



## Photograph A

Date: 04-26-13

Photopoint 1, photos A-D are sweeping overview shots moving from north to southwest across the Site. This photo is looking at the northern half of the mitigation site, bound by the dirt road to the right and existing riparian vegetation in the background. The yellow mustard will be restored or covered by soil.



## Photograph B

Date: 04-26-13

Photopoint 1, this photo is looking northwest over the Site. Not the few native shrubs and large non-native eucalyptus tree in the center of the picture. The shrubs will be saved and the eucalyptus tree removed.

APPENDIXA Photo Log



## Photograph C

Date: 04-26-13

Photopoint 1, this photograph is looking west over the Site (flat area in center of picture). Two of the three Canary Island date palms in the mitigation site are visible here. All three of these palm trees will be removed during the mitigation effort.



#### Photograph D

Date: 04-26-13

Photopoint 1, this is the final picture in the panorama of the Site and shows all three palm trees and the confluence of Lopez Canyon into Los Peñasquitos Creek in the background. The mitigation site extends to the riparian vegetation, but includes the willow just beyond the palm trees, this tree will be saved.

APPENDIXA Photo Log



## PhotographE

Date: 04-10-13

Photopoint 2, looking northeast from the center of the Site. The eucalyptus to be removed is visible in the background, will a native shrub that will be avoided is the closer shrub. The dead vegetation is composed of nonnative species.



#### Photograph F

Date: 04-10-13

Photopoint 2, looking southwest from the center of the Site. A palm tree and dead teasel are seen to the left and in the foreground of the picture. These species will be removed. Assorted non-native grasses are visible coming up in the rest of the picture.



## Memorandum

Date: April 29, 2013

To: Mark Tucker

From: Julie Stout and Sundeep Amin

Subject: Jurisdictional Delineations for Proposed Mitigation Sites within

Los Peñasquitos Canyon Preserve

The purpose of this memo is to document the methods and results of the delineation and jurisdictional determination conducted at two potential mitigation sites within Los Peñasquitos Canyon Preserve (Figures 1 and 2). The purpose of the delineation was to identify and map the location and extent of the limits of local, state, and federal jurisdictional waters of including wetlands that would fall under the jurisdiction of the U.S. Army Corps of Engineers (Corps), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), California Coastal Commission (CCC), and the City of San Diego. The current Arid West Regional Supplement and Rapanos/Carabell guidance (Rapanos) were applied to the methods and results of this study when relevant. This wetland study also evaluated the extent of waters of the State that may fall under the jurisdiction of the California Department of Fish and Wildlife pursuant to Section 1602 of the Fish and Game Code of California (Streambed Alteration Agreements) or the Porter-Cologne Act regulating waste discharge into waters of the State. This report is for use in the verification process with Local, State and Federal regulators and is intended to be submitted to the regulatory agencies for review and verification.

#### **Methods**

Site visits were conducted by URS biologists Julie Stout and Catherine MacGregor on April 4, 2013 and Julie Stout and Sundeep Amin on April 19, 2013. The initial site visits included vegetation mapping of the mitigation areas plus a 150-foot buffer and compilation of a plant species list. Areas with hydrophytic plant species were examined more closely to determine the wetland boundary. Initial delineation was conducted visually based on vegetation indicators. A three parameter wetland delineation was conducted in accordance with the 1987 Corps Manual and 2006 Arid West Supplement. Wetland waters of the U.S. were sampled using the general methodology detailed in the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual (Corps Manual) for wetlands less than 5 acres in size. Sample points were chosen based on vegetation community mapping and considered visible transitions in vegetation composition and topographical changes. Additional soil pits were created to further document the wetland and upland conditions on site during the subsequent site visit and confirm wetland conditions in the southeastern corner of the site.

The definition of the growing season and the basis of determining and recording indicators for hydrophytic vegetation, hydric soils, and wetland hydrology was the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Arid West Supplement). Both the Corps Manual and Arid West Supplement were used for the determination and evaluation of any normal circumstances, atypical situations, and problem area wetlands. All Corps and CDFW jurisdictional areas were also assumed to be under the jurisdiction of the RWQCB and the CCC.



#### Results

El Cuervo al Oeste-The western mitigation area included both upland and wetland areas within the current mitigation site boundary (Figure 1). Freshwater marsh and disturbed wetland overlapped the southwestern and southeastern portions of the proposed mitigation area. The riparian vegetation associated with Los Peñasquitos Creek is considered to be to be jurisdictional wetlands for all agencies. A summary of the delineation results and determinations El Cuervo al Oeste is provided in Table 1 below.

Table 1. Summary of Delineation Results and Jurisdictional Determinations for El Cuervo al Oeste

JDSP No.	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Jurisdictional Wetland (Y/N)
1	-	-	-	N
2	Х	Х	Х	Υ
4	-			N
5	Х	Х	Х	Υ
6	Х	Х	Х	Υ
7	-	-	-	N

El Cuervo del Sur-The southern mitigation area included both upland and wetland areas (Figure 2). The site is surrounded to the North and West by riparian and wetland vegetation. A small patch of wetlands was mapped within the western boundary. This area meets the state definitions of wetlands and is assumed to be Corps jurisdictional under the PJD approach. A summary of the delineation results and determinations for the El Cuervo del Sur is provided in Table 2 below.

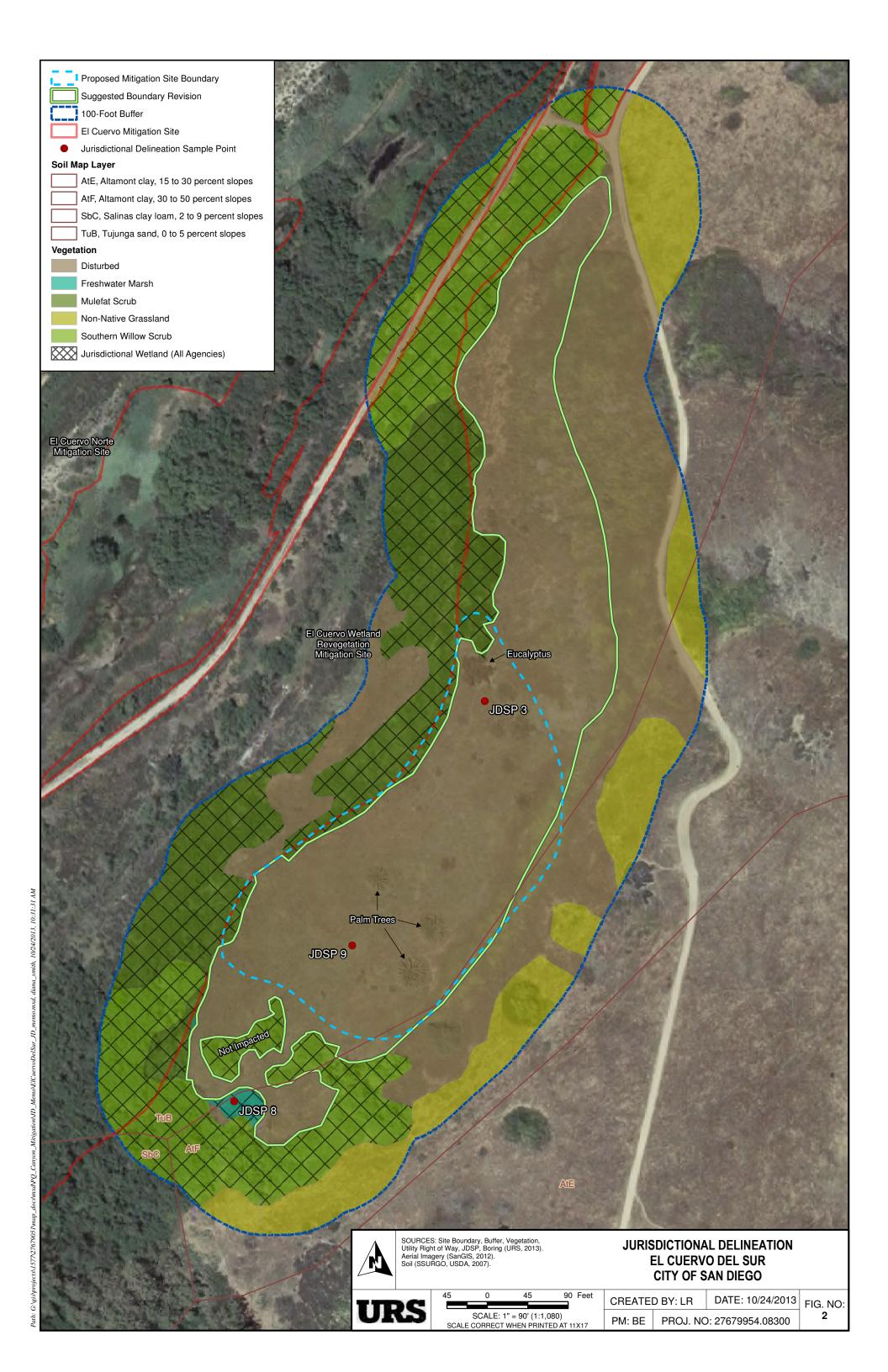
Table 2. Summary of Delineation Results and Jurisdictional Determinations for El Cuervo del Sur

JDSP No.	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Jurisdictional Wetland (Y/N)
3	-	-	-	N
8	Х	-	-	Υ
4	-	-	-	N

#### Recommendations

It is recommended that the downstream boundary of both mitigation areas be revised to avoid wetland impacts. Suggested boundary revisions are shown on Figures 1 and 2.





