## Chuckwalla Valley Road Bridge over Aztec Ditch (State Br. No. 56C0102)



Photograph: 1-1

**Photo Date:** 02-19-2019

**Location:** Feature 1-6

**Direction:** Southwest

**Comment:** Looking upstream at Feature 1-6.



Photograph: 1-2

**Photo Date:** 02-19-2019

**Location:** Feature 1-6

**Direction:** North

Comment: Looking downstream at Feature 1-

6 where flows are conveyed from Chuckwalla Valley Road, but recent presumably routine grading had bermed the side of the road at

the feature's origin.



**Photo Date:** 02-19-2019

**Location:** Feature 1-1

**Direction:** Southwest

Comment: Looking downstream at Feature 1-

1.



Photograph: 1-4

**Photo Date:** 02-19-2019

**Location:** Feature 1-2 (Aztec Ditch)

**Direction:** Southwest

**Comment:** Looking upstream at Feature 1-2

(Aztec Ditch from the bridge on

Chuckwalla Valley Road.



Photograph: 1-5

**Photo Date:** 02-19-2019

**Location:** Feature 1-2 (Aztec Ditch)

**Direction:** Northeast

Comment: Looking downstream at Feature 1-

2 (Aztec Ditch) from the bridge on

Chuckwalla Valley Road.



**Photo Date:** 02-19-2019

**Location:** Feature 1-3

**Direction:** South

**Comment:** Area where flow from Feature 1-3

terminates, taken from the

diversion dike.



Photograph: 1-7

**Photo Date:** 02-19-2019

**Location:** Feature 1-3

**Direction:** Southwest

**Comment:** Looking upstream at Feature 1-3.



Photograph: 1-8

**Photo Date:** 02-19-2019

**Location:** Feature 1-4

**Direction:** South

**Comment:** Looking upstream at Feature 1-4

from its confluence with Feature 1-3 near Chuckwalla Valley Road.



**Photo Date:** 02-19-2019

**Location:** Feature 1-5

**Direction:** southeast

**Comment:** Looking downstream at the origin

of Feature 1-5 along the south side of Chuckwalla Valley Road.



Photograph: 1-10

**Photo Date:** 02-19-2019

**Location:** Feature 1-2 (Aztec Ditch)

**Direction:** Northeast

**Comment:** Looking downstream at one of the

low flow channels within Feature

1-2 (Aztec Ditch).



Photograph: 1-25

**Photo Date:** 02-27-2019

**Location:** Feature 1-2 (Aztec Ditch)

**Direction:** Northwest

**Comment:** Looking at SP 5. Non-wetland.

## Chuckwalla Valley Road Bridge over Tarantula Ditch (State Br. No. 56C0103)



Photograph: 1-11

**Photo Date:** 02-19-2019

**Location:** Feature 2-1

**Direction:** Southeast

**Comment:** Looking upstream at Feature 2-1.



Photograph: 1-13

**Photo Date:** 02-19-2019

**Location:** Feature 2-2

**Direction:** Northwest

**Comment:** Looking at low point along the

Chuckwalla Valley Road where

Feature 2-2 terminates.



**Photo Date:** 02-19-2019

**Location:** Feature 2-2

**Direction:** Southwest

**Comment:** Looking upstream at Feature 2-2

from the diversion dike that splits Feature 2-2 from Feature 2-3.



Photograph: 1-15

**Photo Date:** 02-19-2019

**Location:** Feature 2-3

**Direction:** Northeast

**Comment:** Looking downstream at one of

the low flow channels within

Feature 2-3.



Photograph: 1-16

**Photo Date:** 02-19-2019

**Location:** Feature 2-3

**Direction:** Northwest

**Comment:** Looking upstream at Feature 2-3.



**Photo Date:** 02-19-2019

**Location:** Feature 2-3

**Direction:** West

**Comment:** View of the man-made diversion

dike, taken from the top of the diversion dike along the west side

of Feature 2-3.



Photograph: 1-18

**Photo Date:** 02-19-2019

**Location:** Feature 2-7

**Direction:** Southeast

**Comment:** Looking downstream at Feature

2-7 along the south side of Chuckwalla Valley Road.



Photograph: 1-19

**Photo Date:** 02-19-2019

**Location:** Feature 2-4

**Direction:** South

**Comment:** Looking upstream at Feature 2-4

from where the feature flows into

Feature 2-7.



**Photo Date:** 02-19-2019

**Location:** Feature 2-5

**Direction:** Southwest

**Comment:** Looking upstream at Feature 2-5

from where the feature flows into

Feature 2-7.



Photograph: 1-21

**Photo Date:** 02-19-2019

**Location:** Feature 2-6

**Direction:** South

**Comment:** Looking upstream at Feature 2-6.



Photograph: 1-22

**Photo Date:** 02-19-2019

**Location:** Feature 2-2

**Direction:** Northeast

**Comment:** Looking downstream at Feature

2-2 from the bridge on Chuckwalla Valley Road.



**Photo Date:** 02-19-2019

**Location:** Feature 2-2

**Direction:** South

**Comment:** Looking upstream at Feature 2-2

from the bridge on Chuckwalla

Valley Road.



Photograph: 1-24

**Photo Date:** 02-19-2019

**Location:** Feature 2-2

**Direction:** Southwest

**Comment:** Looking upstream at Feature 2-2

towards bridge on Chuckwalla

Valley Road.



Photograph: 1-26

**Photo Date:** 02-27-2019

**Location:** Feature 2-3

**Direction:** Southeast

**Comment:** Looking at SP 6. Non-wetland.

## Chuckwalla Valley Road Bridge over Sutro Ditch (State Br. No 56C0104)



Photograph: 2-1

**Photo Date:** 02-27-2019

**Location:** Feature 3-1 and Feature 3-2

**Direction:** Southwest

**Comment:** Looking upstream at Feature 3-1

and Feature 3-2 from their confluence along Chuckwalla

Valley Road.



Photograph: 2-2

**Photo Date:** 02-27-2019

**Location:** Feature 3-2

**Direction:** Northeast

**Comment:** Looking downstream at Feature

3-2.



**Photo Date:** 02-27-2019

**Location:** Feature 3-3

**Direction:** North

**Comment:** Looking downstream at Feature

3-3.



Photograph: 2-5

**Photo Date:** 02-27-2019

**Location:** Feature 3-4

**Direction:** South

**Comment:** Looking upstream at Feature 3-4

from its confluence with Feature

3-5.



Photograph: 2-6

**Photo Date:** 02-27-2019

**Location:** Feature 3-5

**Direction:** North

**Comment:** Looking downstream at Feature

3-5.



**Photo Date:** 02-27-2019

**Location:** Feature 3-5

**Direction:** South

**Comment:** Looking upstream at Feature 3-5

from its terminus at a low point along Chuckwalla Valley Road.



Photograph: 2-8

**Photo Date:** 02-27-2019

**Location:** Feature 3-6

**Direction:** Northeast

**Comment:** Looking downstream at Feature

3-6.



Photograph: 2-9

**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** Northeast

**Comment:** Looking downstream at Feature

3-8 from the center of the

channel.



**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** Northeast

**Comment:** Looking downstream at Feature

3-8 from the top of the diversion

dike on the east side of the

channel.



Photograph: 2-11

**Photo Date:** 02-27-2019

**Location:** Feature 3-7

**Direction:** Southeast

**Comment:** Looking downstream at Feature

3-7 flowing towards Feature 3-8

near the bridge.



Photograph: 2-12

**Photo Date:** 02-27-2019

**Location:** Feature 3-7

**Direction:** Northwest

**Comment:** Looking upstream at Feature 3-7

where it flows along the south side of Chuckwalla Valley Road.



**Photo Date:** 02-27-2019

**Location:** Feature 3-7

**Direction:** Southeast

**Comment:** Looking downstream at Feature

3-7 from its origin where flow is

conveyed off of Chuckwalla

Valley Road.



Photograph: 2-15

**Photo Date:** 02-27-2019

**Location:** Feature 3-9

**Direction:** Northeast

**Comment:** Looking downstream at Feature

3-9 from where is runs over old asphalt the runs parallel to Chuckwalla Valley Road.



Photograph: 2-16

**Photo Date:** 02-27-2019

**Location:** Feature 3-9

**Direction:** Southwest

**Comment:** Looking upstream at Feature 3-9.



**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** Southwest

**Comment:** Looking upstream at Feature 3-8

from where the diversion dike meets Chuckwalla Valley Road.



Photograph: 2-19

**Photo Date:** 02-27-2019

**Location:** Feature 3-10

**Direction:** Southwest

**Comment:** Looking upstream at Feature 3-10

from the edge of the study area.



Photograph: 2-20

**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** North

**Comment:** Looking downstream at Feature

3-8 from the diversion dike along the east side of Chuckwalla Valley

Road.



**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** Southwest

**Comment:** Looking upstream at Feature 3-8

from the diversion dike along the

east side of the channel.



Photograph: 2-47

**Photo Date:** 02-27-2019

**Location:** Feature 3-5

**Direction:** South

**Comment:** Looking at SP 1 within the low

point displaying soil cracks at the

terminus of Feature 3-5.



Photograph: 2-48

**Photo Date:** 02-27-2019

**Location:** Feature 3-8

**Direction:** Northwest

**Comment:** Looking at SP 2 within Feature 3-

8.

## Chuckwalla Valley Road Bridge over Acari Ditch (State Br. No. 56C0108)



Photograph: 2-22

**Photo Date:** 02-27-2019

**Location:** Feature 4-1

**Direction:** Northeast

**Comment:** Looking downstream at Feature

4-1.



Photograph: 2-23

**Photo Date:** 02-27-2019

**Location:** Feature 4-2

**Direction:** North

**Comment:** Looking downstream at Feature

4-2 where the OHWM narrows.



**Photo Date:** 02-27-2019

**Location:** Feature 4-2

**Direction:** Southwest

**Comment:** Looking upstream at Feature 4-2.



Photograph: 2-26

**Photo Date:** 02-27-2019

**Location:** Feature 4-3

**Direction:** Northeast

**Comment:** Looking at low point where

Feature 4-3 terminates in between the diversion dike and

Chuckwalla Valley Road.



