
5.				FAC species	x 3 =	
		= Total Cove	er	FACU species	x 4 =	
Herb Stratum (Plot size:)				UPL species	x 5 =	_
<u> </u>				Column Totals:	(A)	(B)
2						_``
3				Prevalence Index = B	/A =	
4.				Hydrophytic Vegetation Inc	dicators:	
5.				X Dominance Test is >50	0%	
6.				Prevalence Index is ≤3	3.0 ¹	
7.				Morphological Adaptat	ions ¹ (Provide supr	oorting
8.				data in Remarks or	on a separate she	et)
		= Total Cov	er	Problematic Hydrophyl	tic Vegetation ¹ (Exr	olain)
Woody Vine Stratum (Plot size:)						,iairi)
1 ,				¹ Indicators of hydric soil and	wetland hydrology	must
2				be present, unless disturbed	d or problematic.	muot
<u></u>		- Total Cove	or.	Herbergherd's		
			7	Hydropnytic Vegetation		
% Bare Ground in Herb Stratum 40 % Co	over of Biotic	Crust		Present? Yes	X No	
Remarks: Vegetation growing in tributary within Greese	on Drain/Wa	sh floodplain	terrace.	1		

Profile Desc	ription: (Describe to	the dept	h needed to docum	ent the in	dicator or o	confirm	the absence o	of indicators.)		
Depth	Matrix		Re	edox Featu	ures		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-18	7.5 YR 3/1	95	5 YR 6/8	5	RM	М	clay loam			
				·						
				·	· ·					
			·	. <u> </u>						
				·						
¹ Type: C=Co	ncentration D=Depletion	RM=Red		d or Coated	Sand Grains	. :	$\frac{2}{1}$ ocation: PI = Pc	pre Lining RC=Root Channel M=Matrix		
Hydric Soil	Indicators: (Applica	ble to all	LRRs, unless other	wise note	ed.)		Indicators	s for Problematic Hydric Soils ³ :		
Histoso	I (A1)		Sandy F	Redox (S5)		1 cm I	Muck (A9) (LRR C)		
Histic E	pipedon (A2)		Stripped	d Matrix (S	ý 6)		2 cm l	Muck (A10) (LRR B)		
Black H	listic (A3)		Loamy	Mucky Mir	neral (F1)		Reduc	ced Vertic (F18)		
Hydroge	en Sulfide (A4)		Loamy	Gleyed Ma	atrix (F2)		Red P	Parent Material (TF2)		
Stratifie	d Layers (A5) (LRR C)	x Deplete	d Matrix (F	=3)		Other	Other (Explain in Remarks)		
1 cm M	uck (A9) (LRR D)		Redox I	Dark Surfa	ice (F6)					
Deplete	d Below Dark Surface	e (A11)	Deplete	d Dark Su	rface (F7)					
Thick D	ark Surface (A12)		Redox [Depressio	ns (F8)		³ Indicators	s of hydrophytic vegetation and		
Sandy N	Mucky Mineral (S1)		Vernal F	Pools (F9)			wetlan	d hydrology must be present,		
Sandy (Gleyed Matrix (S4)						unless	disturbed or problematic.		
Restrictive	Layer (if present):									
Type:										
Depth (inc	hes):						Hydric Soil P	resent? Yes X No		
Remarks [.]										
Remains.										
	0.7									
							0.			
wetland Hy	varology indicators:			L A			<u>Se</u>	Condary Indicators (2 or more required)		
Primary Ind	icators (minimum or o	ne require	ed; check all that appl							
x Surface	e vvater (A1)		Salt Crus	st (B11)				Sediment Deposits (B2) (Riverine)		
<u>x</u> High W	ater Table (A2)		Biotic Cru	ust (B12)				Dritt Deposits (B3) (Riverine)		
<u>x</u> Saturat	ion (A3)		Aquatic I	nvertebrat	es (B13)			Drainage Patterns (B10)		
Water N	Marks (B1) (Nonriveri	ne)	Hydrogei	n Sulfide C	Odor (C1)			Dry-Season Water Table (C2)		
Sedime	ent Deposits (B2) (Nor	nriverine)	Oxidized	Rhizosph	eres along l	Living Ro	oots (C3)	Thin Muck Surface (C7)		
Drift De	eposits (B3) (Nonriver	ine)	Presence	e of Reduc	ed Iron (C4)		Crayfish Burrows (C8)		
Surface	e Soil Cracks (B6)		Recent Ir	ron Reduc	tion in Tillec	I Soils (C	6)	Saturation Visible on Aerial Imagery (C9)		

Saturation	Visihle	on Aerial	Imagen	(CQ)
 Jaturation	VISIDIE	UII Achai	innagery	(03)