## WETLAND DETERMINATION DATA FORM - Arid West Region

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Project/Site: El CVETVO WEST	City	County: SCV	1 Dicgo	_ Sampling Date: 4(4/15
Applicant/Owner:			State: CA	_ Sampling Point: Pi+
Investigator(s): J. Stort. C. MacGre	yor sec	tion, Township. R	ange.	
Landform (hillslope, terrace, etc.): Flood te	stace Loc	al relief (concave	(convex) none):	Slope (%): Z
Subregion (LRR):	tat: 47°	1794.71	_tong: 36408	190 01 Datum: W(55)
Soil Map Unit Name: CYMTO SITT LOUV	Y\		NWI classif	fication freshwater em
Are climatic / hydrologic conditions on the site typical	al for this time of year?	Yes X No	(If no, explain in	Remarks \ W(
Are Vegetation, Soil, or Hydrology _	significantly distu			present? Yes No
Are Vegetation, Soil, or Hydrology _			needed, explain any answ	<del>-,</del>
SUMMARY OF FINDINGS – Attach site			locations, transect	's important features etc
				5, important leatures, etc.
	No <u>X</u>	is the Sample	d Area	
	No X	within a Wetla	ind? Yes	No <u>X</u>
Remarks:		<u> </u>		
VEGETATION – Use scientific names of	f plants.			
	Absolute Dor	ninant Indicator	Dominance Test work	ke hoot:
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2		<del></del>	Total Number of Domir	nant
3 4			Species Across All Stra	ata: Z (B)
	<b>-</b> To	tal Cause	Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size:	)	tal Cover	That Are OBL, FACW,	or FAC: 50 (A/B)
1.	<del></del>		Prevalence Index wor	rksheet:
2			Total % Cover of:	Multiply by:
3				x1=
4			FACW species	x2=
		tal Cover	FAC species 70	
Herb Stratum (Plot size:)		iai Cover		^+
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3. Distichlis spicator	<u> 40                                   </u>	- FAC	Prevalence Index	
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6 7.			Prevalence Index is	
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W = 12	<del></del>	al Cover	Hydrophytic Vegetation	
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(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	LOC		
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			19					
					. ——			
¹Type: C=C	Concentration, D=De	oletion, RM=	Reduced Matrix, C	S=Covere	d or Coate	ed Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all I	LRRs, unless othe	rwise not	ted.)	•	Indicators	for Problematic Hydric Soils <sup>3</sup> :
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Histoso	, ,		Stripped M				2 cm N	fluck (A10) (LRR B)
	Epipedon (A2)		Loamy Mu		al (F1)		Reduc	ed Vertic (F18)
_	Histic (A3)		Loamy Gle				Red P	arent Material (TF2)
	en Sulfide (A4)	C	Depleted N				Other	(Explain in Remarks)
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	luck (A9) (LRR D)	(014)	Depleted [					
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HYDROLO Wetland H Primary Inc Surface High W Satura Water Sedim Drift D Surface Inunda Water Field Obs Surface W Water Tab	OGY  lydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3)  Marks (B1) (Nonrive the Deposits (B2) (No the Marks (B3) (Nonrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) the Present?	s: one require erine) conriverine) verine) al Imagery (B	d; check all that ap  Salt Crue Biotic Cr Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduction Re	tes (B13) Odor (C1) heres alon ced Iron (C tion in Till e (C7) Remarks)	g Living Ro	Second Se	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation	OGY  lydrology Indicators dicators (minimum of the Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive the Deposits (B2) (Nonrive the Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9 tervations: Vater Present? The Present?	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F (inches): (inches): (inches):	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation	OGY  lydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3)  Marks (B1) (Nonrive the Deposits (B2) (No the Marks (B3) (Nonrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) thervations:  Nater Present? The Present?	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F (inches): (inches): (inches):	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab	OGY  lydrology Indicators dicators (minimum of the Water (A1) Nater Table (A2) ation (A3) Marks (B1) (Nonrive the Deposits (B2) (Nonrive the Soil Cracks (B6) ation Visible on Aeria r-Stained Leaves (B9 tervations: Vater Present? The Present?	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F (inches): (inches): (inches):	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation  (includes of  Describe I	OGY  Iydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3) Marks (B1) (Nonrive thent Deposits (B2) (Norrive thent Deposits (B3) (Norrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) theresent? The Present? The Present? The Present? The Present? The Present (Sapillary fringe) The Recorded Data (streat	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F (inches): (inches): (inches):	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation	OGY  Iydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3) Marks (B1) (Nonrive thent Deposits (B2) (Norrive thent Deposits (B3) (Norrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) theresent? The Present? The Present? The Present? The Present? The Present (Sapillary fringe) The Recorded Data (streat	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F (inches): (inches): (inches):	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation  (includes of  Describe I	OGY  Iydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3) Marks (B1) (Nonrive thent Deposits (B2) (Norrive thent Deposits (B3) (Norrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) theresent? The Present? The Present? The Present? The Present? The Present (Sapillary fringe) The Recorded Data (streat	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation  (includes of  Describe I	OGY  Iydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3) Marks (B1) (Nonrive thent Deposits (B2) (Norrive thent Deposits (B3) (Norrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) theresent? The Present? The Present? The Present? The Present? The Present (Sapillary fringe) The Recorded Data (streat	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
HYDROL  Wetland H  Primary Ind  Surface  High V  Satura  Water  Sedim  Drift D  Surface  Inunda  Water  Field Obs  Surface W  Water Tab  Saturation  (includes of  Describe I	OGY  Iydrology Indicators dicators (minimum of the Water (A1)  Nater Table (A2) ation (A3) Marks (B1) (Nonrive thent Deposits (B2) (Norrive thent Deposits (B3) (Norrive the Soil Cracks (B6) ation Visible on Aeria the Stained Leaves (B9) theresent? The Present? The Present? The Present? The Present? The Present (Sapillary fringe) The Recorded Data (streat	s: i one require erine) conriverine) verine)  I Imagery (B )  Yes Yes	d; check all that ap  Salt Crus Biotic Crus Aquatic Hydroge Oxidized Presenc Recent I Thin Mu Other (E	ply) st (B11) ust (B12) Invertebra in Sulfide ( I Rhizosph e of Reduct fron Reduct ck Surface explain in F	tes (B13) Odor (C1) neres alon ced Iron (C ction in Till e (C7) Remarks)	g Living Ro	Secondary Second	Andary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Wervo West	City/0	County: SO	M Diego Sampling Date: 4/4/13
Applicant/Owner:		,	State CA Sampling Point: Pi+2
Investigator(s): J. Stort, C. MacGreas	Secti	on Townshin F	Range:
Landform (hillslope, terrace, etc.): Flood terrace	Ce Loca	I relief (Consour	convex, none): Slope (%):
Subregion (LRR):		798.70	
Soil Map Unit Name: Chino Silt locar	\		
Are climatic / hydrologic conditions on the site typical for t	his time of year?	<b>\</b>	NWI classification: Freshwater Foreste
Are Vegetation, Soil, or Hydrology			e "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology			needed, explain any answers in Remarks.)
		•	locations, transects, important features, etc.
lara a dan da	No		
Livelete Call Description	No	is the Sample	
1 144 14 144 1 1 1 1 1 1 1 1 1 1 1 1 1	No	within a Wetla	and? Yes No
Remarks:			
All II II II II			
			w w
VEGETATION – Use scientific names of pla			
To a scientific fiames of pla	<del></del>		24
Tree Stratum (Plot size:)	Absolute Dom <u>% Cover</u> Spec	inant Indicator cies? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2	11		
3.			Total Number of Dominant Species Across All Strata: (B)
4			(=)
Sapling/Shrub Stratum (Plot size:)	= Tot	al Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			
3.			OBL species 10 x 1 = 10
4			FACW species $\frac{1}{\sqrt{2}}$
5		100	FAC species $80 \times 3 = 240$
Herb Stratum (Plot size:)	= Tota	al Cover	FACU species
1. Saliconia pacifica	10 N	· (50) (	UPL species x 5 =
2. Disticulis spicata	$-\frac{80}{10} + \frac{3}{10}$		Column Totals: \(\sum{\lambda}\) (A) \(\frac{320}{320}\) (B)
3. Frankenia Salina	5 /	FACM	Prevalence Index = B/A = 2.9
4. Cynodon dactulon	15	WAT -	Hydrophytic Vegetation Indicators:
5		_ +	✓ Dominance Test is >50%
6			X Prevalence Index is ≤3.0¹
7			Morphological Adaptations¹ (Provide supporting
8			data in Remarks or on a separate sheet)
Woody Vine Stratum (Plot size:)		l Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1	<del>-</del> 55		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2	<del> </del>	<del></del>	be present, unless disturbed or problematic.
, 10	= Tota	Cover	Hydrophytic
	of Biotic Crust	3	Vegetation
Remarks:	OI DIVIIC CRUST	<u> </u>	Present? Yes No No
			3
			·

OIL	ription: (Describe t	- 411	th mandad to doour	nant tha i	ndicator	or confi	irm the abse	nce of in	dicators.)
Profile Desc		o tne aep				o. co		ii.	
Depth	Color (moist)	%	Color (moist)	x Feature:	Type <sup>1</sup>	Loc <sup>2</sup>	Textur	e	Remarks
(inches)	7,54R 3/2		<u> </u>				Silho C	lan	
0-7		<u>60</u>					_ <del>//////</del>		
	7.54B4/3	<u>0</u>							
	G1 2,5/N	<u>30                                    </u>					- 10		
7-12	7.5483/2	90	104R516	10	C	$\sim$	- 41	ρ	romnert
1-10			1.3 / 1.3					,	
							<del></del>		
							····		
			V .						
¹Type: C=C	oncentration, D=Depl	etion. RM	=Reduced Matrix, C	S=Covere	d or Coate	ed Sand	Grains.	<sup>2</sup> Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to al	I LRRs, unless othe	rwise not	ed.)		Indica	tors for	Problematic Hydrlc Soils <sup>3</sup> :
Histoso			Sandy Red						(A9) (LRR C)
_	pipedon (A2)		Stripped M						(A10) (LRR B)
	listic (A3)		Loamy Mu						Vertic (F18)
Hydrog	en Sulfide (A4)		Loamy Gle						t Material (TF2)
Stratifie	ed Layers (A5) (LRR (	C)	Depleted N				, — C	uner (Exp	lain in Remarks)
	uck (A9) (LRR D)		Redox Dar						
	ed Below Dark Surfac	e (A11)	Depleted D				3Indic.	ators of h	ydrophytic vegetation and
_	Park Surface (A12)		Vernal Po		(1 0)				rology must be present,
	Mucky Mineral (S1) Gleyed Matrix (S4)		vernari oc	)IS (1 C)				•	bed or problematic.
	Layer (if present):								
Type:									
	nches):						Hydric	Soil Pre	esent? Yes X No
	ilcites)		<del></del>						
Remarks:									
	2				112				
					·				
HYDROL	OGY								
Wetland H	ydrology Indicators	:							
1	dicators (minimum of		ed: check all that ap	olv)				Seconda	y Indicators (2 or more required)
		one requi	Salt Crus					Wate	er Marks (B1) (Riverine)
	e Water (A1) Vater Table (A2)		_	ust (B12)			.*	Sedi	ment Deposits (B2) (Riverine)
				nvertebrat	es (B13)			Drift	Deposits (B3) (Riverine)
Satura	Marks (B1) (Nonrive	rine)	Hydroge						nage Patterns (B10)
	ent Deposits (B2) (No					a Livina	Roots (C3)		Season Water Table (C2)
	eposits (B3) (Nonrive			e of Reduc					fish Burrows (C8)
	ce Soil Cracks (B6)	31110/		ron Reduc			(C6)		ration Visible on Aerial Imagery (C9)
	ation Visible on Aerial	imagen		ck Surface			, , ,	Shal	low Aquitard (D3)
. —	-Stained Leaves (B9)		· -	xplain in F				FAC	-Neutral Test (D5)
Field Obs			00.07 (0						
14		Voe	No X Depth (	inches):					
1									
			_ No Depth (				Motiond Hyd	Irology P	resent? Yes No No
Saturation	Present? capillary fringe)	Yes/	No Depth (	inches)	-	"	rectand try	nology i	
Describe F	Recorded Data (stream	m gauge,	monitoring well, aeria	al photos,	previous ir	nspectio	ns), if availal	ole:	
		5 5-7	<b>.</b>	·					
Pernarke:				. 1	۸ .	· · · · · · · · · · · · · · · · · · ·	^ · ·		
Remarks:	table pro	Jana	, high, (	Ponde	is wa	<b>*</b> C	rearby		
money	TOOL ALO		) ' ' '	-			J	•	
27									
1									