Photograph: 2-27

**Photo Date:** 02-27-2019

**Location:** Feature 4-3

**Direction:** North

**Comment:** Looking downstream at Feature

4-3 towards the diversion dike.



**Photo Date:** 02-27-2019

**Location:** Feature 4-4

**Direction:** North

**Comment:** Looking downstream at Feature

4-4 from the diversion dike along

the east side of the channel.



Photograph: 2-29

**Photo Date:** 02-27-2019

**Location:** Feature 4-4

**Direction:** Southeast

**Comment:** Looking upstream at Feature 4-4

from the diversion dike along the

west side of the channel.



Photograph: 2-30

**Photo Date:** 02-27-2019

**Location:** Feature 4-5

**Direction:** Northwest

**Comment:** Looking upstream at Feature 4-5

from the area containing soil

cracks where the feature

terminates.



**Photo Date:** 02-27-2019

**Location:** Feature 4-5

**Direction:** South

**Comment:** Area containing soils cracks

where Feature 4-5 terminates.



Photograph: 2-32

**Photo Date:** 02-27-2019

**Location:** Feature 4-5

**Direction:** Southeast

**Comment:** Looking downstream at Feature

4-5.



Photograph: 2-33

**Photo Date:** 02-27-2019

**Location:** Feature 4-6

**Direction:** Northeast

**Comment:** Looking downstream at Feature

4-6 towards its confluence with

Feature 4-7.



**Photo Date:** 02-27-2019

**Location:** Feature 4-4

**Direction:** Southeast

**Comment:** Looking upstream at Feature 4-4

from the diversion dike along the

west side of the channel.



Photograph: 2-36

**Photo Date:** 02-27-2019

**Location:** Feature 4-4

**Direction:** Northwest

**Comment:** Low point where water sits, but

does not exhibit flow or

hydrophytic vegetation, looking

towards Feature 4-4.



Photograph: 2-38

**Photo Date:** 02-27-2019

**Location:** Feature 4-4

**Direction:** Northwest

**Comment:** Looking downstream at Feature

4-4.



**Photo Date:** 02-27-2019

**Location:** Feature 4-7

**Direction:** Southwest

**Comment:** Looking upstream at Feature 4-7.



Photograph: 2-42

**Photo Date:** 02-27-2019

**Location:** Feature 4-9

**Direction:** east

**Comment:** Looking downstream at Feature

4-9 from where it runs along the side of Chuckwalla Valley Road.



Photograph: 2-43

**Photo Date:** 02-27-2019

**Location:** Feature 4-9

**Direction:** East

**Comment:** Looking downstream at Feature

4-9 where the Feature sheet flows over old asphalt that runs parallel to Chuckwalla Valley

Road.



**Photo Date:** 02-27-2019

**Location:** Feature 4-9

**Direction:** North

**Comment:** Looking downstream at Feature

4-9.



Photograph: 2-45

**Photo Date:** 02-27-2019

**Location:** Feature 4-10 and 4-11

**Direction:** Northeast

**Comment:** Looking downstream at the split

between Feature 4-10 and Feature 4-11 from Feature 4-9.



Photograph: 2-46

**Photo Date:** 02-27-2019

**Location:** Feature 4-10 and 4-11

**Direction:** Southeast

**Comment:** Looking downstream at Feature

4-9 where it conveys flows along

the north side of Chuckwalla

Valley Road.



**Photo Date:** 02-27-2019

**Location:** SP 3

**Direction:** Northwest

**Comment:** Looking at SP 3 within area

containing soil cracks to the west of the western diversion dike, south of Chuckwalla Valley Road.



Photograph: 2-50

**Photo Date:** 02-27-2019

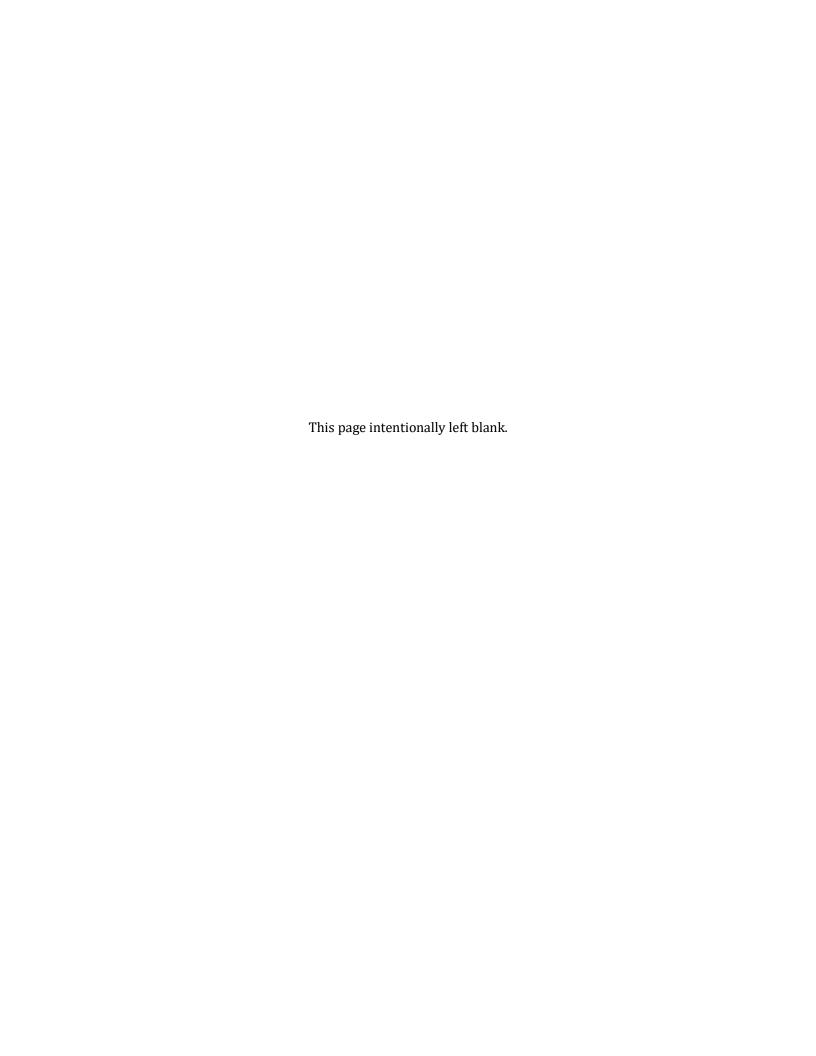
**Location:** Feature 4-4

**Direction:** Northwest

**Comment:** Looking at SP 4 at the base the

Feature 4-4 near the bridge.

# Appendix C Ordinary High Water Mark Forms



#### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chuckwalla Valley Rd. Bridge over Azke	Date: 2 /19/2019 Time: 11:00 AM
Project Number: 37.19 , Task 1 Ditch	-Town: Near Desert center State: CA
Stream: Aztec Ditch, south of Road	Photo begin file#: Photo end file#:
Investigator(s): K. Kline felter, P. Schwar	
	Location Details: Azke Ditch, south of
Y / N Do normal circumstances exist on the site?	Chuckwalla Valley Rd.
Y ☐ / N ☑ Is the site significantly disturbed?	Projection: Datum: Was 84
Potential anthropogenic influences on the channel syst	Coordinates: 33.402665, -115.135787
Flows under two-lane chuckwalla Vally	
Potentially man-made berms on either sid	
Dirt pushed to the side of road, possibly afker	I bring washed over road in recent rainere
Priof site descriptions All features Flow S-201	
Four total features (1+,1-2,1-3,1-4); described over road. 1-2 main charitel, flows under 6 chily on s. side of road. 1-4 only on s side of 1-2, main channel.	ridge, funnels in . 1-3 odd feature w/no outle rock . 1-5 flows parallel to road into
Checklist of resources (if available):	
Aerial photography Stream gag	
Dates: Gage num	
Topographic maps Period of r	
	y of recent effective discharges
	s of flood frequency analysis
	recent shift-adjusted rating
	heights for 2-, 5-, 10-, and 25-year events and the
	recent event exceeding a 5-year event
Global positioning system (GPS) Other studies	
Hydrogeomorphic F	Floodplain Units
Active Floodplain	Low Terrace
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the flood	Iplain units to assist in identifying the OHWM:
1. Walk the channel and floodplain within the study area vegetation present at the site.	to get an impression of the geomorphology and
2. Select a representative cross section across the channel.	Draw the cross section and label the floodplain units
3. Determine a point on the cross section that is character	
a) Record the floodplain unit and GPS position.	and the state of t
b) Describe the sediment texture (using the Wentworth floodplain unit.	class size) and the vegetation characteristics of the
c) Identify any indicators present at the location.	
4. Repeat for other points in different hydrogeomorphic t	floodplain units across the cross section
5. Identify the OHWM and record the indicators. Record	
Mapping on aerial photograph	GPS
Digitized on computer	Other:

roject ID: Cross section II	D: 5. of Road Date: 2/19/2019 Time: 11:00 Am
ross section drawing:	
Active Floodplain	
race tow Flore	Low
LOW Terrace   Active Flow	
othum &	Flood plain 1 L + Active - Phod
11-1 OHWM OHWM LOW	Flow Charles OHNE
Flow Flow	JOHNM OHUM 1-41
	11-2 [1-3] OHWM
OHWM	The state of the s
	* The following sections will focus on the OHWM
GPS point:	and Floodplain Units for the main channel, Feature 1-2
point.	
Indicators:	
Change in average sediment texture	☑ Break in bank slope
Change in vegetation species	Other: Change in Sediment size
Change in vegetation cover	Other:
Commenter	
Comments:	San
along banks leading up to terrace	amarist, creosole) within channels, consentrate
diang banks leading of	
Sandy land Alant Channels with him	
Sandy low flow channels with larger	sediment in areas of active floodplain with less.
Sandy low flow channels with larger	r sediment in areas of active floodplain with less.
Sandy low flow channels with larger	r sediment in areas of active floodplain with less.
Sandy low flow channels with larger	r sediment in areas of active floodplain with less i
Floodplain unit:  Low-Flow Channel	
Floodplain unit:  Low-Flow Channel	
Sandy low flow channels with larger	
Floodplain unit:  Low-Flow Channel  GPS point:	
Floodplain unit:  Low-Flow Channel  GPS point:  Characteristics of the floodplain unit:	
Floodplain unit:  Low-Flow Channel  GPS point:   Characteristics of the floodplain unit:  Average sediment texture: Fine sand	Active Floodplain    Low Terrace
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %	Active Floodplain    Low Terrace
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  5 % Tree: 0 %  Community successional stage:	Active Floodplain    Low Terrace  Shrub:
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  5 % Tree:  0 %  Community successional stage:  NA	Active Floodplain    Low Terrace  Shrub:% Herb:%  Mid (herbaceous, shrubs, saplings)
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  5 % Tree: 0 %  Community successional stage:	Active Floodplain    Low Terrace  Shrub:
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)	Active Floodplain    Low Terrace  Shrub:% Herb:%  Mid (herbaceous, shrubs, saplings)
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Tree:  %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:	Shrub:% Herb:% Mid (herbaceous, shrubs, saplings)Late (herbaceous, shrubs, mature trees)
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks	Shrub:% Herb:%
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples	Shrub:% Herb:%
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris	Shrub: % Herb: %  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size distribution
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Tree:  %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris  Presence of bed and bank	Shrub: Mid (herbaceous, shrubs, saplings)  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size distribution Other: Gravel sheets
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris	Shrub: Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size distribution
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Tree:  %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris  Presence of bed and bank  Benches	Shrub: Mid (herbaceous, shrubs, saplings)  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size cluster by troop Other: Gravel sheets
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Tree:  %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris  Presence of bed and bank	Shrub: Mid (herbaceous, shrubs, saplings)  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size distribution Other: Gravel sheets
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris  Presence of bed and bank  Benches	Shrub: Mid (herbaceous, shrubs, saplings)  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size cluster by troop Other: Gravel sheets
Floodplain unit:  Low-Flow Channel  GPS point:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Tree:  % Tree:  %  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples  Drift and/or debris  Presence of bed and bank  Benches	Shrub: Mid (herbaceous, shrubs, saplings)  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: change in particle size distribution Other: Gravel sheets

E

Aztre Ditch, Cross section ID: s. of road Date: 2/19/2019 Time: 11:00 AM Project ID: Active Floodplain Low Terrace Floodplain unit: Low-Flow Channel **GPS** point: Characteristics of the floodplain unit: Average sediment texture: coarse sand Total veg cover: 40 % Tree: 5 % Shrub: 25 % Herb: 10 % Community successional stage: Mid (herbaceous, shrubs, saplings) NA Late (herbaceous, shrubs, mature trees) Early (herbaceous & seedlings) Indicators: Soil development Mudcracks Ripples Surface relief Other: Exposed roots Drift and/or debris Presence of bed and bank 1 Other: Change in particle size distribution Other: Cravel sheets Benches I Levels and narrow berms Comments: · Palo verde, mesquite, creosote, phaecelia distans, yellow evening primrose, Mentzelia sp. Camissonia brevipes Floodplain unit: Low-Flow Channel Active Floodplain Low Terrace GPS point: Characteristics of the floodplain unit: Average sediment texture: Perble Total veg cover: 5 % Tree: 1 % Shrub: 3 % Herb: 1 % Community successional stage: Mid (herbaceous, shrubs, saplings) NA Early (herbaceous & seedlings) Late (herbaceous, shrubs, mature trees) Indicators: Soil development Mudcracks Surface relief Ripples Other: Desert pavement Drift and/or debris Other: Presence of bed and bank Other: Benches Comments:

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chuckwalla Valley Rd. Bridge over Azke	Date: 2/19/2019 Time: /2:00 PM
Project Number: 37.19, Task P Ditch Stream: Azka Ditch, North of Road	Photo begin file#: Photo end file#:
Investigator(s): K. Klinefelter, P. Schwartz	Thoto begin men.
Y / N Do normal circumstances exist on the site?	Location Details: Azke Diten, North of Chuckwalla Valley Road
Y / N Is the site significantly disturbed?	Projection: Datum: 1145 84 Coordinates: 33.402782, -115, 13560(
Potential anthropogenic influences on the channel system Flows under two-lane Chuckwalla Valley Re Potentially man-made burns on enther & Dirt has been pushed to sides of road, possil	tem:
Brief site description:	
Vegetation maps  Soils maps  Results  Most r  Rainfall/precipitation maps	ber:
Hydrogeomorphic F	loodplain Units
, Active Floodplain	, Low Terrace ,
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the flood	plain units to assist in identifying the OHWM:
<ol> <li>Walk the channel and floodplain within the study area to vegetation present at the site.</li> <li>Select a representative cross section across the channel. It is a point on the cross section that is characterially a point on the cross section that is characterially a point on the cross section that is characterially a position.</li> <li>Describe the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth floodplain unit.</li> <li>Identify any indicators present at the location.</li> <li>Repeat for other points in different hydrogeomorphic floodplain the OHWM and record the indicators. Record to Mapping on aerial photograph Digitized on computer</li> </ol>	Draw the cross section and label the floodplain units. stic of one of the hydrogeomorphic floodplain units. class size) and the vegetation characteristics of the oodplain units across the cross section.

ross section drawing:	D: N. of Road Date: 2/19/2019 Time: 12:00 Pr
A A A A A A A A A A A A A A A A A A A	2119/2019 Time: 12:00 pr
Floodplain Low Terrace	
1	Low Terrace
OHMM OHMM	Active Pload Plann
[1-6]	
OHMM	LOW Flow Office
	OHWM OHWM
HWM	[1-2]
	* The Aura
PS point:	* The following sections will focus on
1 5 point:	
ndianta	the main channel, Feature 1-2
ndicators:	
Change in average sediment texture	Break in bank slope
Change in vegetation species	Other: Change of the
Change in vegetation cover	Other: charge in sediment particle size
Flow condinsed from south side / upsi	tream side of bridge
Floodplain unit:	
Floodplain unit:	
Characteristics of the floodplain unit:	
Characteristics of the floodplain unit:  Average sediment texture: Fine sand	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:	Active Floodplain Low Terrace  Shrub:% Herb:%
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)	Active Floodplain    Low Terrace  Shrub:% Herb:%  Mid (herbaceous, shrubs, saplings)
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA  Early (herbaceous & seedlings)	Active Floodplain    Low Terrace  Shrub:%    Herb:%  Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks	Active Floodplain    Low Terrace  Shrub:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples	□ Active Floodplain □ Low Terrace  Shrub:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris	Active Floodplain    Low Terrace  Shrub:%    Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development  Surface relief  Other:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank	Active Floodplain    Low Terrace  Shrub:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris	Active Floodplain    Low Terrace  Shrub:%    Herb:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	Active Floodplain    Low Terrace  Shrub:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches  Comments:	Active Floodplain    Low Terrace  Shrub:
Characteristics of the floodplain unit:  Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 %  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	Active Floodplain    Low Terrace  Shrub:

Floodplain unit: Low-Flow Channel	
	Active Floodplain Low Terrace
ana	
GPS point:	
Characteristics of the floodplain unit:	1
Average sediment texture: very coarse Sanc	
Total veg cover: 30 % Tree: 15 % S	nrub:
Community successional stage:	
NA NA	Mid (herbaceous, shrubs, saplings)
Early (herbaceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Indicators:	
Mudcracks	Coil dayslanment
Ripples	Soil development Surface relief
Drift and/or debris	
Presence of bed and bank	Other: Cravel sheets
=/	Other: Levers and narrow berms
Benches	1 Other: change in particle Size distribution
Comments:	
Floodplain unit: Low Flow Channel	Active Fleedplein Lew Terroce
Floodplain unit:	☐ Active Floodplain ☐ Low Terrace
	Active Floodplain Low Terrace
	Active Floodplain Low Terrace
GPS point:	☐ Active Floodplain ☐ Low Terrace
GPS point:Characteristics of the floodplain unit:	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Pubble	
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S	
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:	hrub: _5_% Herb: _10_%
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings)
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:	hrub: <u>5</u> % Herb: <u>10</u> %
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings)
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)	hrub:
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks	hrub:
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples	hrub:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris	hrub: _5 % Herb: _/0 %  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Desert parement
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank	hrub: _5 % Herb: _10 _%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other: Desert parement Other:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris	hrub: _5_% Herb: _/O_%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other:
Characteristics of the floodplain unit:  Average sediment texture: Pubble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	hrub: _5 % Herb: _10 _%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:
Characteristics of the floodplain unit:  Average sediment texture: Pebble  Total veg cover: 20 % Tree: 5 % S  Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	hrub: _5_% Herb: _10_%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:
Total veg cover: 20 % Tree: 5 % S Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank	hrub: _5 % Herb: _10 _%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Other:

m

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Chucknalla Valley, Rd Bridge Over Tarantula Project Number: 41.19, Task 1 Ditch Stream: Tarantula Ditch, South of Road Investigator(s): K. Klinefelter, P. Schwartz	Date: 2/19/2019 Time: /3:30 Town: Near Desert Center State: A Photo begin file#: Photo end file#:
Y / N Do normal circumstances exist on the site?	Location Details: Towantula Ditch, South of Chuckwalla Nalley Road
Y / N Is the site significantly disturbed?	Projection: Datum: WGS 84 Coordinates: 33, 39 48 79, -115, 125296
Potential anthropogenic influences on the channel system. Flows under two-lane chuckeralla Valley Potentially man-made berms on either of Dirt has been pushed to sides of road, possible site description:  Some pales channels that exist because of indicators have been wind croded there.	tem: Road side of main channel flature ossibly after being washed over road from
Vegetation maps  Result Soils maps  Rainfall/precipitation maps  Gage	ber:
Hydrogeomorphic Active Floodplain	Floodplain Units  Low Terrace
Low-Flow Channels	OHWM Paleo Channel
<ol> <li>Procedure for identifying and characterizing the flood</li> <li>Walk the channel and floodplain within the study area vegetation present at the site.</li> <li>Select a representative cross section across the channel.</li> <li>Determine a point on the cross section that is characte a) Record the floodplain unit and GPS position.</li> <li>Describe the sediment texture (using the Wentworth floodplain unit.</li> <li>Identify any indicators present at the location.</li> <li>Repeat for other points in different hydrogeomorphic</li> <li>Identify the OHWM and record the indicators. Record Mapping on aerial photograph Digitized on computer</li> </ol>	to get an impression of the geomorphology and  Draw the cross section and label the floodplain units. ristic of one of the hydrogeomorphic floodplain units.  class size) and the vegetation characteristics of the floodplain units across the cross section.