	· ·	`
Shallow Aquitard (D3)		

Water-Stained Leaves	eriai imag (B9)	gery (i	87)	Other (Explain in Remarks)		Snallow Aquitard (D3) FAC-Neutral Test (D5)		
Field Observations:								
Surface Water Present?	Yes	Х	No	Depth (inches):	6			
Water Table Present?	Yes	Х	No	Depth (inches):	0			
Saturation Present? (includes capillary fringe)	Yes	Х	No	Depth (inches):	0	Wetland Hydrology Present?	Yes X No	
Describe Recorded Data (str	eam gaug	ge, mo	onitoring	well, aerial photos, pre	evious inspec	ctions), if available:		
Remarks: Small tributary to	Greeson I	Drain/	Wash Ic	w flow channel.				

Project/Site: Wistaria Ranch	City/County: Imperial County Sampling Date: 09/18/12
Applicant/Owner: Tenaska	State: CA Sampling Point: GW-A
Investigator(s): G. Scheid	Section, Township, Range: Heber Quad: Section 14 T17S, R13E
Landform (hillslope, terrace, etc.): man-made pond	Local relief (concave, convex, none): <u>concave</u> Slope (%): <u>0-1%</u>
Subregion (LRR): LRR-C Lat: 32	.68 dd Long: -115.61 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 y	ear? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignification	antly disturbed? No Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrologynatural	y 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? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes <u>X</u> No
Remarks: Man-made pond with conr	nection to drain?		

		Absolute	Dominant	Indicator	Dominance Test worksh	eet:		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Spec	cies		
1. None					That Are OBL, FACW, or I	FAC:	1	(A)
2					Total Number of Dominan	t		
3.					Species Across All Strata:	_	1	(B)
4.					Percent of Dominant Spec	ies		
			= Total Cove	er	That Are OBL, FACW, or I	-AC:	100	_(A/B)
Sapling/Shrub Stratum (Plot size:)							
1. none					Prevalence Index works	neet:		
2.					Total % Cover of:	M	ultiply by:	_
3.					OBL species	x 1 =		
4.					FACW species	x 2 =		
5.					FAC species	x 3 =		
			= Total Cove	er	FACU species	x 4 =		_
Herb Stratum (Plot size:)				UPL species	x 5 =		
1. Scirpus sp.		60	Y	OBL	Column Totals:	(A)		(B)
2.								_
3.					Prevalence Index =	= B/A =		_
4.					Hydrophytic Vegetation	Indicators:		
5.					X Dominance Test is	>50%		
6.					Prevalence Index is ≤3.0 ¹			
7.					Morphological Adap	otations ¹ (Pr	ovide suppo	orting
8.					data in Remarks	or on a sep	arate sheet	:)
		60	= Total Cov	rer	Problematic Hydrop	hvtic Veaet	ation ¹ (Expl	ain)
Woody Vine Stratum (Plot size:)					, ,	、 I	,
1.					¹ Indicators of hydric soil a	and wetland	hydrology i	must
2.					be present, unless distur	bed or probl	ematic.	
			= Total Cove	er	Hydronbytic			
					Vegetation			
% Bare Ground in Herb Stratum 40	% Co	over of Biotic	Crust		Present? Yes		No <u>X</u>	
Remarks: Bullrushes growing on pond bottom	are dea	d due to lack	c of moisture.					

SOIL

Sampling Point: GW-A

Depth	Matrix		Re	dox Featu	ires		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-6	10 YR 3/1	100					clay loam			
6-12	gray	Gleyed					clay			
					·					
					·					
T			d Matrix 00-0aura			2				
Type. C=C	bil Indicators: (Applie	able to all I	RRs unless other	wise note		5.	Indicators for Prof	NC=Root Channe	c Soils ³	
Histos	sol (A1)		Sandy F	Redox (S5))		1 cm Muck (A9) (I BB C)		
Histic	Epipedon (A2)		Other	Matrix (S	, 6)		2 cm Muck (A1	$(\mathbf{LRR} \mathbf{B})$		
Black	Histic (A3)		Loamv N	Muckv Min	eral (F1)		Reduced Vertic	Vertic (E18)		
Hydro	gen Sulfide (A4)		X Loamy (Gleyed Ma	trix (F2)		Red Parent Material (TF2)			
Stratif	ied Layers (A5) (LRR	C)	X Deplete	d Matrix (F	3)		Other (Explain i	Other (Explain in Remarks)		
1 cm	Muck (A9) (LRR D)		Redox [Dark Surfa	ce (F6)					
Deple	ted Below Dark Surfa	ce (A11)	Deplete	d Dark Su	rface (F7)			f hydrophytic vegetation and		
Thick	Dark Surface (A12)		Redox E	Depressior	ns (F8)		³ Indicators of hydro			
Sandy	Mucky Mineral (S1)		Vernal F	Pools (F9)			wetland hydrolo	gy must be pre	sent,	
Sandy	y Gleyed Matrix (S4)						unless disturbed	unless disturbed or problematic.		
estrictive	e Layer (if present):									
Туре:										
Depth (ir	nches):						Hydric Soil Present?	ent? Yes X No		
emarks:										
YDROLO	OGY									
Vetland	Hydrology Indicators	5:					Secondary	Indicators (2 c	or more require	
Primary Ir	ndicators (minimum of	one required;	check all that appl	y)			Water M	larks (B1) (Rive	erine)	
Surfa	ce Water (A1)		Salt Crus	t (B11)			Sedime	nt Deposits (B2) (Riverine)	
High \	Water Table (A2)		Biotic Cru	ust (B12)			Drift Der	posits (B3) (Riv	erine)	
Satur	ation (A3)	Aquatic Invertebrates (B13) Drainage Patterns (B10)				Aquatic Invertebrates (B13) Drainage Patterns (B10)				