## WETLAND DETERMINATION DATA FORM - Arid West Region

	City/Cou		n Diego Sampling Date: 4/4/1
Applicant/Owner:	100 00 00 0000		State: <u>CA</u> Sampling Point: <u>P.7-3</u>
Investigator(s): Julie Stout 3 Cather		-	
Landform (hillslope, terrace, etc.):	Local re	elief (concave,	convex, none): Hat Slope (%):
Subregion (LRR):		43,02	tong: 3641347, 02 Datum: W65
Soil Map Unit Name:			NWI classification: Freshwater emor
Are climatic / hydrologic conditions on the site typical f	or this time of year? Yes	No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbe	d? Are	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problemation		eeded, explain any answers in Remarks.)
		•	ocations, transects, important features, etc
Hydrophytic Vegetation Present? Yes	No X	s the Sampled	1
Hydric Soil Present? Yes	_ No <u>X</u>	vithin a Wetla	. 1
Wetland Hydrology Present? Yes	_ No <u>X</u> "	riuiiii a vvetiai	ndf 168NO
VEGETATION – Use scientific names of	plants.	6.7	
		ant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Specie		Number of Dominant Species
1.			That Are OBL, FACW, or FAC: (A)
2.			Total Number of Dominant
3			Species Across All Strata: (B)
4.	= Total	Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)	<del></del>		That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =
4.			FACW species x 2 =
5		0	FAC species
Herb Stratum (Plot size:)	= Total	Cover	,
1. Helminthothera echioc	<u>lus 85 Y</u>	- FACU	UPL species $10 \times 5 = 50$ Column Totals: $05 \times (A) \times 5 = 50$
2. Sinapis arrosis	10 N	UPC	1
3. 🗜			Prevalence Index = B/A =
4		-91	Hydrophytic Vegetation Indicators:
5			Dominance Test is >50%
6.			Prevalence Index is ≤3.0¹
7.			Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)	Total	Cover	
1			Indicators of hydric soil and wetland hydrology must
2.			be present, unless disturbed or problematic.
	= Total	Cover	Hydrophytic
% Bare Ground in Herb Stratum	Cover of Biotic Crust	0	Vegetation Present? YesNo
Domarket		<del></del>	169
remains. ant whony in soil	at pit loc	ation	
,	,	- •	
- ×			

	inpulon. (Describe)	to the depth				or commi	i tile absence o	indicators.
Depth	Color (moist)	<del></del> %	Color (moist)	x Features %	Tvpe <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches)			Color (moist)		Type	LUC	Scarlin	Remarks
0-12	7.54R 312	100		· ———			Mos Low	
							J	
		<u> </u>						
			0	. ——				
	oncentration, D=Dep					d Sand Gr	ains. <sup>2</sup> Loca	tion: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Application	able to all LF	RRs, unless other	wise note	ed.)		Indicators fo	or Problematic Hydric Soils³:
Histosol	(A1)		Sandy Redo	ox (S5)			1 cm Mu	ick (A9) (LRR C)
ı —	pipedon (A2)		Stripped Ma					ick (A10) (LRR B)
Black Hi			Loamy Muc		(F1)			d Vertic (F18)
	en Sulfide (A4)		Loamy Gley					rent Material (TF2)
ı <del>—</del>	i Layers (A5) (LRR (	3)	Depleted Ma		· -/			Explain in Remarks)
<u>, —                                     </u>	ick (A9) (LRR D)	-1	Redox Dark		F6)		0aler (E	wiprout in Francisco)
	d Below Dark Surface	a /Δ11\	Depleted Da	•				
	ark Surface (A12)	- (A 1 1)	Redox Depi		` '		3Indicators of	f hydrophytic vegetation and
			Vernal Pool		- O)			ydrology must be present,
	flucky Mineral (S1)		Vernai Pool	s (F9)				turbed or problematic.
	Bleyed Matrix (S4)						uriless dis	turbed or problematic.
	Layer (if present):							
Type:			<del></del>					
Depth (in	ches):		<b>-</b>				Hydric Soil P	resent? Yes No
Remarks:								
						Pil		
ł								
HYDROLO	CV			3.52				
Wetland Hy	drology Indicators:							8
Primary India	cators (minimum of o	ne required; o	check all that appl	v)			Second	lary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust	(B11)			Wa	iter Marks (B1) (Riverine)
	ater Table (A2)		Biotic Crus	•				diment Deposits (B2) (Riverine)
Saturati		(8)	Aquatic Inv		e (B13)			ft Deposits (B3) (Riverine)
	• •	!>						ainage Patterns (B10)
1	larks (B1) (Nonriver		Hydrogen					- 1
	nt Deposits (B2) (No		Oxidized F	•	•	•		y-Season Water Table (C2)
Drift De	posits (B3) ( <b>Nonrive</b>	rine)	Presence	of Reduce	d Iron (C4	·)	Cra	ayfish Burrows (C8)
Surface	Soil Cracks (B6)		Recent Iro	n Reduction	on in Tilled	d Soils (C6	6) Sat	turation Visible on Aerial Imagery (C9)
Inundati	on Visible on Aerial I	magery (B7)	Thin Muck	Surface (	C7)		Sha	allow Aquitard (D3)
Water-S	stained Leaves (B9)		Other (Exp	olain in Re	marks)		FA	C-Neutral Test (D5)
Field Obser								
		oo N-	Depth (inc	oboe\:				
Surface Wat			<del></del>			-   13		
Water Table	Present? Y	es No	Depth (inc	ches):		_ l		V
Saturation P		es No	Depth (inc	ches):		_ Wetla	and Hydrology	Present? Yes No X
(includes ca								
Describe Re	corded Data (stream	gauge, moni	toring well, aerial p	onotos, pre	evious insp	pections),	if available:	
Remarks:		·						
			-					
ı								

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: El Wervo West	Cit	y/County:		Sampling Date: 4/19/
Applicant/Owner:			State:	Sampling Point: Pi+ 4
Investigator(s): S. AMIN J. Sh	<u> </u>	ction, Township, R	ange:	
Landform (hillslope, terrace, etc.): Fraul terrace Subregion (LRR): C 20	ecLo	cal relief (concave	. convex. none):	Slone (%):
Subregion (LRR): C 20	X: 47	99 33,38	120 36409	45, 52 Deturn MGS
Soil Map Unit Name: Chino Silt Lo	$\overline{\alpha}$			
		. V 26 N	NWI class	
Are climatic / hydrologic conditions on the site typical fo		-		• –
Are Vegetation, Soil, or Hydrology				s" present? Yes No
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS - Attach site m		•	leeded, explain any ans	
		ampling point	locations, transec	ts, important features, etc
	No X	Is the Sample	d Area	
	.' No	within a Wetla		NoX
Remarks:	. No			
Tromand.				
VEGETATION – Use scientific names of p	lants.			
Tree Stratum (Plot size:)		ominant Indicator	Dominance Test wo	orksheet:
1	% Cover S	pecies? Status	Number of Dominant	
2		<del></del>	That Are OBL, FACV	V, or FAC: (A)
2			Total Number of Don	_
3 4			Species Across All S	trata: (B)
	3	Total Cayor	Percent of Dominant	
Sapling/Shrub Stratum (Plot size:)		Total Cover	That Are OBL, FACV	V, or FAC: 50 (A/B)
1			Prevalence Index w	orksheet:
2.			Total % Cover of	f. Multiply by:
3.			OBL species	x1=
4.				x 2 =
5			FAC species	40 x3= (20)
Herb Stratum (Plot size:)	=	Total Cover		x 4 =
1. Boms diendus	20	V 1101		x5= 100
2. Lolium perrore	<u> 780                                   </u>	V FAT	Column Totals:	(A) 710 (B)
3. Horden se.		111C	Prevalence Inde	ex = B/A = 3,6
4.			Hydrophytic Vegeta	
5			Dominance Test	
6.			Prevalence Index	7-7-1
7			I	laptations <sup>1</sup> (Provide supporting
8.			data in Remar	ks or on a separate sheet)
<u> </u>		otal Cover	Problematic Hydr	ophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)	0	1		
1			Indicators of hydric se	oil and wetland hydrology must
2.			be present, unless dis	turbed or problematic.
	= T	otal Cover	Hydrophytic	
% Bare Ground in Herb Stratum % Co	ver of Biotic Crust		Vegetation Present? Yes	es No X
Remarks:				
less title				· .
dead gross - 30%, mon	an Morde	um - Preu	alone intex	would civil be
1 - 30 h , onor		\2	even if this.	furned out to
			can oblicat	