LOW Terrace Active to Floodplain  OHMM OHMM OHMM OHMM
Active to Floodplain  OHWM  OHWM  Low  FRONT
OHMM Floodplain
OHWIN TOWN THOM
OHWM ROW
12-21 2-1
* The following sections will focus on the
Union and Hoodplain Unite and
main channel, Feature 2-3
**Onlineacous partition that partition and republic to up the
M People in head about
Break in bank slope  Other: shapes as sed and the
Other: change in sediment size  Other:
Active Floodplain Low Terrace
b:% Herb:%
Mid (herbaceous, shrubs, saplings)
Late (herbaceous, shrubs, mature trees)
Soil development
Surface relief
Other: Gravel sheets
Other: long gravel bars
Other:

E

Tarantula Ditch,

Project ID:	Cross section ID:	: 5. of Rpad Date: 2/19/2019 Time: 13:30
Floodplain unit:	☐ Low-Flow Channel	
GPS point:		
Characteristics of the	floodplain units	
Average sediment tex	ture: Granula	
Total veg cover: 3/	) % Tree: 10 %	Shrub: 12 % Herb: 8 %
Community succession	onal stage:	Jan 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
□ NA		Mid (herbaceous, shrubs, saplings)
☐ Early (herba	ceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Indicators:		
Muderacks		Soil development
Ripples		Surface relief
Drift and/or	debris	Other: Graves sheets
Presence of	bed and bank	Other: Levees and narrow berms
Benches		Other: change in particles its distribution
Comments:		The state of the s
		,
Floodplain unit:	Low-Flow Channel	Active Floodplain  Low Terrace
	zov. Trovi chamier	El Low Terrace
GPS point:		
Chamastavistics of the	Caralalain 14	
Characteristics of the		
Total year cover:	ture: Granule / Pelob	Shrub: 10 % Herb: 35 %
Community succession		Siliuo: 90 Herb: 55 %
NA NA	mai stage.	Mid (herbaceous, shrubs, saplings)
	ceous & seedlings)	Late (herbaceous, shrubs, mature trees)
	, , , , , , , , , , , , , , , , , , ,	zate (nerodecous, sindos, mature trees)
Indicators:		
☐ Mudcracks		, Soil development
Ripples		Surface relief
Drift and/or		Other: Desert pavement
Presence of b	ped and bank	Other: Surface rounding
Benches		Other:
Comments:		
· Surface rounden · Herb cover high	g from wind erosio	on over pades channels made by large b

### Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Owokwalla Valley Rd. Bridge over Tarantula	Date: 2/19/2019 Time: 1500
roject rumber. 41.19, lask	Town: Near Desert Center State: CA
Stream: Tarantula Ditch, North of Road	Photo begin file#: Photo end file#:
Y N Do normal circumstances exist on the site?	Location Details: Tarantla Dtch North of
The state of the s	Projection: Datum: NGS 84
Y \( \sum / N \( \subseteq \) Is the site significantly disturbed?	
Potential anthropogenic influences on the channel syst	Coordinates: 33, 395025, -115, 125110
Flows under two-lane Chuckwalla Valley R	of man channel feature
Dirt has been pushed to sides of road, poss	ibly after being washed over road from rec
Brief site description:	
Charliet of resources (if excilable)	
Checklist of resources (if available):  Aerial photography  Stream gag	e data
Dates: Stream gag	
Topographic maps  Period of re	
	of recent effective discharges
	s of flood frequency analysis
	ecent shift-adjusted rating
Rainfall/precipitation maps Gage h	eights for 2-, 5-, 10-, and 25-year events and the
Existing delineation(s) for site most re	ecent event exceeding a 5-year event
Global positioning system (GPS)	
Other studies	
Hydrogeomorphic F	loodplain Units
Active Floodplain	Low Terrace
4 44 4 4 4	· · · · · · · · · · · · · · · · · · ·
	T
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the flood	plain units to assist in identifying the OHWM:
1. Walk the channel and floodplain within the study area t	
vegetation present at the site.	o get an impression of the geomorphology and
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.	
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.	
a) Record the floodplain unit and GPS position.	
b) Describe the sediment texture (using the Wentworth	class size) and the vegetation characteristics of the
floodplain unit.	
c) Identify any indicators present at the location.	
4. Repeat for other points in different hydrogeomorphic flo	oodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record t	the OHWM position via:
☐ Mapping on aerial photograph ☐	GPS
☐ Digitized on computer ☐	Other:

roject ID:	Tarantula Ditch,
Cross section drawing:	Tarantula Ditch,  N. of Road Date: 2/19/2019 Time: 15:00
Low Terray	Date: 2/19/2019 Time: 15:00
LOW Terrace - Active Avodplain	
1	Low terrace
	- ienace
Loyd	
OHUM LOW A	
[2·2] OHWM	
OHWM	
	* The following sections will focus on
GPS point:	OHUM and Florida in clarke C - 4
T 11	main channel, Feature 2-2
Indicators:	
Change in average sediment texture	Break in bank slope
Change in vegetation species Change in vegetation cover	Other: Change in sediment size
Change in vegetation cover	Other: Change in sediment size  Other: Change in Sed, diposition
Comments:	
. Wind eroded pales features in low lerro	aco
classical road runoff teature to	east; very shallow with slight veg/sedement
chair iges	9
Floodplain unit: Low-Flow Channel	☐ Active Floodplain ☐ Low Terrace
	Low Terrace
GPS point:	
Characteristics of the floodulein with	
Characteristics of the floodplain unit: Average sediment texture:	
Total veg cover: _ % Tree: _ 0 % Sh	nrub: 0 % Herb: <\ %
Community successional stage:	
☑/NA	Mid (herbaceous, shrubs, saplings)
☐ Early (herbaceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Indicators	
Indicators:  Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other: Gravel Sheets
Presence of bed and bank	Other:
Benches	Other:
Comments:	

Tarantula Ditch

Project ID: Cross section I	D: N. of Road Date: 4/19/2019 Time: 15:00
Floodplain unit:	Active Floodplain Low Terrace
CDS maints	
GPS point:	
Characteristics of the floodplain unit:	
Average sediment texture: Med. Sand	
Total veg cover: _5 % Tree: _0 %	Shrub: 4 % Herb: /_ %
Community successional stage:	A
☐ NA ☐ Early (herbaceous & seedlings)	Mid (herbaceous, shrubs, saplings)
Larry (herbaccous & seedings)	Late (herbaceous, shrubs, mature trees)
Indicators:	
Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other: Evavel sheets
Presence of bed and bank Benches	Other: Levers and harrow berms
	Other: change in particle size dist.
Comments:	
F1 11: ''	
Floodplain unit: Low-Flow Channe	Active Floodplain Low Terrace
GPS point:	
GI 5 point.	
Characteristics of the floodplain unit:	
Average sediment texture: Grande	
Total veg cover: 50 % Tree: 6 %	Shrub: <u>10</u> % Herb: <u>45</u> %
Community successional stage:	☐ Mid (herbaceous, shrubs, saplings)
☐ NA ☐ Early (herbaceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Larry (herbaccous de securings)	Jaco (Nerousous, Sinus), mature trees)
Indicators:	The design
Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other: Desert parement
Presence of bed and bank	Other: Surface rounding
Danahas	1 Other
Benches	Other:
Benches Comments:	