Wetland Hydrology Indica	ators:	Secondary Indicators (2 or more required)					
Primary Indicators (minimu	m of one requir		Water Marks (B1) (Riverine)				
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) (Nor	riverine)			Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)	
Sediment Deposits (B2) (Nonriverine	e)		Oxidized Rhizospheres along Livir	ng Roots (C3)	Thin Muck Surface (C7)	
Drift Deposits (B3) (No	nriverine)			Presence of Reduced Iron (C4)		Crayfish Burrows (C8)	
Surface Soil Cracks (B	6)		_	Recent Iron Reduction in Tilled Sc	oils (C6)	Saturation Visible on Aerial Imagery (C9)	
Inundation Visible on A	erial Imagery (B7)		Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Water-Stained Leaves	Leaves (B9) Other (Explain in Remarks)			Other (Explain in Remarks)		FAC-Neutral Test (D5)	
Field Observations:							
Surface Water Present?	Yes	No	Х	Depth (inches):			
Water Table Present?	Yes	No	Х	Depth (inches):			
Saturation Present? Yes No 2 (includes capillary fringe)		Х	Depth (inches): Wetland Hydrology Present? Yes X		ology Present? Yes X No		
Describe Recorded Data (stre	eam gauge, mo	onitorir	ng w	ell, aerial photos, previous inspectior	ns), if available:		
Remarks: Wetland hydrology from agricultural drain.	/ assumed bas	sed on	pres	sence of hydrophytic vegetation and l	hydric soil indica	ators. Man-made pond received runoff diverted	

Project/Site: Wistaria Ranch	City/County: Imperial County			Sampling Date:	09/19/12	
Applicant/Owner: Tenaska		State:	CA S	Sampling Point:	GW-B	
Investigator(s): G. Scheid	Section, Township, Range:	Heber Qua	ad: Sectio	on 14 T17S, R1	3E	
Landform (hillslope, terrace, etc.): floodplain terrace	Local relief (concave, convex	k, none): <u>n</u>	ione	Slop	e (%): <u>0-1</u> 9	%
Subregion (LRR): LRR-C Lat: 32	69 dd Long:	: <u>-115.62</u> d	bb	Datum	n: NAD83	
Soil Map Unit Name: Imperial silty clay		NWI cla	ssification	: Riverine		
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes <u>X</u> No	(If no, e	xplain in R	Remarks.)		
Are Vegetation, Soil, or Hydrologysignification	antly disturbed? No Are "No	rmal Circu	mstances'	" present? Yes	X No	
Are Vegetation, Soil, or Hydrologynaturall	y problematic? No (If neede	ed, explain	n any answ	vers in Remarks	.)	

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

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes <u>X</u> No
Remarks: Irrigated wetland .		i	