9
Sampling Point: PI+4
indicators.)
Remarks
1
tion: PL=Pore Lining, M=Matrix.
or Problematic Hydric Soils <sup>3</sup> : ack (A9) (LRR C)
ick (A10) (LRR B)
i Vertic (F18) ent Material (TF2)
ent Material (172) Explain in Remarks)
f hydrophytic vegetation and ydrology must be present, turbed or problematic.
Present? Yes No
1
ten Indianters (2 or more required)
lary Indicators (2 or more required) ater Marks (B1) (Riverine)
diment Deposits (B2) (Riverine)
ft Deposits (B3) (Riverine)

SOIL

epth <u>Matrix</u>	Redox Features	1 1 2 2	Tardusa	Domarke
<u> </u>	% Color (moist) % Type		_	Remarks
-20 7.5YR 3/2 1			/	
-1 (OBYR3/2 1)	<u> </u>		<u>clay lown</u>	
			J	
		<del></del>	2, ,,	Di Dana Linian Maldala
ype: C=Concentration, D=Depletion	n, RM=Reduced Matrix, CS=Covered or Co	ated Sand Gra	ins. Location:	PL=Pore Lining, M=Matrix.  roblematic Hydric Soils <sup>3</sup> :
/dric Soil Indicators: (Applicable	to all LRRs, unless otherwise noted.)			-
_ Histosol (A1)	Sandy Redox (S5)		1 cm Muck (/	• •
_ Histic Epipedon (A2)	Stripped Matrix (S6)		Reduced Ve	410) (LRR B)
_ Black Histic (A3)	Loamy Mucky Mineral (F1)		—   I	Material (TF2)
_ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		<del></del>	in in Remarks)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)		Other (Expla	iii iii Neillaiksy
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6) 11) Depleted Dark Surface (F7)			
_ Depleted Below Dark Surface (A	Redox Depressions (F8)		3Indicators of hyd	rophytic vegetation and
_ Thick Dark Surface (A12)	Vernal Pools (F9)		-	ogy must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)			•	ed or problematic.
estrictive Layer (if present):				
estrictive Euror (ii process).			1	
Timer				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Type:			Hydric Soil Pres	ent? Yes No
Type: Depth (inches): Remarks:			Hydric Soil Preso	ent? Yes No
Depth (inches):			Hydric Soil Prese	ent? Yes No
Depth (inches):			Hydric Soil Prese	ent? Yes No
Depth (inches):			8 21 11	
Depth (inches):			Secondary	Indicators (2 or more required)
Depth (inches):		2	Secondary Water	Indicators (2 or more required) Marks (B1) (Riverine)
Depth (inches):  Primary Indicators (minimum of one	required; check all that apply)	3	Secondary Water I	Indicators (2 or more required)  Marks (B1) (Riverine)  ent Deposits (B2) (Riverine)
Primary Indicators (minimum of one Surface Water (A1)	required; check all that apply) Salt Crust (B11)	3)	Secondary Water I	Indicators (2 or more required) Marks (B1) (Riverine)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)		Secondary Water l Sedime Drift De	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C	1)	Secondary  Water I Sedime Drift De Drainaets (C3) Dry-Se	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Corerine)  Oxidized Rhizospheres allow	1) ong Living Root	Secondary  Water I Sedime Drift De Drainaets (C3) Dry-Se	Indicators (2 or more required)  Marks (B1) (Riverine)  ent Deposits (B2) (Riverine)  eposits (B3) (Riverine)  ge Patterns (B10)
Popth (inches):  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine  Sediment Deposits (B2) (Nonriverine  Drift Deposits (B3) (Nonriverine	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Corerine)  Oxidized Rhizospheres allow	1) ong Living Root (C4)	Secondary  Water I  Sedime  Drift De  Drainae  ts (C3) Dry-Se  Crayfis	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Permarks:  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine  Sediment Deposits (B2) (Nonriverine  Drift Deposits (B3) (Nonriverine  Surface Soil Cracks (B6)	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Content of the content of the co	1) ong Living Root (C4)	Secondary  Water I Sedime Drift De Draina ts (C3) Dry-Se Crayfis Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8)
Permarks:  YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Ima	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Content of the content of the co	1) ong Living Root (C4) Filled Soils (C6)	Secondary Water   Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Saturae Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (CS
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Contine)  Oxidized Rhizospheres ald presence of Reduced Iron Recent Iron Reduction in Serve (B7)  Recent Iron Reduction (C7)	1) ong Living Root (C4) Filled Soils (C6)	Secondary Water   Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Saturae Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (CS
Permarks:  YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine  Sediment Deposits (B2) (Nonriverine  Drift Deposits (B3) (Nonriverine  Surface Soil Cracks (B6)  Inundation Visible on Aerial Ima  Water-Stained Leaves (B9)  Field Observations:	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (Continue) Oxidized Rhizospheres all presence of Reduced Iron Recent Iron Reduction in Recent Iron Reduction in Gery (B7) Other (Explain in Remarks	1) ong Living Root (C4) Filled Soils (C6)	Secondary Water   Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Saturae Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (CS
Popeth (inches):  Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Yes	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (Continuo)  Oxidized Rhizospheres allowed Presence of Reduced Iron  Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7)  Other (Explain in Remarks)	1) ong Living Root (C4) Filled Soils (C6)	Secondary Water   Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Saturae Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) tion Visible on Aerial Imagery (CS
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present?	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C  /erine) Oxidized Rhizospheres ald  s) Presence of Reduced Iron  Recent Iron Reduction in  gery (B7) Thin Muck Surface (C7)  Other (Explain in Remarks  No Depth (inches):  Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I  Sedime  Drift De  Draina ts (C3) Dry-Se  Crayfis  Satura  Shallov  FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)
Popth (inches):  YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine  Sediment Deposits (B2) (Nonriverine  Drift Deposits (B3) (Nonriverine  Surface Soil Cracks (B6)  Inundation Visible on Aerial Ima  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes  Water Table Present?  Yes  Saturation Present?	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C verine) Oxidized Rhizospheres ald Presence of Reduced Iron Recent Iron Reduction in Gery (B7) Thin Muck Surface (C7) Other (Explain in Remarks No Depth (inches): Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary Water   Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Saturae Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (Content) Oxidized Rhizospheres all Presence of Reduced Iron Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Satura Shallov FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes	required; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C  /erine) Oxidized Rhizospheres ald  s) Presence of Reduced Iron  Recent Iron Reduction in  gery (B7) Thin Muck Surface (C7)  Other (Explain in Remarks  No Depth (inches):  Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Satura Shallov FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Fleid Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream ga	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (Content) Oxidized Rhizospheres all Presence of Reduced Iron Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Satura Shallov FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)
Process  Process  Process  Process  Primary Indicators (minimum of one	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (Content) Oxidized Rhizospheres all Presence of Reduced Iron Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Satura Shallov FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (CS v Aquitard (D3) eutral Test (D5)
Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine Sediment Deposits (B2) (Nonriverine Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Ima Water-Stained Leaves (B9) Field Observations: Surface Water Present? Surface Water Present? Ves Nater Table Present? Saturation Present? Seturation Present?	required; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (Content) Oxidized Rhizospheres all Presence of Reduced Iron Recent Iron Reduction in Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	1) ong Living Root (C4) Filled Soils (C6)	Secondary  Water I Sedime Drift De Drainae ts (C3) Dry-Se Crayfis Satura Shallov FAC-N	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9 w Aquitard (D3) eutral Test (D5)

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## WETLAND DETERMINATION DATA FORM – Arid West Region

roject/Site: El Wevo	west	(	City/County	:		Sampling Date: 4/19
oplicant/Owner:					State:	(/+\ =
vestigator(s):			Section, To	wnship, Ra	nge:	
andform (hillslope, terrace, etc.):			Local relief	(concave,	convex, none):	Slope (%):
ubregion (LRR):		<u> </u>	7995	<u>55,833</u>	Long: <u>*36408</u>	Datum:
oil Map Unit Name:						ation:
re climatic / hydrologic conditions on t				& No		
re Vegetation, Soil, or						resent? Yes No
re Vegetation, Soil, or					eeded, explain any answer	`
UMMARY OF FINDINGS - A				·		
Hydrophytic Vegetation Present?	Yes 😾	No	<b>1</b>			
Hydric Soil Present?	Yes	No	ľ	e Sampled	IX.	No
Wetland Hydrology Present?	Yes 😾	No	with	in a Wetlaı	nd? Yes	NO
Remarks:			· ·			
EGETATION – Use scientific	names of pla	ants.				
		Absolute	Dominant		Dominance Test works	sheet:
Tree Stratum (Plot size:	<del>_</del> )	<u>% Cover</u>		Status FACW	Number of Dominant Sp	
		_ 62_	7	THOM	That Are OBL, FACW, o	r FAC: (A)
3.		11			Total Number of Domina	
4					Species Across All Strat	a: (B)
		(,5	= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW, of	
Sapling/Shrub Stratum (Plot size:						
1					Prevalence Index work	
2.					Total % Cover of:	
3						x1= x2=
4						x3=
J			= Total Co	ver		x 4 =
Herb Stratum (Plot size:					LUDI ALLEGO	x 5 =
1. Anemorsis calife		_ 20	<del>-</del>	<u>obl</u>	Column Totals:	(A) (B
Salx lasiolops	<del>is</del>			-	Barrelon as today.	- D(4
Bromus sp.		2			Hydrophytic Vegetatio	= B/A =
ł					Dominance Test is	
5					Prevalence Index is	
3 7						tations <sup>1</sup> (Provide supporting
8						or on a separate sheet)
		72	= Total Co	ver	Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:		4 3			1	
1					Indicators of hydric soil be present, unless distu	and wetland hydrology must rbed or problematic.
2	<u>-</u>					and or production
		1	= Total Co	ver	Hydrophytic Vegetation	\ \ \
% Bare Ground in Herb Stratum	% Co	ver of Biotic Cr	ust		Present? Yes	No
Remarks:					<u> </u>	
leaf litter 78%						