Project: Ohvekwalla Valley Rd Bridge over Sutro Project Number: 40.19, Task 1	Date: 2/27/2019 Time: 11:30 Am Town: Near Desert Center State: CA		
Stream: Sutro Ditch, South of road	Photo begin file#: Photo end file#:		
Y / N Do normal circumstances exist on the site?	Location Details: Area south of Chuckwalla		
Y / N Is the site significantly disturbed?	Projection: Datum: WGS 84 Coordinates: 33.390620, -115.113955		
Potential anthropogenic influences on the channel system: Flows under two lane Chackwalla Valley Road Potentially man-made berms on either side of main channel feature Dirt has been pushed to sides of road, possibly after being washed over road from			
Brief site description: Side channels that run parallel to main channel and do not connect with main channel become	nannel flow towards low point along row		
Checklist of resources (if available):			
Aerial photography Stream gag			
Dates: Gage numb Topographic maps Period of r			
	y of recent effective discharges		
	s of flood frequency analysis		
	ecent shift-adjusted rating		
	neights for 2-, 5-, 10-, and 25-year events and the		
Existing delineation(s) for site most recent event exceeding a 5-year event			
	ecent event exceeding a 3-year event		
Global positioning system (GPS)	ecent event exceeding a 3-year event		
Global positioning system (GPS) Other studies			
Global positioning system (GPS) Other studies  Hydrogeomorphic F	loodplain Units		
Global positioning system (GPS) Other studies			
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain	Floodplain Units  Low Terrace		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels	Codplain Units  Low Terrace  OHWM Paleo Channel		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to	OHWM Paleo Channel plain units to assist in identifying the OHWM:		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood	OHWM Paleo Channel  plain units to assist in identifying the OHWM: to get an impression of the geomorphology and  Draw the cross section and label the floodplain units.  istic of one of the hydrogeomorphic floodplain units.		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to vegetation present at the site.  2. Select a representative cross section across the channel. It is characterially a point on the cross section that is characterially Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth floodplain unit.	OHWM Paleo Channel  plain units to assist in identifying the OHWM: to get an impression of the geomorphology and  Draw the cross section and label the floodplain units.  istic of one of the hydrogeomorphic floodplain units.		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to vegetation present at the site.  2. Select a representative cross section across the channel. It is characterially a point on the cross section that is characterially Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth floodplain unit.  c) Identify any indicators present at the location.	OHWM Paleo Channel  plain units to assist in identifying the OHWM: to get an impression of the geomorphology and  Draw the cross section and label the floodplain units. istic of one of the hydrogeomorphic floodplain units. class size) and the vegetation characteristics of the		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to vegetation present at the site.  2. Select a representative cross section across the channel.  3. Determine a point on the cross section that is characterial Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth floodplain unit.  c) Identify any indicators present at the location.  4. Repeat for other points in different hydrogeomorphic floodplain units.	OHWM Paleo Channel  plain units to assist in identifying the OHWM:  to get an impression of the geomorphology and  Draw the cross section and label the floodplain units.  istic of one of the hydrogeomorphic floodplain units.  class size) and the vegetation characteristics of the  coodplain units across the cross section.		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to vegetation present at the site.  2. Select a representative cross section across the channel.  3. Determine a point on the cross section that is characterical and Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth floodplain unit.  c) Identify any indicators present at the location.  4. Repeat for other points in different hydrogeomorphic floodplain the OHWM and record the indicators. Record to the second the indicators. Record to the second the indicators. Record the indicators. Record the indicators. Record the indicators. Record the indicators.	Draw the cross section and label the floodplain units. Istic of one of the hydrogeomorphic floodplain units. It class size) and the vegetation characteristics of the soodplain units across the cross section. It compares the cross section the cross section. It compares the cross section the cross section. It compares the cross section the coordinate the cross section.		
Global positioning system (GPS)  Other studies  Hydrogeomorphic F  Active Floodplain  Low-Flow Channels  Procedure for identifying and characterizing the flood  1. Walk the channel and floodplain within the study area to vegetation present at the site.  2. Select a representative cross section across the channel.  3. Determine a point on the cross section that is characterical and Record the floodplain unit and GPS position.  b) Describe the sediment texture (using the Wentworth floodplain unit.  c) Identify any indicators present at the location.  4. Repeat for other points in different hydrogeomorphic floodplain units.	OHWM Paleo Channel  plain units to assist in identifying the OHWM:  to get an impression of the geomorphology and  Draw the cross section and label the floodplain units.  istic of one of the hydrogeomorphic floodplain units.  class size) and the vegetation characteristics of the  coodplain units across the cross section.		

Project ID:	Cross section ID:	of Road Date: 2	/27/2019 Tim	e: 11:30
Cross section drawin	g:			
Active	Low	LOW Active Floodplain	Low A	F LT AF
rue Floodplain	Terrole Active Ploodplans	Terrace Floodplain	1 Proceed	· · · · · · · · · · · · · · · · · · ·
1			4	LF
LOW		The set	OHMM	OHNER OHUMA
HA Flow	others of	HWM OHWM TO	MWH	13-17
0HWM [3-8]	DHWM LOW	MOW LOW Flow	3-	21
OHWA	13-	15		
<u>OHWM</u>		of The following		
GPS point:			hannel, Featur	
Of 5 point.		The manne	, rear or	232
Indicators:		-/		
	rage sediment texture	Break in bank slo		
Change in vege		Other: Change	mavg. sed. s	ite
v Change in vege	nation cover	Other.		
Comments:	s that run parallel	La main channel	and flow into b	usin on side
Smaller side channel	s that run parallel	lands.		
Main channel has	multiple low flow	1 banks		
Gandy bottom, larger	sediment, shrubs	ora, G		
Floodplain unit:  GPS point:	Low-Flow Channel	Active Floodplai	n Low	Terrace
GI 5 points				
Characteristics of the fl				
Average sediment textu	" Tree: % Sh	ruh: % Herb:	%	
Community successions	al stage:			
NA NA	, , , , , , , , , , , , , , , , , , , ,	Mid (herbaceous	, shrubs, saplings)	
	ous & seedlings)	Late (herbaceous	s, shrubs, mature tre	ees)
I. disatawa				
Indicators:  Mudcracks		Soil developmen	t	
Ripples		Surface relief		
Drift and/or de	bris	Other: Gravel		
Presence of be	d and bank	Other:		
□ Benches		Other:	1	
Comments:				
Muderacks in side	changuls where th	y connect to b	asin; also in l	sasin
		15 15 17 11 1		

acrd.

Project ID:	Cross section ID:	5. of Road Date: 2/27/2019 Time: 11:30	Aur
Floodplain unit:	☐ Low-Flow Channel	☐ Active Floodplain ☐ Low Terrace	
CDC naints			
GPS point:			
Characteristics of the	e floodplain unit:		
Average sediment ter	xture: Very course sand		
Total veg cover: 3	0 % Tree: 5 % Sh	rub: <u>20</u> % Herb: <u>5</u> %	
Community succession	onal stage:		
□ NA		Mid (herbaceous, shrubs, saplings)	
☐ Early (herba	aceous & seedlings)	✓ Late (herbaceous, shrubs, mature trees)	
Indicators:			
Mudcracks		Soil development	
Ripples		Surface relief	
Drift and/or	debris	1 Other: Meander bars	
Presence of	bed and bank	Other: Overes berns and bevers	
Benches		Other: Gravel sheets	
Comments:		I change in particle size distribution	
Annul herbs			
Shrulos lining bern	es and banks		
3			
TTI 1 1 1 1			-
Floodplain unit:	Low-Flow Channel	Active Floodplain Low Terrace	
CDC nainte			
GPS point:			
Characteristics of th	e floodplain unit:		
Average sediment te			
Total veg cover:	10 % Tree: 3 % Sh	nrub: 4 % Herb: 3 %	
Community success			
□ NA	MARIANTE AND AND A	Mid (herbaceous, shrubs, saplings)	
Early (herba	aceous & seedlings)	Late (herbaceous, shrubs, mature trees)	
Indicators:		□ C-11.11	
Mudcracks		Soil development	
Ripples	1.1.4.	Surface relief	
Drift and/or		Other: Desert pavement	
	bed and bank	Other:	
Benches		Uniti.	
Comments:			

からしん

Project: Owck wall a Vally Rd. Bridge over Sutro Project Number: 40.19, task 1	Date: 2/27/2019 Time: 12'.00 pm Town: Near Desertanter State: CA
Stream: Sutro Ditch, N. of Road	Photo begin file#: Photo end file#:
Investigator(s): K. Klinefelker, P. Schwartz	
Y / N Do normal circumstances exist on the site?	Location Details: Area of SA North of Chuckwalla Valley Road
Y / N Is the site significantly disturbed?	Projection: Datum: 1275 84  Coordinates: 33, 390775 - 115, 113748
Potential anthropogenic influences on the channel syst Flows under two-lane chuckwalla Valley Potentially man-made berms on either of Dirt has been preshed to sides of road, poss	em: Road side of main channel feature
Brief site description:	-
Checklist of resources (if available):	ra data
Aerial photography  Dates:  Stream gag  Gage numb	
Topographic maps  Period of re	
	y of recent effective discharges
Vegetation maps Results	s of flood frequency analysis
	ecent shift-adjusted rating
	neights for 2-, 5-, 10-, and 25-year events and the
	ecent event exceeding a 5-year event
Global positioning system (GPS)	
Other studies	
Hydrogeomorphic F	Floodplain Units
Active Floodplain	Low Terrace
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the flood	
1. Walk the channel and floodplain within the study area to vegetation present at the site.	
2 Select a representative cross section across the channel.	Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteri	istic of one of the hydrogeomorphic floodplain units.
a) Record the floodplain unit and GPS position.	
b) Describe the sediment texture (using the Wentworth	class size) and the vegetation characteristics of the
floodplain unit.	
<ul><li>c) Identify any indicators present at the location.</li><li>4. Repeat for other points in different hydrogeomorphic fl</li></ul>	1.
4. Repeat for other points in different hydrogeomorphic in	codnigin linite across the cross section
5 Identify the OHWM and record the indicators Record t	the OHWM position via:
5. Identify the OHWM and record the indicators. Record to	the OHWM position via:
5. Identify the OHWM and record the indicators. Record to Mapping on aerial photograph Digitized on computer	the OHWM position via:  GPS Other:

Cross section drawing:	Sutro Ditch, N. of Road Date: 2/27/2019 Time: 12:00
AF 1 LOW FENGLE	Low Terrace
Active Flood plain	- I-T
1 1000 Main	AF
	N LF T
- 9 OHWM	OHWM OHNM
[3-8]	[3-10]
DHWM	VT. Dub
	* The following sections will focus on
GPS point:	nain channel, Feature 3-8
	recon charmer, rearries
ndicators:	
	Break in bank slope
Change in vegetation species	Other:
Change in vegetation cover	Other:
Comments:	
	In Low flow channels
Loss regetated below offum, not at all	Active Floodplain Low Terrace
Loss requtated below orlum, not at an Floodplain unit:  \( \sqrt{Low-Flow Channel} \)	
Cloodplain unit: Low-Flow Channel Characteristics of the floodplain unit:	
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:	☐ Active Floodplain ☐ Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:	Active Floodplain Low Terrace
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  % Shi  Community successional stage:	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings)
Cloodplain unit: Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:O% Tree:% Shi  Community successional stage:	Active Floodplain Low Terrace
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture:  Fine Sand  Total veg cover:	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings)
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:  O % Tree: % Shi  Community successional stage:  NA  Early (herbaceous & seedlings)	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture:  Fine Sand  Total veg cover:  O % Tree: % Sha  Community successional stage:  NA  Early (herbaceous & seedlings)	Active Floodplain    Low Terrace  rub:%    Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture:  Fine Sand  Total veg cover:  % Tree: % Shi  Community successional stage:  NA  Early (herbaceous & seedlings)  Indicators:  Mudcracks  Ripples	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture:  Fine Sand  Total veg cover:	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Gravel starts
Cloodplain unit:	Active Floodplain    Low Terrace  rub:%    Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Gravel shuts Other:
Cloodplain unit:  Low-Flow Channel  Characteristics of the floodplain unit:  Average sediment texture:  Fine Sand  Total veg cover:	Active Floodplain    Low Terrace  rub:% Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Gravel starts
Characteristics of the floodplain unit:  Average sediment texture: Fine Sand  Total veg cover:	Active Floodplain    Low Terrace  rub:%    Herb:%  Mid (herbaceous, shrubs, saplings) Late (herbaceous, shrubs, mature trees)  Soil development Surface relief Other: Gravel shuts Other:

Project ID:	Cross section ID: N	of Rpad Date: 2/27/2019 Time: 12:00 pm
Floodplain unit:	Low-Flow Channel	
CDC		
GPS point:		
Characteristics of the	floodplain unit:	
	xture: Very course sand	
Total veg cover: 15	5_% Tree: 5_% Shru	ub: <u>5</u> % Herb: <u>5</u> %
Community succession	onal stage:	Mid (hadraness shorter and in a)
NA Farly (herba	ceous & seedlings)	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees)
Duriy (neroa	ceous & seedings)	Date (neroaccous, sinuos, mature trees)
Indicators:		
Mudcracks		Soil development
Ripples Drift and/or	dahnia	Surface relief
Presence of	bed and bank	other: Others of sachele Size destribution
Benches		Other: Change in particle Size distribution Other:
Comments:		
	near landas	
Annuals growing	near bridge on berms and banks	
0.7	or portion who willies	
Floodplain unit:	Low-Flow Channel	☐ Active Floodplain ☐ Low Terrace
CDS points		
GPS point:		
Characteristics of the	floodplain unit:	
Average sediment tex		1 = 0/ 11 1 = 0/
Total veg cover: _/		ub: <u>5</u> % Herb: <u>5</u> %
Community succession NA	mai stage.	Mid (herbaceous, shrubs, saplings)
	ceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Indicators:		Coil development
Mudcracks		Soil development Surface relief
Ripples Drift and/or	debris	Other: Desert pavement
	bed and bank	Other:
Benches		Other:
Comments:		

Project: Chuckwalla Valley Rd. Bridges over Acur;	Date: 2/27/2019 Time: 16:00			
Project Number: 36.19, Task 10 Ditch	TOWN. I SEAT LESSA CENTER STATE. CAT			
Stream: Acari Ditch, S. of Road	Photo begin file#: Photo end file#:			
Y N Do normal circumstances exist on the site?	Location Details: Area south of Chuckwalla Valley Road			
Y / N Is the site significantly disturbed?	Projection: Datum: 146584 Coordinates: 33,372909,-115.085049			
Potential anthropogenic influences on the channel system:				
Borms on either side of moun channel; Dire has been pushed to sides of road, possibly of Flows under two-fame Chickwalla Wallang	have old jimk cars by it into them for suffer flowing over road during recent rain e			
Brief site description: Sandy bottom channels. Multiple channels to e Point next to road, held in by berm and en Low point with mudcracks to west of main chan	d there.			
Checklist of resources (if available):	Dom Plants :			
Aerial photography  Dates:  Gage numl  Period of r	per:			
✓ Topographic maps       Period of record:         ✓ Geologic maps       History of recent effective discharges         ✓ Vegetation maps       Results of flood frequency analysis         ✓ Soils maps       Most recent shift-adjusted rating         ✓ Rainfall/precipitation maps       Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event         ✓ Global positioning system (GPS)				
Other studies				
Hydrogeomorphic F	Floodplain Units			
Active Floodplain  Low-Flow Channels	OHWM Paleo Channel			
Procedure for identifying and characterizing the flood	plain units to assist in identifying the OHWM:			
<ol> <li>Walk the channel and floodplain within the study area vegetation present at the site.</li> <li>Select a representative cross section across the channel.</li> <li>Determine a point on the cross section that is character a) Record the floodplain unit and GPS position.</li> <li>b) Describe the sediment texture (using the Wentworth floodplain unit.</li> <li>c) Identify any indicators present at the location.</li> </ol>	Draw the cross section and label the floodplain units. istic of one of the hydrogeomorphic floodplain units. class size) and the vegetation characteristics of the			
4. Repeat for other points in different hydrogeomorphic fits. Identify the OHWM and record the indicators. Record  Mapping on aerial photograph  Digitized on computer	the OHWM position via:  GPS  Other:			

Project ID: Cross section ID:	Acari Ditch 5. of Road Date: 2/27/2019 Time: 1600
Cross section drawing:	
Soil creeks DHWM [H-4]	Low Flows  Low Flows  Low Flows  OHWM 0HWM [4-2] [4-1]
OHWM  GPS point:	* The following sections will fows on the OHWM and Floodplain Units of the ma channel, Feature 4-4
Indicators:  Change in average sediment texture Change in vegetation species Change in vegetation cover	Break in bank slope Other: Other:
Comments:	
Floodplain unit:    Low-Flow Channel	☐ Active Floodplain ☐ Low Terrace
GPS point:	
Characteristics of the floodplain unit:	
Average sediment texture: Fine sand  Total veg cover: 5 % Tree: 0 % Shi	
Total veg cover 5 /0 Ticc 6 /0 Sit	ruh. 0 % Herb. 5 %
	rub:% Herb:%
Community successional stage:	
	mub:
Community successional stage:  NA Early (herbaceous & seedlings)	☐ Mid (herbaceous, shrubs, saplings)
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees)
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators: Mudcracks	☐ Mid (herbaceous, shrubs, saplings)
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief ☐ Other: Gravel Shuts
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief ☐ Other: Gravel Shuts
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief ☐ Other: Gravel Shuts
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief ☐ Other: Gravel Shorts
Community successional stage:  NA Early (herbaceous & seedlings)  Indicators:  Mudcracks Ripples Drift and/or debris Presence of bed and bank Benches	☐ Mid (herbaceous, shrubs, saplings) ☐ Late (herbaceous, shrubs, mature trees) ☐ Soil development ☐ Surface relief ☐ Other: Gravel Shorts

Project ID: Cross section II	D: S. of Rogal Date: 2/27/2019 Time: 16:00
Floodplain unit:	Active Floodplain Low Terrace
GPS point:	
Characteristics of the floodplain unit:  Average sediment texture: Coarse sand	
Total veg cover: 15 % Tree: 3 %	Shrub:% Herb:%
Community successional stage:	DMC1(h. h. and h. h. andings)
Early (herbaceous & seedlings)	Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)
Indicators:  Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other: Award Shuts
Presence of bed and bank Benches	Other: Meander bars
	Other: Navrow beens and lives
Comments:	V change in particl size distribution
Floodplain unit:	el Active Floodplain D Low Terrace
Characteristics of the floodplain unit:  Average sediment texture: Carante	
Total veg cover: 15 % Tree: 2 %	Shrub: 3 % Herb: 10 %
Community successional stage:	Mid (harba acque abruba continua)
☐ NA☐ Early (herbaceous & seedlings)	Mid (herbaceous, shrubs, saplings)  Late (herbaceous, shrubs, mature trees)
Indicators:  Mudcracks	☐ Soil development
Ripples	Surface relief
Drift and/or debris	Other: Desert pavement
	Othors
Presence of bed and bank	Other:
Presence of bed and bank Benches	Other:
Presence of bed and bank	Other:
Presence of bed and bank Benches	Other:
Presence of bed and bank Benches	Other:

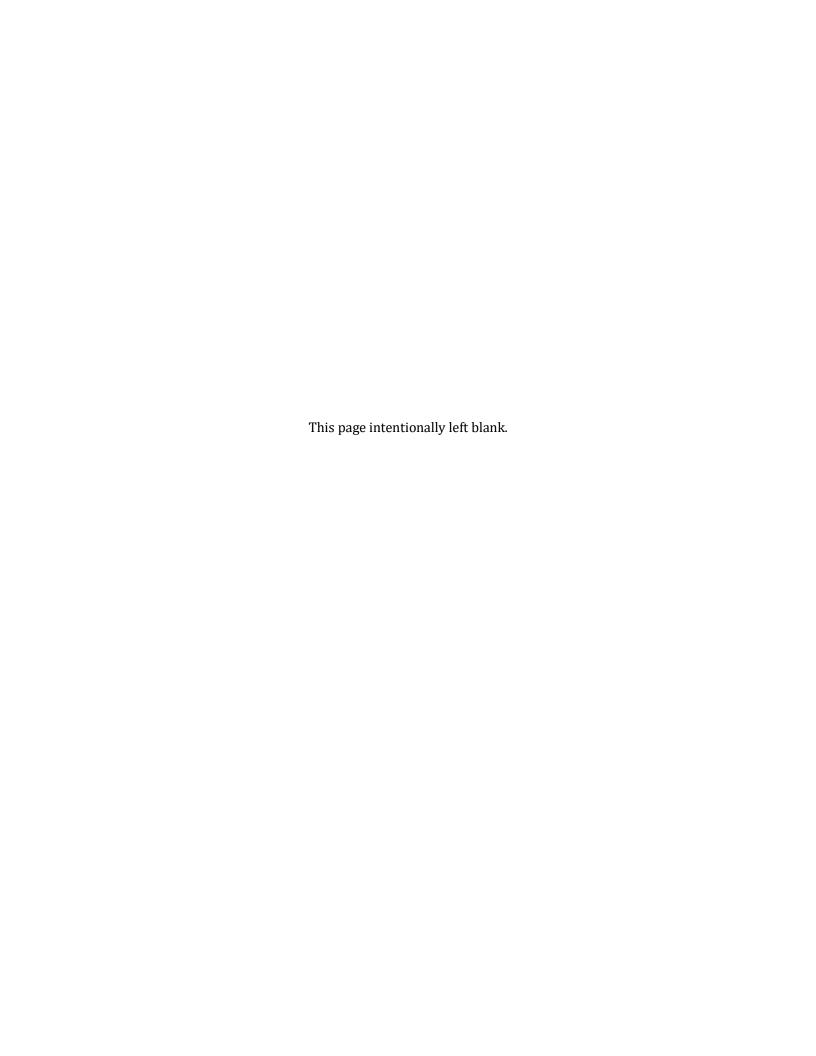
Project: Chuckwalla Valley Rd. Bridge over Acari Ditch	Date: 2/27/2019 Time: 1620		
Project Number: 36.19, Task	Town: Neur Desert Center State: CA		
Stream: Acari Ditch, N. of Road	Photo begin file#: Photo end file#:		
Investigator(s): K. Klinefelter, P. Schwartz	I noto end men.		
Y / N Do normal circumstances exist on the site?	Location Details: Arta North of Chuckwalla Valley Road		
Y / N Is the site significantly disturbed?	Projection: Datum: 1465 84 Coordinates: 33.3343064, -115.084873		
Potential anthropogenic influences on the channel syst	em:		
Berms on effer side of main channel; have old cars built in for support (?) Flows under two-lane Chuckwalla Valley Road			
Brief site description: Sandy bottom channels. Main low flow chann Multiple small channels flowing from 4-9. appers to have been broken/eroded away, +	el with trib. (4-9) originating from road. Old burm on either side of main chann hus allowing for 4-9 to flow in		
Checklist of resources (if available):	Dom. Plants:		
Aerial photography Stream gag	ge data Creosoft		
Dates: Gage num	ber: Mesquite		
✓ Topographic maps Period of r	1		
	y of recent effective discharges		
	s of flood frequency analysis		
	ecent shift-adjusted rating		
	neights for 2-, 5-, 10-, and 25-year events and the		
Existing delineation(s) for site most r Global positioning system (GPS) Other studies	ecent event exceeding a 5-year event		
Hydrogeomorphic F	Floodplain Units		
. Active Floodplain	, Low Terrace ,		
Low-Flow Channels	OHWM Paleo Channel		
Procedure for identifying and characterizing the flood	plain units to assist in identifying the OHWM:		
1. Walk the channel and floodplain within the study area vegetation present at the site.	to get an impression of the geomorphology and		
	Draw the cross section and label the floodplain units		
<ol> <li>Select a representative cross section across the channel. Draw the cross section and label the floodplain units.</li> <li>Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.</li> </ol>			
<ul><li>a) Record the floodplain unit and GPS position.</li><li>b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.</li></ul>			
c) Identify any indicators present at the location.			
4. Repeat for other points in different hydrogeomorphic f	loodplain units across the cross section.		
5. Identify the OHWM and record the indicators. Record			
☐ Mapping on aerial photograph ☐	GPS		
Digitized on computer	Other:		

roject ID: Cross section ID:	Acari Ditch,	Date: 2/27/2019	Time: 1620
Cross section drawing:			
T LT AF LT AF	Active Floods		OHNEN OH
OHWM  GPS point:			ocus on the OHWM nits for the ma e 4-4
Indicators:  Change in average sediment texture  Change in vegetation species  Change in vegetation cover	Other:	n bank slope	
Comments:			
Comments:			
Floodplain unit:	Active	Floodplain	Low Terrace
	Active	Floodplain	Low Terrace
Floodplain unit:	hrub:%		olings)
Floodplain unit:	hrub:%  Mid (head	Herb:% erbaceous, shrubs, saperbaceous, shrubs, ma	olings) sture trees)
Floodplain unit:	hrub:%  Mid (head	Herb:% erbaceous, shrubs, sap erbaceous, shrubs, ma velopment e relief Gravel Short 5	olings) sture trees)

Project ID: Cross section ID:	N. of Road Date: 2/27/2019 Time: 1620
Floodplain unit: Low-Flow Channel	Active Floodplain   Low Terrace
and tt-	
GPS point:	
Characteristics of the floodplain unit:	
Average sediment texture: Coarse Sand	
	hrub: 10 % Herb: 7 %
Community successional stage:	
□ NA	Mid (herbaceous, shrubs, saplings)
Early (herbaceous & seedlings)	
Indicators:	
Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other:
Presence of bed and bank	Other:
Benches	Other:
Comments:	
Floodplain unit: Low-Flow Channel	Active Floodplain  Low Terrace
Low-Flow Channel	Active Floodplain
GPS point:	
St S point.	
Characteristics of the floodplain unit:	
Average sediment texture:	
	hrub: % Herb: %
Community successional stage:	7 1100.
NA	Mid (herbaceous, shrubs, saplings)
Early (herbaceous & seedlings)	Late (herbaceous, shrubs, mature trees)
Larry (nor ouccous & securings)	East (nerodecods, sindos, mature trees)
Indicators:	
☐ Mudcracks	Soil development
Ripples	Surface relief
Drift and/or debris	Other: Creavel sheets
Presence of bed and bank	Other: change in particle Size Dist.
Benches	Other:
Comments:	

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# Appendix D Wetland Determination Data Forms



WETLAND DETERMINATION DATA FORM - Arid West Region Project/Site: Churcharalla Valley Road - Sutro Ditch City/County: Riverside Country Sampling Date: 2/27/19 Applicant/Owner: RCTD State: CA Sampling Point: SPI - Sutro Investigator(s): Paul Schwartz Section, Township, Range: 515 TGS R17E Landform (hillslope, terrace, etc.): Roads de Local relief (concave, convex, none): Concave Slope (%): \_\_\_\_\_ Soil Map Unit Name: No soil data available NWI classification: /24 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 \_\_\_\_\_ naturally problematic? No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes \_\_\_\_ No \_/ Is the Sampled Area within a Wetland? 
 Hydric Soil Present?
 Yes
 No

 Wetland Hydrology Present?
 Yes
 No
 Yes No V Pit dug in small "basin" feature where water from 2 Small features collect adjacent to the road, Has cracked soils + fresh + must herbaceous veg than deep sand under bridge. VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30 ) Absolute Cover Species? Status **Dominance Test worksheet:** 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: 1. Parkinsonia acuelata Prevalence Index worksheet: 2. Hymenoclea salsola UPI Total % Cover of: Multiply by: 3. Larrea tridentata OBL species \_\_\_\_\_ x 1 = \_\_\_\_ FACW species \_\_\_\_ x 2 = \_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ 85 = Total Cover FACU species \_\_\_\_\_ x 4 = \_\_\_\_ Herb Stratum (Plot size: \_ 5 UPL species \_\_\_\_\_ x 5 = \_\_\_\_ 1. Vulpia myuros - 25 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B) N UPL 2. Sisumbrium irio UPL Prevalence Index = B/A = 3. Pectocarya sp. N UPL Hydrophytic Vegetation Indicators: 4. Schismus barbatus \_\_ Dominance Test is >50% No Prevalence Index is ≤3.01 \_\_\_ Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) 34 = Total Cover Woody Vine Stratum (Plot size: 5) <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 \_\_\_\_ N/A Present? Remarks: Area adjacent to young Palo rerde vegetation

- "		/	
Sampling	Point:	- 1	ı

Profile Description: (Describe to the dept		
Depth Matrix (inches) Color (moist) %	Redox Features  Color (moist) % Type¹ Loc	Texture Remarks
		TOALOIG
0-17" 7.5/R4/4 100		silty loan
7.3		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=		nd Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all I	LRRs, 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 Mucky Mineral (F1)	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: None		
Depth (inches):		Hydric Soil Present? Yes No V
	il indicators obser	
Remarks: No hydric so	il indicators obser	The state of the s
Remarks: No hydric so	il indicators obser	
HYDROLOGY Wetland Hydrology Indicators:		ved,
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required)	f; check all that apply)	Secondary Indicators (2 or more required)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)	d; check all that apply) Salt Crust (B11)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)	i; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)	Secondary Indicators (2 or more required)  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)	i; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)	Secondary Indicators (2 or more required)  — Water Marks (B1) (Riverine)  — Sediment Deposits (B2) (Riverine)  — Drift Deposits (B3) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	i; check all that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)
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 Living	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Roots (C3) Dry-Season Water Table (C2)
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 Living Presence of Reduced Iron (C4)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  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)	i; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Pry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
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 (B7)	Si; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
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)	i; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soil	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Proposits (B3) (Riverine)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)
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 (B7)  Water-Stained Leaves (B9)  Field Observations:	Salt Crust (B11)  Salt Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
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 (B7)  Water-Stained Leaves (B9)  Field Observations:	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
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 (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes No	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Roots (C3)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
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 (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Water Table Present?  Yes No	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)
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 (B7)  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes None of the present?  Water Table Present? Yes None of the present?	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  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
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) Vauface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes Notes that the present?  Water Table Present?  Yes Notes that the present?	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Pry-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
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) Vauface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes Noncompared to the processor of the	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
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 (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 Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
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 (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 Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
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 (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 Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No
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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) Vaurface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? Yes Noncomparison of the Control of the Contr	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Thin Muck Surface (C7)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	Secondary Indicators (2 or more required)  Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Crayfish Burrows (C8)  Saturation Visible on Aerial Imagery (C9)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Wetland Hydrology Present? Yes No  Ons), if available:  ages converge adjacent  Creating a small basin and debris wracking the