	Absolute	Dominant	Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Number of Dominant Species			
1. Tamirix chilensis	60	Y	FAC	That Are OBL, FACW, or FAC	: <u> </u>		
2.				Total Number of Dominant			
3.				Species Across All Strata:	2 (B)		
4.				Percent of Dominant Species	、,		
	60	= Total Cove	er	That Are OBL, FACW, or FAC	:: <u>100</u> (A/B)		
Sapling/Shrub Stratum (Plot size:			-				
1 Atriplex lentiformis	20	Y	FAC	Prevalence Index worksheet	•		
3		·		Total % Cover of	Multiply by:		
2					v 1 =		
5					× 1 =		
4					x z =		
5				FAC species	x 3 =		
	20	= Total Cove	r	FACU species	x 4 =		
Herb Stratum (Plot size:)				UPL species	x 5 =		
1				Column Totals:	(A)(B)		
2.				Prevalence Index = B/	\ =		
3.					<i>۱</i> –		
4.				Hydrophytic Vegetation Indi	cators:		
5.	-			X Dominance Test is >50%			
6.	-			Prevalence Index is ≤3.0 ¹			
7.				Morphological Adaptations ¹ (Provide supporting			
8.				data in Remarks or on a separate sheet)			
		= Total Cov	er	Problematic Hydrophytic	c Vegetation ¹ (Explain)		
Woody Vine Stratum (Plot size:)							
1				¹ Indicators of hydric soil and	wetland hydrology must		
2		·		be present, unless disturbed	or problematic.		
[= Total Cove	r.	Ludronhutio			
				Vegetation			
% Bare Ground in Herb Stratum 20 % Co	ver of Biotic	Crust		Present? Yes	X No		
Remarks: Vegetation within upper floodplain terrace of	Greeson W	ash.					

SOIL

Sampling Point: GW-B

Depth	Matrix		Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks	
)-18	10 YR 3/2	95	5 YR 6/8	5			clay loam			
							<u> </u>			
							<u> </u>			
ype: C=C	oncentration, D=Depletion	, RM=Red	uced Matrix, CS=Covere	d or Coated	I Sand Grains	. 2	Location: PL=Pore Lining,	RC=Root Channel,	M=Matrix.	
ydric So	il Indicators: (Applica	able to al	I LRRs, unless other	wise note	ed.)		Indicators for Pro	blematic Hydric	Soils ³ :	
Histosol (A1) Sandy Redox)		1 cm Muck (A9	cm Muck (A9) (LRR C)		
Histic I	Stripped	Matrix (S	56) L (E 1)		2 cm Muck (A10) (LRR B)					
Black Histic (A3) Loamy Mucky Mineral (neral (F1)		Reduced Vertic (F18)			
Hydrogen Sulfide (A4)				Loamy Gleyed Matrix (F2)			Red Fareni ivialenal (TF2)			
Stratified Layers (A5) (LRR C)				<u>X</u> Depleted Matrix (F3)				in Remarks)		
I CIII N Denlet	ad Below Dark Surface	Neulox I	Redux Dark Surface (F0)							
Depieted Below Dark Surface (ATT)Depi				Reday Depressions (F8)			³ Indicators of hydro	nhytic vegetation	and	
Sandy Mucky Mineral (S1)			Vernal F	Vernal Pools (E9)			wetland hydrology must be present			
Sandy Gleyed Matrix (S4)							unless disturbed or problematic.			
estrictive	e Layer (if present):									
Туре:										
Depth (in	iches):		<u></u>				Hydric Soil Present?	Yes X	No	
emarks:										
DROLC	DGY									
Vetland H	lydrology Indicators:						<u>Secondary</u>	Indicators (2 or	more require	
Primary Indicators (minimum of one required; check all that apply)							x Water N	/larks (B1) (River	ine)	
Surface Water (A1)			x Salt Crus	<u>x</u> Salt Crust (B11)			Sediment Deposits (B2) (Riverine)			
High Water Table (A2)			Biotic Cru	Biotic Crust (B12)			Drift Deposits (B3) (Riverine)			
Saturation (A3)			Aquatic I	Aquatic Invertebrates (B13)			Drainage Patterns (B10)			
Water	Marks (B1) (Nonriver	Hydroger	n Sulfide (Ddor (C1)		Dry-Season Water Table (C2)				

d Observations			
Water-Stained Leaves (B9)	Other (Explain in Remar		
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)		

Water-Stained Leaves ((B9)	Other (Explain in Rem	narks)FAC-Neutral Test (D5)							
Field Observations:										
Surface Water Present?	Yes	No X Depth (inches):								
Water Table Present?	Yes	No X Depth (inches):								
Saturation Present? (includes capillary fringe)	Yes	No X_Depth (inches):	Wetland Hydrology Present? Yes X No							
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Remarks: Water source is ag	ricultural rur	loff, ACOE irrigated wetland; CDFG r	iparian?							

Oxidized Rhizospheres along Living Roots (C3)

Recent Iron Reduction in Tilled Soils (C6)

Presence of Reduced Iron (C4)

Sediment Deposits (B2) (Nonriverine)

Drift Deposits (B3) (Nonriverine)

x Surface Soil Cracks (B6)

Thin Muck Surface (C7)

Saturation Visible on Aerial Imagery (C9)

Crayfish Burrows (C8)

Shallow Aquitard (D3)