Sampling Point: Pits

Profile Description: (Describe to the depth	needed to document the indicator or	confirm the absence of Indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
0-2 WYR 3/2 100		<u>Clay lorn</u>
12-20 104R3/2100_		Scrilycom
All all		J
1Type: C=Consentration D=Depletion DM=F	Padvand Makin CO-Coursed Control	21 21 21 21 21 21 21 21 21 21 21 21 21 2
Type: C=Concentration, D=Depletion, RM=F Hydric Soil Indicators: (Applicable to all L		
ii ii ii		Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)   Histic Epipedon (A2)	Sandy Redox (S5) Stripped Matrix (S6)	, 1 cm Muck (A9) (LRR C)
Black Histic (A3)	Loamy Mucky Mineral (F1)	2 cm Muck (A10) (LRR B) Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	<sup>3</sup> 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 Layer (if present):		
Type:	_	X
Depth (inches):		Hydric Soil Present? Yes No
HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required:	check all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	✓ Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B2) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Liv	- · · · · · · · · · · · · · · · · · · ·
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled S	
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	Depth (inches):	la .
Water Table Present? Yes No	7	
Saturation Present? Yes No	1.	Wetland Hydrology Present? Yes No No
(includes capillary fringe)	Deput (incles).	Wetland Hydrology Present? Yes/\ No
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, previous inspec	ctions), if available:
Remarks:	——————————————————————————————————————	100 mm
9		200
		, #
- B		2

## WETLAND DETERMINATION DATA FORM – Arid West Region

					State:	Sampling Point:	けわ
plicant/Owner:			action Towns	hin Rand	ne.		
restigator(s): ndform (hillslope, terrace, etc.):			ocal relief (co	ncave co	ouvex none).	Slope	(%):
ndform (hilisiope, terrace, etc.): bregion (LRR):		X AG	acarrener (co	1 C	364093	2703 Datum	MAS
bregion (LRR):		- 13/ <del>- 10</del> /	00001	7.7.	NIA# classific	ation:	VVI
il Map Unit Name:							
e climatic / hydrologic conditions on the							A1
e Vegetation, Soil, or Hy					Iormal Circumstances" p		_ NO
e Vegetation, Soil, or Hy	drology	naturally probl	ematic?	(If nee	ded, explain any answe	ers in Remarks.)	
UMMARY OF FINDINGS - Atta	ach site map	showing s	ampling	oint lo	cations, transects	, important feat	ures, etc
Hydrophytic Vegetation Present?	Yes X	No =					
lydric Soil Present?		Vo ov		ampled / Wetland	Ų	No	
Vetland Hydrology Present?		No	within	ı vvetlalit	18 163		
Remarks:	7						
TOTA TION	omas of play	nte					
EGETATION – Use scientific n	atties of plai		Dominant In	dicator	Dominance Test work	ksheet:	
ree Stratum (Plot size:	_		Species?		Number of Dominant S	Species	
					That Are OBL, FACW,	or FAC:	(A)
					Total Number of Domin	nant	
					Species Across All Str	ata: 👢	(B)
					Percent of Dominant S	pecies	*
Sapling/Shrub Stratum (Plot size:	,		= Total Cove	·	That Are OBL, FACW,	or FAC:	(A/B
Saping/Shrub Stratum (Plot size:					Prevalence Index wo	rksheet:	
2.				- 1	Total % Cover of:	Multiply b	<u>v:</u>
3.				ı	OBL species	x1=	
4.					FACW species		
5.			7		FAC species		
			= Total Cove	r	FACU species		
Herb Stratum (Plot size:	)	10			UPL species		
1. Sarpus america 2. Llen Apium aru	77 0 0 0 7 V				Column Totals:	(A)	(B)
	rnica	aro &	<u> </u>	BL	Prevalence Inde	x = B/A =	
3. Bristy OX-tongue	* TITCOC	- 5		<u> </u>	Hydrophytic Vegetat		
	ostachya	15			Dominance Test i	s >50%	
6. Junes autis	20,1-1-1	2		ACW	Prevalence Index	is ≤3.0 <sup>1</sup>	
Helminthother ech	riodes	<u> </u>		<b>1</b>	Morphological Ad	aptations¹ (Provide su	pporting
8.			*	7700		ks or on a separate sh	
V			= Total Cove	г	Problematic Hydr	ophytic Vegetation <sup>1</sup> (E	explain)
Woody Vine Stratum (Plot size:					<sup>1</sup> Indicators of hydric so	nil and wetland hydrol	oav must
1					be present, unless dis	turbed or problematic	
2.			T-1:10:				
			= Total Cove	r	Hydrophytic Vegetation	<b>*</b>	
% Bare Ground in Herb Stratum	% Cov	er of Biotic Cr	rust		Present? Y	es No	
Remarks:							
8							

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	"	

Sampling Point: PIF6

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Profile Description: (Describe to the depth  Depth Matrix	Redox Fe			no absolice o	mulcators.)
(inches) Color (moist) %		% Type'	Loc <sup>2</sup>	Texture	Remarks
0-4 7,54RS/2 60 5	YR 4/6 4	0 CS	MPL	Sind	
4-H7.54R2.5/1 100			•		. d
				Mucky Sc	70
					s +12
- car					
				- 1	
				130	
T			<del></del> -		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Re Hydric Soil Indicators: (Applicable to all LRI	duced Matrix, CS=Co	vered or Coate	d Sand Grain		on: PL=Pore Lining, M=Matrix.
Histosol (A1)				indicators fo	r Problematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)	Sandy Redox (St				* (A9) (LRR C)
Black Histic (A3)	Stripped Matrix (				k (A10) (LRR B)
Hydrogen Sulfide (A4)	Loamy Mucky Mi Loamy Gleyed M				Vertic (F18)
Stratified Layers (A5) (LRR C)	Depleted Matrix (	. ,			nt Material (TF2)
1 cm Muck (A9) (LRR D)	Redox Dark Surfa			\	plain in Remarks)
Depleted Below Dark Surface (A11)	Depleted Dark St				
Thick Dark Surface (A12)	Redox Depressio	ns (F8)		3Indicators of	hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	)			Irology must be present,
Sandy Gleyed Matrix (S4)	(				rbed or problematic.
Restrictive Layer (if present):				****	
Type:	•				<b>\</b>
Depth (inches):			. [1	łydric Soil Pro	esent? YesNo
YDROLOGY					
Wetland Hydrology Indicators:					
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; ch					y Indicators (2 or more required)
Vetland Hydrology Indicators: Primary Indicators (minimum of one required; ch Surface Water (A1)	Salt Crust (B11)			Wate	r Marks (B1) (Riverine)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12	2)		Wate Sedir	r Marks (B1) (RIverine) nent Deposits (B2) (RIverine)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb	?) rates (B13)		Wate Sedir Drift [	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide	?) rates (B13) e Odor (C1)		Wate Sedin Drift [ Drain	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizos	e) rates (B13) e Odor (C1) oheres along Li	ving Roots (	Wate Sedir Drift I Drain C3) Dry-S	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizosa Presence of Red	e) rates (B13) e Odor (C1) pheres along Li uced Iron (C4)		Wate Sedir Drift I Drain C3) Dry-S Crayfi	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) season Water Table (C2) ish Burrows (C8)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizosy Presence of Red Recent Iron Redi	rates (B13) e Odor (C1) pheres along Li uced Iron (C4) uction in Tilled		Wate Sedir Drift I Drain C3) Crayfi Satur	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) attion Visible on Aerial Imagery (C9)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizosy Presence of Red Recent Iron Redu Thin Muck Surface	rates (B13) e Odor (C1) pheres along Li uced Iron (C4) uction in Tilled		Wate Sedir Drift I Drain C3) Crayfi Satur Shallo	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizosy Presence of Red Recent Iron Redi	rates (B13) e Odor (C1) pheres along Li uced Iron (C4) uction in Tilled		Wate Sedir Drift I Drain C3) Crayfi Satur Shallo	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) attion Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in	rates (B13) e Odor (C1) pheres along Li uced Iron (C4) uction in Tilled		Wate Sedir Drift I Drain C3) Crayfi Satur Shallo	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfider Oxidized Rhizosy Presence of Red Recent Iron Reduration Muck Surface Other (Explain in	c) rates (B13) e Odor (C1) oheres along Li uced Iron (C4) uction in Tilled (C7) Remarks)		Wate Sedir Drift I Drain C3) Crayfi Satur Shallo	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) deason Water Table (C2) dish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteble Hydrogen Sulfide Oxidized Rhizosy Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches):	rates (B13) Practice (B13) Proceed (C1) Proceed Iron (C4) Proced (C7) Proced (	Soils (C6)	Wate Sedir Drift I Drain C3) Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfider Oxidized Rhizosy Presence of Red Recent Iron Reduration Muck Surface Other (Explain in	c) rates (B13) e Odor (C1) oheres along Li uced Iron (C4) uction in Tilled (C7) Remarks)	Soils (C6)	Wate Sedir Drift I Drain C3) Crayfi Satur Shallo	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Furface Water Present?  Ves No Auturation Present?  Ves No No Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Vater Table Present?  Vater Table Present?  Ves No  Saturation Present?  Ves No  includes capillary fringe)  Describe Recorded Data (stream gauge, monitorical	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; ch  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No  Saturation Present?  Yes No  Saturation Present?  Yes No  Saturation Present?  Yes No  Saturation Present?	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No Saturation Present?	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; cheat Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No Actual Control of Staturation Present?  Vater Table Present?  Ves No Actual Control of Staturation Present?  Ves No Control of Staturation Present?	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required; check Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Ves No Saturation Present?  Ves No Saturation Present?  Yes No Saturation Present?  Yes No Saturation Present?  Yes No Social Cracks (B6)  Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12 Aquatic Invertebre Hydrogen Sulfide Oxidized Rhizose Presence of Red Recent Iron Redu Thin Muck Surface Other (Explain in Depth (inches): Depth (inches):	rates (B13) Proceed (C1) Proceed Iron (C4) Proceed (C7) P	Soils (C6)	Wate Sedir Drift I Drain C3) Dry-S Crayfi Satur Shallo FAC-I	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)

ct/Site:	site typical for this ydrologys	Se Local Loc	ction, Township, Rapport of the Concave, Concave	Convex, none).  TLAg: 3646140,29 Datum:  NWI classification:  (If no, explain in Remarks.)  "Normal Circumstances" present? Yes	(%):
cant/Owner: stigator(s): sti	site typical for this ydrologys	Se Local Loc	ction, Township, Rapport of the Concave, Concave	State: Sampling Point: nge: Slope of the state of the	(%):
stigator(s):  Iform (hillslope, terrace, etc.):  egion (LRR):  Map Unit Name:  climatic / hydrologic conditions on the  Vegetation, Soil, or Hy	site typical for this	Se Localization Se Localizatio Se Localization Se Localization Se Localization Se Localization	ction, Township, Rapacal relief (concave, 40140, 2) 3 000 2 ( ) 7 Yes No_ sturbed? Are	Convex, none).  TLAg: 3646140,29 Datum:  NWI classification:  (If no, explain in Remarks.)  "Normal Circumstances" present? Yes	MSS
form (hillslope, terrace, etc.):egion (LRR):  Map Unit Name:  climatic / hydrologic conditions on the  Vegetation, Soil, or Hy	site typical for this ydrologys	s time of year ignificantly distribution	relief (concave, 24040,22 in 23 000 2 in 25 No 25 No 25 Are	Convex, none).  TLAg: 3646140,29 Datum:  NWI classification:  (If no, explain in Remarks.)  "Normal Circumstances" present? Yes	MSS
egion (LRR):  Map Unit Name:  climatic / hydrologic conditions on the  Vegetation, Soil, or Hy	site typical for this	s time of years ignificantly dis	3 000 2 / S ? Yes No _ sturbed? Are	NWI classification: (If no, explain in Remarks.) "Normal Circumstances" present? Yes	
Map Unit Name:  climatic / hydrologic conditions on the  Vegetation, Soil, or Hy	site typical for this	s time of year ignificantly dis	? Yes No _ sturbed? Are	(If no, explain in Remarks.) "Normal Circumstances" present? Yes	
climatic / hydrologic conditions on the Vegetation, Soil, or Hy	site typical for this ydrologys	ignificantly dis naturally probl	sturbed? Are	"Normal Circumstances present: 105	_ No
Vegetation, Soil, or Hy	ydrologys ydrologyr	ignificantly dis naturally probl	sturbed? Are	"Normal Circumstances present: 105	_ No
Vegetation Soil . or HV	ydrology r	aturally proble	ematic? (If n		
MMARY OF FINDINGS - Att.	ach site map		•	eeded, explain any answers in Remarks.)	
MMARY OF FINDINGS - Att		showing s	ampling point	locations, transects, important feat	ures, e
		×			
drophytic Vegetation Present?	Yes N		Is the Sample	d Area	
/dric Soil Present?	Yes N	10	within a Wetla	and? Yes No	
etland Hydrology Present?	Yes N	10			
emarks:					
					-
GETATION – Use scientific	names of plan	nts.	i a sa wi		
		Absolute	Dominant Indicator	Dominance Test worksheet:	N
ee Stratum (Plot size:		% Cover	Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	(A
					-
p HE				Total Number of Dominant Species Across All Strata:	<u> </u>
				Percent of Dominant Species	<i>}</i> .
•			= Total Cover	That Are OBL, FACW, or FAC:	(A
Sapling/Shrub Stratum (Plot size:	)			Prevalence Index worksheet:	
				Total % Cover of: Multiply	by:
	į.			OBL species x1=	<u> </u>
3	11			FACW species x 2 =	
4.				FAC species x 3 =	<u>-</u>
5	(36)	ü	= Total Cover	FACU species x 4 =	<del>_</del>
Herb Stratum (Plot size:		20	O.	UPL species x 5 =	3_
1. Bromus diendr	<u> </u>	<u> 30</u>		. 1	<del></del>
s fromiculum rule	de la	<del>-                                    </del>	FAL	Prevalence Index = B/A = 3.2	<u>s</u>
3. Rumex crispus"		- 70		Hydrophytic Vegetation Indicators:	
4. Browns caricatus	<u>,                                    </u>	- <del>10</del>	FACU	Dominance Test is >50%	
5. Broms hardaces 6. Aremapsis alifor	<u> </u>		061	Prevalence Index is ≤3.01	
6. Aremapsis carrie	ALCA			Morphological Adaptations <sup>1</sup> (Provide data in Remarks or on a separate	supportir sheet)
7 8				Problematic Hydrophytic Vegetation¹	
8		no	= Totai Cover	Floblemade Hydrophyse engagement	` •
Woody Vine Stratum (Plot size:	)			<sup>1</sup> Indicators of hydric soil and wetland hydr	rology mu
1				be present, unless disturbed or problema	tic.
2.			= Total Cover	Hydrophytic	
				Vegetation	X
% Bare Ground in Herb Stratum	% Co	over of Biotic	Crust	Present? Yes No	
Remarks:					

(inches) Color (mc	latrix	Redox F	eatures		n the absence of indic	•
(inches) Color (mo	oist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
					born clair	- TOMAINO
7-10 107/ 3	100		E 1		Sandy clas 100	m I"wom
9-1 10714	5/4 10					MI I MOIM
					Silt/sone	
	795					
<del></del>						
	<del></del>					
ype: C=Concentration, D	=Depletion, RM=Re	educed Matrix, CS=C	overed or Coate	d Sand Gr	ains <sup>2</sup> Location: DI	-D1::
(A)	pplicable to all LR	Rs, unless otherwis	e noted.)	- 04/14 0/		=Pore Lining, M=Matrix.
_ HISTOSOF (A1)		Sandy Redox (S	S <b>5</b> )		1 cm Muck (A9)	
Histic Epipedon (A2)		Stripped Matrix			2 cm Muck (A10)	(LRR C)
Black Histic (A3)		Loamy Mucky M			Reduced Vertic (	(LRK D) F18)
Hydrogen Sulfide (A4)		Loamy Gleyed I	/latrix (F2)		Red Parent Mate	r (0)
Stratified Layers (A5) (L	LRR C)	Depleted Matrix	(F3)		Other /Evalui- :-	Domestes)
1 cm Muck (A9) (LRR D	<b>D</b> )	Redox Dark Sur			Other (Explain in	remarks)
Depleted Below Dark S	urface (A11)	Depleted Dark S	Surface (F7)			
Thick Dark Surface (A1:		Redox Depressi	ons (F8)		3Indicators of budget	. At
Sandy Mucky Mineral (S	S1)	Vernai Pools (F9	))		<sup>3</sup> Indicators of hydroph	ytic vegetation and
Sandy Gleyed Matrix (S	34)		. 12		wetland hydrology	nust be present,
strictive Layer (if preser	nt):				unless disturbed or	problematic.
		_			•	
Depth (inches):		9				
narks:				Í	Hydric Soil Present?	Yes No K
		_=				
						21 gr 80
land Hydrology Indicate		II				51 p
land Hydrology Indicate pary Indicators (minimum		eck all that apply)			0	
land Hydrology Indicate pary Indicators (minimum						ors (2 or more required)
land Hydrology Indicate nary Indicators (minimum Surface Water (A1)		Salt Crust (B11)		<i>J</i>	Water Marks	(B1) (Riverine)
land Hydrology Indicate hary Indicators (minimum Surface Water (A1) High Water Table (A2)		Salt Crust (B11) Biotic Crust (B12	2)		Water Marks	(B1) (Riverine)
land Hydrology Indicaton eary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	of one required; che	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb	?) rates (B13)		Water Marks Sediment Dep	(B1) (Riverine) Posits (B2) (Riverine)
land Hydrology Indicator eary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri	of one required; che	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide	e) Pates (B13) Podor (C1)	2	Water Marks Sediment Dep Drift Deposits Drainage Patt	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine)
land Hydrology Indicate hary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (	of one required; che verine) Nonriverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	e) rates (B13) Odor (C1) Oheres along Liv	ing Roots	<ul><li>Water Marks</li><li>Sediment Deposits</li><li>Drainage Patt</li></ul>	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) erns (B10)
land Hydrology Indicate hary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) ( Drift Deposits (B3) (Nonri	of one required; che verine) Nonriverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos	e) rates (B13) Odor (C1) Oheres along Liv	ing Roots	<ul> <li>Water Marks</li> <li>Sediment Deposits</li> <li>Drift Deposits</li> <li>Drainage Patt</li> <li>(C3)</li> <li>Dry-Season Water</li> </ul>	(B1) (Riverine) posits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2)
cland Hydrology Indicate nary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) ( Drift Deposits (B3) (Nonri Surface Soil Cracks (B6)	of one required; che verine) Nonriverine) iverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red	e Odor (C1)  Cheres along Livuced Iron (C4)		Water Marks Sediment Dep Drift Deposits Drainage Patt CO3) Crayfish Burro	(B1) (Riverine) cosits (B2) (Riverine) (B3) (Riverine) erns (B10) /ater Table (C2) ows (C8)
cland Hydrology Indicate nary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) ( Drift Deposits (B3) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri	of one required; che verine) Nonriverine) iverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Rede	2) rates (B13) e Odor (C1) oheres along Livuced Iron (C4) uction in Tilled S		Water Marks Sediment Dep Drift Deposits Drainage Patt CC3) Dry-Season V Crayfish Burro Saturation Vis	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) lws (C8) ible on Aerial Imagery (C
tland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B8)	of one required; che verine) Nonriverine) iverine)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Rede Thin Muck Surface	e Odor (C1) cheres along Livuced Iron (C4) cuction in Tilled Size (C7)		Water Marks Sediment Dep Drift Deposits Drainage Patt Orayfish Burro Saturation Vis Shallow Aquita	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Lible on Aerial Imagery (Card (D3)
tland Hydrology Indicates nary Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B6) In Observations:	of one required; che verine) Nonriverine) iverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Rede	e Odor (C1) cheres along Livuced Iron (C4) cuction in Tilled Size (C7)		Water Marks Sediment Dep Drift Deposits Drainage Patt CC3) Dry-Season V Crayfish Burro Saturation Vis	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Lible on Aerial Imagery (Card (D3)
tland Hydrology Indicates nary Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (B6) In Observations:	of one required; che verine) Nonriverine) iverine) ial Imagery (B7) 9)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Rede Thin Muck Surfac	c) rates (B13) c Odor (C1) cheres along Livuced Iron (C4) uction in Tilled Sice (C7) Remarks)		Water Marks Sediment Dep Drift Deposits Drainage Patt Orayfish Burro Saturation Vis Shallow Aquita	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Lible on Aerial Imagery (Card (D3)
tland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (Drift Deposits (B3) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (Ball Observations:	verine) Nonriverine) iverine) ial Imagery (B7) 9)	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Thin Muck Surfac Other (Explain in	c) rates (B13) c Odor (C1) cheres along Liv uced Iron (C4) uction in Tilled Sice (C7) Remarks)		Water Marks Sediment Dep Drift Deposits Drainage Patt Orayfish Burro Saturation Vis Shallow Aquita	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Lible on Aerial Imagery (Card (D3)
tland Hydrology Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (Drift Deposits (B3) (Nonri Surface Soil Cracks (B6) Inundation Visible on Aeri Water-Stained Leaves (Bt I Observations: are Water Present?	verine) (Nonriverine) iverine) ial Imagery (B7) 9)  Yes No Yes No	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Thin Muck Surfac Other (Explain in	c) rates (B13) c Odor (C1) cheres along Liv uced Iron (C4) uction in Tilled S ce (C7) Remarks)	oils (C6)	Water Marks Sediment Deposits Drift Deposits Drainage Patt Cayfish Burro Saturation Vis Shallow Aquita FAC-Neutral T	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Lible on Aerial Imagery (Card (D3)
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stland Hydrology Indicator mary Indicators (minimum) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri- Sediment Deposits (B2) ( Drift Deposits (B3) (Nonri- Surface Soil Cracks (B6) Inundation Visible on Aeri- Water-Stained Leaves (Bild Observations: ace Water Present? Table Present? ration Present? udes capillary fringe) cribe Recorded Data (streat	verine) Nonriverine) ial Imagery (B7)  Yes No Yes No Yes No	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Thin Muck Surfac Other (Explain in  Depth (inches): Depth (inches):	e Odor (C1) cheres along Livuced Iron (C4) uction in Tilled Size (C7) Remarks)	oils (C6)	Water Marks Sediment Dep Drift Deposits Drainage Patt Can Dry-Season V Crayfish Burro Saturation Vis Shallow Aquita FAC-Neutral T	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) Dows (C8) Dible on Aerial Imagery (Card (D3) Dest (D5)
High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonri Sediment Deposits (B2) (	verine) Nonriverine) ial Imagery (B7)  Yes No Yes No Yes No	Salt Crust (B11) Biotic Crust (B12 Aquatic Inverteb Hydrogen Sulfide Oxidized Rhizos Presence of Red Recent Iron Red Thin Muck Surfac Other (Explain in  Depth (inches): Depth (inches):	e Odor (C1) cheres along Livuced Iron (C4) uction in Tilled Size (C7) Remarks)	oils (C6)	Water Marks Sediment Dep Drift Deposits Drainage Patt Can Dry-Season V Crayfish Burro Saturation Vis Shallow Aquita FAC-Neutral T	(B1) (Riverine) Dosits (B2) (Riverine) (B3) (Riverine) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imagery (ard (D3) est (D5)

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ed Cours de Sur	City	County:	an Diego Sampling Date: 4/26/13
Applicant/Owner:	O.K.y.	ovanty.	State: A Sampling Point: P. F. 8
Investigator(s): S-Amin, R-Ran	d. 11 Sant	lion Tournelin De	State. Sampling Point: P. 6
Landform (hillslope, errace) etc.):	Loc	al relief (concave,	convex, r(one): 44.7 Slope (%): 6  Long: 3641211 Datum: WGS8
Subregion (LRR):	_ Lat: 40C	5650	Long: Datum: WGS8
Soil Map Unit Name: TUB-Tuyunge Son	2,665	20 shipe	NWI classification: trohustreneg
Are climatic / hydrologic conditions on the site typical for th	is time of year?	Yes No _	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly distu	urbed? Are	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problem	natic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sa	mpling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	lo/		711
Hydric Soil Present? Yes N		is the Sampled	
Wetland Hydrology Present? YesN	lo	within a Wetlar	nd? Yes No
Remarks: Vesetation present by	t no so	the or h	colory, pt boaton in
depassion that many pr	nd who	classich	her America
00p.03310= 1100 1 9 p.	,, o- <b>(</b> -), o	wya 1	1000000
VEGETATION - Use scientific names of plan	its.		
T Class (B) is		minant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		ecies? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC:(A)
2			Total Number of Dominant
3			Species Across All Strata: (B)
· ·	= To	otal Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:)		otal Cover	That Are OBL, FACW, or FAC: (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3			OBL species x 1 =1
4	<del></del>		FACW species x 2 =
5.			FAC species x 3 =
Herb Stratum (Plot size:	= To	otal Cover	FACU species x 4 =
1. Juneus Kiphiodes	100	y cou	UPL species x 5 =
2			Column Totals:(A)(B)
3.	<u> </u>		Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5			Deminance Test is >50%
6.			Prevalence Index is ≤3.0¹
7			Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8	1.00		Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)	100 = To	tal Cover	vestermans rijaroprijas vegetation (Explain)
1			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2			be present, unless disturbed or problematic.
	= To	tal Cover	Hydrophytic
% Bare Ground in Herb Stratum % Cover	of Biotic Crust	0	Vegetation Present? Yes No
Remarks:			Present? Yes No No
			**

S	OI	L

Depth <u>Matrix</u>	Redox Features	Loc <sup>2</sup> Texture Remarks
inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks Silty Claylorn
0-3 6403/2		
3-13 7.5403/2		silty du tom smell parties & nitor
	4 1	
ype: C=Concentration, D=Depletion, RM=I	Reduced Matrix, CS=Covered or Coate	ed Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
ydric Soil Indicators: (Applicable to all L	.RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
_ Histosol (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 Mücky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Red Parent Material (TF2) Other (Explain in Remarks)
_ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3) Redox Dark Surface (F6)	Other (Explain in Normano)
_ 1 cm Muck (A9) (LRR D) _ Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	E.
Depleted Below Bark Surface (A11)	Redox Depressions (F8)	<sup>3</sup> 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.
lestrictive Layer (if present):		
Type:		X
Depth (inches):		Hydric Soil Present? Yes No _/ \
Remarks:		
YDROLOGY Vetland Hydrology Indicators:	l; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Presence of Reduced Iron (C	
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along</li> </ul>	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7  Water-Stained Leaves (B9)  Field Observations:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7  Water-Stained Leaves (B9)  Field Observations:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille Thin Muck Surface (C7) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Vetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLOGY  Netland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present?  Ves   Noter Table Present?  Ves   Noter Table Present?  Saturation Present? Yes   Noter Table Present?  Saturation Present? Yes   Noter Table Present? Yes   Noter Tabl	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): Depth (inches): Depth (inches): S h	Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Ed Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes Includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): Depth (inches): Depth (inches): S h	Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Ed Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge, mo	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Water Table Present?  Yes Saturation Present? (includes capillary fringe) Describe Recorded Data (stream gauge, mo	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? Saturation Present? Secribe Recorded Data (stream gauge, mo	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
VDROLOGY  Vetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Ves Vater Table Present? Ves Saturation Present? Saturation Present? Secribe Recorded Data (stream gauge, model)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Living Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes Saturation Present? Yes Gincludes capillary fringe) Describe Recorded Data (stream gauge, mo	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C Recent Iron Reduction in Tille 7) Thin Muck Surface (C7) Other (Explain in Remarks)  No Depth (inches): Depth (inches): No Depth (inches): Depth (inches): No Depth (inches):	Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Ed Soils (C6)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No

WETLAND DETERMINATION DATA FORM - Arid West Region Project/Site: \_\_\_\_\_ City/County: \_\_\_ Applicant/Owner: \_ Sampling Point: Investigator(s): \_\_\_\_ Section, Township, Range: \_\_\_ Landform (hillslope (terrace, etc.): Local relief (concave, convex, rope): Subregion (LRR): \_\_\_ 480698 Long Datum: WG581 Soil Map Unit Name: TUL -Tuluna NWI classification: TChworfe Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_ (If no. explain in Remarks.) Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? is the Sampled Area Hydric Soil Present? Yes \_\_\_\_\_ No within a Wetland? Wetland Hydrology Present? Yes \_ No Remarks: VEGETATION - Use scientific names of plants. Absolute Dominant Indicator **Dominance Test worksheet:** Tree Stratum (Plot size: \_\_\_\_) % Cover Species? Status Number of Dominant Species That Are OBL, FACW, or FAC: **Total Number of Dominant** Species Across All Strata: Percent of Dominant Species \_\_\_\_\_ = Total Cover That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: \_\_\_\_\_) Prevalence Index worksheet: Total % Cover of: OBL species FACW species FAC species = Total Cover FACU species Herb Stratum (Plot size: 545 UPL species Column Totals: Prevalence Index = B/A = **Hydrophytic Vegetation Indicators:** \_\_\_ Dominance Test is >50% Prevalence Index is ≤3.01 \_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) \_\_ Problematic Hydrophytic Vegetation¹ (Explain) = Total Cover Woody Vine Stratum (Plot size: \_\_\_\_) <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. \_\_\_\_ = Total Cover Hydrophytic Vegetation % Bare Ground in Herb Stratum % Cover of Biotic Crust Present? Remarks:

C 11	

Sampling Point: P.19

Profile Description: (Describe to the depth	,	
Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Lo	
0-4 104R 3/2		Clay lain
4-14 bya 3/2		sanly ban
		•
		2
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, CS=Covered or Coated S	and Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.  Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators: (Applicable to all I		
Histosol (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) Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Explain in Nomano)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)	
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7) Redox Depressions (F8)	<sup>3</sup> Indicators of hydrophytic vegetation and
Thick Dark Surface (A12)	Vernal Pools (F9)	wetland hydrology must be present,
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Vernan colo (i o)	unless disturbed or problematic.
Restrictive Layer (if present):		
<u>-</u>		
Type:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks: Soil damp, but n	5 1-018WC.	
	5 1-018WC.	
HYDROLOGY	5 1-018WC.	
HYDROLOGY  Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required	d; check all that apply)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)	d; check all that apply) Salt Crust (B11)	
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)	t; check all that apply) Salt Crust (B11) Biotic Crust (B12)	Water Marks (B1) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)	d; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> </ul>
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Liv	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> </ul>
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	d; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Live Presence of Reduced Iron (C4)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ing Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) ing Roots (C3) Dry-Season Water Table (C2) Crayfish Burrows (C8)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)  Surface Soil Cracks (B6)  Inundation Visible on Aerial Imagery (B	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Ing Roots (C3)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> </ul>
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## **URS**

## Memorandum

Date: April 19, 2013

To: Sundeep Amin

From: Thomas Grace

Subject: Los Penasquitos Field Survey Progress Report

Matt Moore, Jerry Pitt and Tom Grace spent approximately 1.5 days conducting an in-house survey for Los Penasquitos Creek at the El Cuervo al Oeste and El Cuervo del Sur sites. The survey was taken with three cross-section alignments for each site. The El Cuervo al Oeste site survey was taken on April 17<sup>th</sup>, 2013 and the El Cuervo del Sur site was taken on April 18<sup>th</sup>, 2013. The field survey cross-sections were taken with the objective to closely align with the HEC-RAS cross-section and boring locations. Other than getting the general topography of the land, we also noted edge-of-water locations and depth of water.

The El Cuervo al Oeste site survey was conducted within the creek area. The area was heavily vegetated with thick brush and trees. The creek had running water and in some instances small pools of standing water were observed.

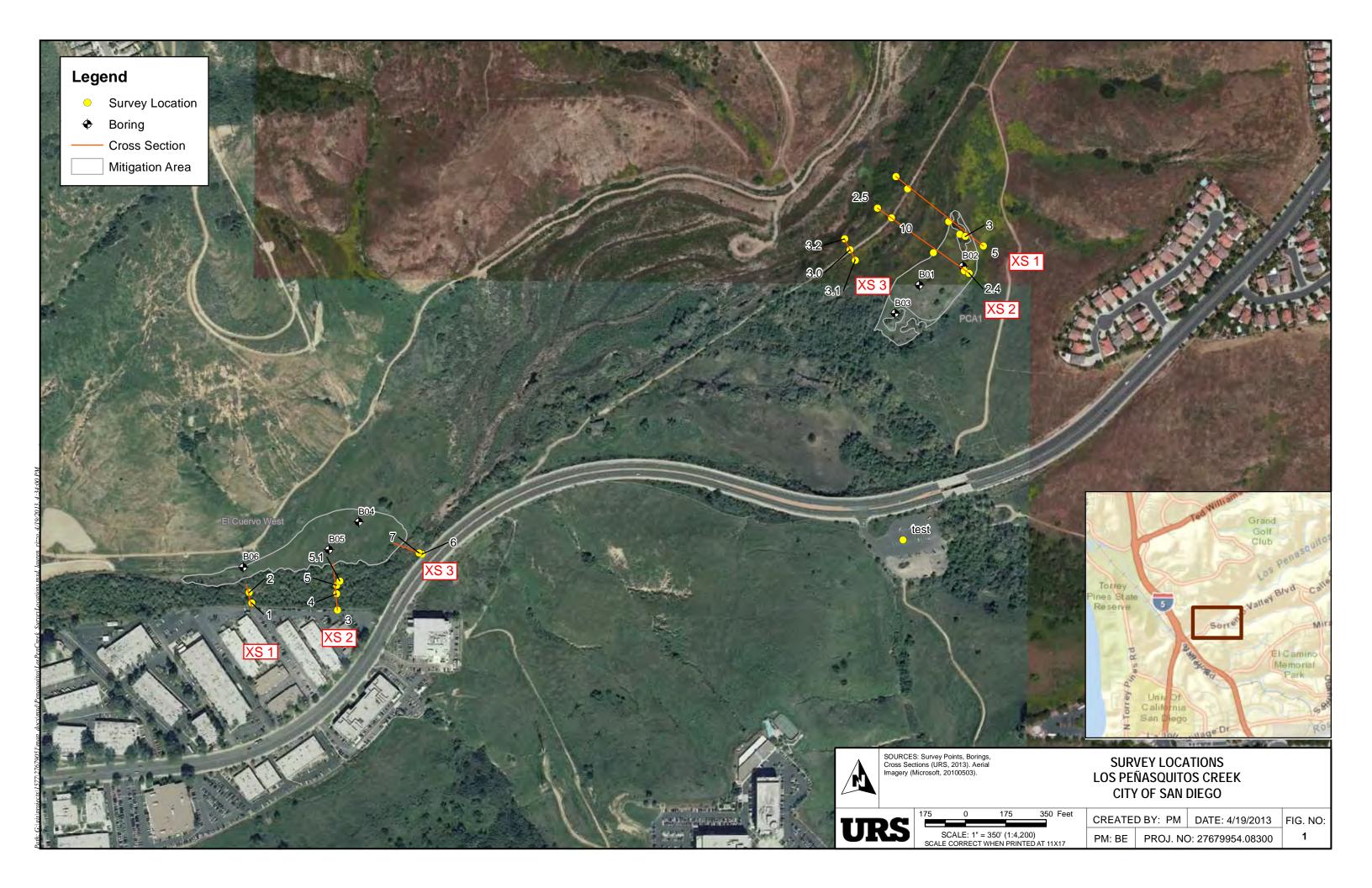
The El Cuervo del Sur site survey was conducted mainly within the project site area. The site area is mainly dry with tall grass, shrubs and trees. The creek area was very dense with tall vegetation. The vegetation was too dense to complete the survey along the alignments and the water appeared to be deep. We couldn't traverse through the creek due to safety. The third cross-section, the most downstream section, was very densely vegetated. Survey points were gathered until accessibility was limited.

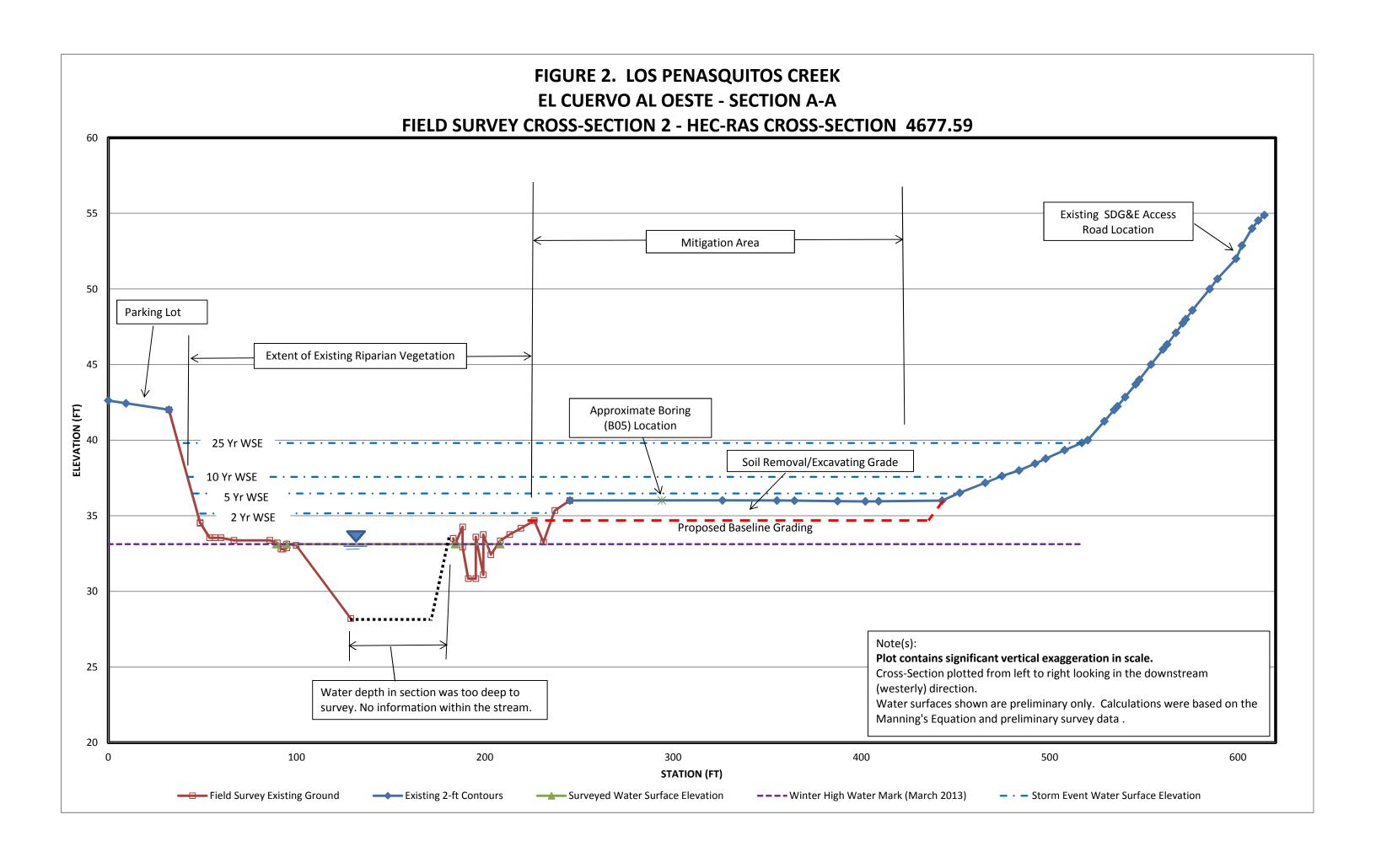
The cross-section alignments were hard to establish based on the overview map. However, we oriented our alignments with visible landmarks, such as houses, trees and boring locations, to give us direction.

Attached is a map illustrating our general cross-section alignments that were established by taking waypoints with the GPS unit on the field survey. Refer to **Figure 1**.

The field survey points were then transposed onto the cross-sections generated with the existing topography, 2-ft contour intervals, to generate a more defined section. Refer to **Figure 2 and Figure 3** for El Cuervo del Oeste and El Cuervo del Sur, respectively. The City topography is not detailed enough to capture the ground points beneath the dense canopy of the trees and brush therefore a field survey was conducted to supplement those points.

The cross-sections generated from the City topography and the field surveys were used as ground point data for an HEC-RAS analysis. The results from the analysis determined the preliminary water surface elevations and flood widths for both project sites. For each site, the 2-, 5-, 10-, and 25-year floodplains were delineated. Refer to **Figure 4 and Figure 5** for El Cuervo del Oeste and El Cuervo del Sur, respectively. The flow rates were based on the FEMA Flood Insurance Study (FIS) for Los Penasquitos Creek.





# FIGURE 3. LOS PENASQUITOS CREEK EL CUERVO DEL SUR - SECTION B-B FIELD SURVEY CROSS-SECTION 2 - HEC-RAS CROSS-SECTION 7566.95