WETLAND DETERMINATION DATA FORM - Arid West Region

Tree Stratum (Plot size: 30 % Cover Species? Status That Art  2.	slope (%): ~1
Lat: 33,390682 Long:	
il Map Unit Name: No sol dota actual and a climatic / hydrologic conditions on the site typical for this time of year? Yes No (If a vegetation Soil or Hydrology significantly disturbed? N) are "Normal C a vegetation Soil or Hydrology naturally problematic? N are "Normal C a vegetation Soil or Hydrology naturally problematic? N are "Normal C a vegetation Soil or Hydrology naturally problematic? N are "Normal C and a vegetation Soil or Hydrology	5. 113852 Datum: 1X-15 84
e climatic / hydrologic conditions on the site typical for this time of year? Yes No (If se Vegetation Soil or Hydrology significantly disturbed? No Are "Normal Cost or Hydrology significantly disturbed? No Are "Normal Cost or Hydrology naturally problematic? No (If needed, exp. 19 (If	NWI classification: RCe
evegetation	explain in Remarks.)
Segentation, Soil, or Hydrology naturally problematic? No (If needed, exp. JMMARY OF FINDINGS - Attach site map showing sampling point locations by drophytic Vegetation Present? Yes, No	imstances" present? Yes V No
JMMARY OF FINDINGS - Attach site map showing sampling point location:    vydrophytic Vegetation Present?   Yes	n any answers in Remarks.)
ydrophytic Vegetation Present? Yes No Veltand Hydrology Present? Yet No	
ree Stratum (Plot size:	
ree Stratum (Plot size:	Yes No
EGETATION - Use scientific names of plants.  Total Number Total Number Total Number Total Number That Are Total Cover Species?  Free Stratum (Plot size:	
GETATION – Use scientific names of plants.  The stratum (Plot size:	of bridge.
EGETATION – Use scientific names of plants.  The stratum (Plot size: 30 )	
Absolute % Cover Status Number That Ar Species?  Total Number That Ar Species applied Stratum (Plot size:	
ree Stratum (Plot size: 30 ) % Cover Species? Status That Art Art Art Art Art Art Art Art Art Ar	
Total No Species  apling/Shrub Stratum (Plot size:	ce Test worksheet:
Total No Species  Percent That Art  Prevale  Tot  OBL sp  FAC sp  FAC sp  FAC sp  Perchagan Sp.  Cammison a booth:  Total Cover  Prevale  Tot  OBL sp  FAC sp	Dominant Species DBL, FACW, or FAC:(A)
Species  Percent That An  Prevale  Tot  OBL sp  FAC sp	
Percent That Are pling/Shrub Stratum (Plot size:	ber of Dominant cross All Strata: 4 (B)
That Are Tha	Deminent Species
Tot  OBL sp  FACW:  FAC sp  FACU s  UPL sp  Column  Pecfocary a Sp.  Cammisonia boothi  Tot  OBL sp  FACW:  FACU s  UPL sp  Column  Pecfocary a Sp.  Cammisonia boothi  Pro  Mo  Pro  Pro  Mo  Pro  Pro  Mo  Pro  Pr	DBL, FACW, or FAC: 25 (A/B)
Tot  OBL sp  FACW:  FAC sp  FACU s  UPL sp  Column  Pectocarya Sp.  Cammisonia boothi  Pre  Mo  Doi  Doi  Doi  Doi  Doi  Doi  Doi	e Index worksheet:
OBL SP FACWS FAC SP FACUS  PER HYLE CMORY  PECHOCANYON SP.  Cammisonia boothi  Do Pre Mo	% Cover of: Multiply by:
FACWS FAC sp FACUs  FAC sp  FACUs  FA	es x1=
FAC sp  FAC sp  FAC us  FAC us  Perityle cmary:  Pectocarya sp.  Cammison: a boothi  Pre  Mo  Mo  Pre	ecies x 2 =
Perityle amory:  Pectocarya sp.  Cammisonia boothi  Total Cover  FACUS  UPL sp  Column  Property of the control	ies x 3 =
Perityle amory:  Pectocarya Sp.  Cammisonia boothi  Pre  Mo  Do  Pre  Mo	cies x 4 =
Pectocarya Sp. 2 Y apl Programisonia boothi 2 Y upl Programisonia boothi 2 Y upl Program — Progr	es x 5 =
Commisonia boothi 2 Y UPL Property of the Hydrop Property of the Hyd	otals: (A) (B)
Hydrop  Doi  Pre  Mo  Pre	valence Index = B/A =
	rtic Vegetation Indicators:
Pre	nance Test is >50% No
	lence Index is ≤3.01
/O - Total Cours Pro	nological Adaptations <sup>1</sup> (Provide supporting ta in Remarks or on a separate sheet)
/ O - Total Cours	ematic Hydrophytic Vegetation¹ (Explain)
Control of the state of the sta	
oody Vine Stratum (Plot size: 5 Indicate be pres	s of hydric soil and wetland hydrology must
	t, unless disturbed or problematic.
O = Total Cover Hydrog	
Bare Ground in Herb Stratum 80 % Cover of Biotic Crust N/A Presen	
Bare Ground in Herb Stratum % Cover or Biotic Crust Present	
marks: Area adjacent to large Tamarix.	

US Army Corps of Engineers

Arid West - Version 2.0

Sampling Point: 2

Depth	Matrix			x Features					Remarks	
inches) Color (		%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture		Remarks	
0-6 7.5Y		100	-	-	_	_	silty 10	am		
7.5Y	R 5/3	100	_				Sondy	oan		
Type: C=Concentration  Aydric Soil Indicators  Histosol (A1)  Histic Epipedon (A2)  Black Histic (A3)  Hydrogen Sulfide (A2)  Stratified Layers (A2)  1 cm Muck (A9) (LI	(Applicabl 2) A4) 5) (LRR C)			ox (S5) atrix (S6) ky Mineral red Matrix atrix (F3)	(F1) (F2)	d Sand Gr	Indicators 1 cm 2 cm Reduc	Muck (A9) Muck (A10 ced Vertic Parent Mate	) (LRR B)	1=Matrix. Soils³:
Depleted Below Da		A11)	Depleted Da							
Thick Dark Surface Sandy Mucky Mine Sandy Gleyed Mate	(A12) ral (S1)		Redox Depr Vernal Pool	ressions (F			wetland	hydrology	hytic vegetation must be present or problematic.	
Restrictive Layer (if pr										
Type: None										
Type: Toote										,
Depth (inches):	dric s	oil i	nd confor	s of	oserv	ed.	Hydric Soi	l Present?	? Yes	No
Depth (inches):Remarks: No hye	dric s	oil in	nd confor	s ob	oserv	ed.	Hydric Soi	I Present?	? Yes	No
Depth (inches):Remarks: No hyperparts have been supported by the property of the proper		oil i	nd confor	s of	serv	ed.	Hydric Soi	I Present?	? Yes	No
Depth (inches):	dicators:				oserv	ed.			Yes	
Depth (inches):	dicators:			()	oserv	ed.	Seco	ndary Indic		e required)
Depth (inches):  Remarks: No hye  YDROLOGY  Vetland Hydrology Inches  Primary Indicators (mini	dicators: mum of one		neck all that apply Salt Crust Biotic Crus	(B11) t (B12)		ed.	Seco	ndary Indic Vater Mark Sediment D	cators (2 or more cs (B1) (Riverine Deposits (B2) (Ri	e required)
Depth (inches):	dicators: mum of one		neck all that apply Salt Crust Biotic Crus Aquatic Inv	(B11) tt (B12) vertebrates	s (B13)	ed.	Seco	ndary Indio Water Mark Sediment D	cators (2 or more cs (B1) (Rivering deposits (B2) (Ri its (B3) (Rivering	e required)
YDROLOGY  Wetland Hydrology Inc Surface Water (A1) High Water Table (A) Saturation (A3) Water Marks (B1) (	dicators: mum of one  A2)  Nonriverine	required; c	neck all that apply Salt Crust Biotic Crus Aquatic Inv	y) (B11) It (B12) vertebrates Sulfide Od	s (B13) or (C1)		Second Se	ndary India Water Mark Sediment D Drift Depos Drainage P	cators (2 or more cs (B1) (Rivering deposits (B2) (Ri its (B3) (Rivering atterns (B10)	e required) e) everine)
YDROLOGY  Wetland Hydrology Inc  Surface Water (A1)  High Water Table (A1)  Saturation (A3)  Water Marks (B1) (  Sediment Deposits	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriv	required; c	heck all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen	(B11) It (B12) Vertebrates Sulfide Od Chizosphere	s (B13) lor (C1) es along l	Living Root	Secon	ndary Indic Water Mark Sediment D Orift Depos Orainage P Ory-Seasor	cators (2 or more cs (B1) (Rivering Deposits (B2) (Rivering atterns (B10) on Water Table (C	e required) e) everine)
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Primary Indicators (minimal Surface Water (A1) High Water Table (A3) Water Marks (B1) (Cased Marks (B3) Surface Soil Cracks	dicators: mum of one A2) Nonriverine; (B2) (Nonriv (Nonriverine ( (B6)	required; c	neck all that apph Salt Crust Biotic Crus Aquatic Inv Hydrogen Oxidized R Presence o	(B11) It (B12) Vertebrates Sulfide Od Ithizosphere of Reduced In Reduction	s (B13) for (C1) es along t d Iron (C4) on in Tilled	Living Roof	Secon	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation N	cators (2 or more cs (B1) (Riverine Deposits (B2) (Ri its (B3) (Riverine atterns (B10) in Water Table (Carrows (C8) Visible on Aerial	e required) e) (verine) e)
Primary Indicators (minimary Indicators (Mainimary Indicators (Minimary	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (Nonriverine; (B6) on Aerial Imag	required; c	neck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Reduced Reductio Surface (C	s (B13) for (C1) es along l d Iron (C4) on in Tilled	Living Roof	Secon	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation V Shallow Aq	cators (2 or more cs (B1) (Riverine Deposits (B2) (Ri its (B3) (Riverine atterns (B10) in Water Table (Courrows (C8) Visible on Aerial uitard (D3)	e required) e) (verine) e)
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Primary Indicators (minimary Indicators (Main Water Marks (B1) (Main Sediment Deposits (B3) Surface Soil Cracks Inundation Visible of Water-Stained Leaves (B4) (Main Sediment Deposits (B4) (Main Marks (B4) (Main Main Marks (B4) (Main Main Marks (B4) (Main Marks (B4) (Main Main Main Main Main Marks (B4) (Main Main Main Main Main Main Main Main	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (Nonriverine; (B6) on Aerial Images (B9)  Yes	required; c	neck all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Reduction Reduction Surface (Clain in Rer	s (B13) for (C1) es along t d Iron (C4) on in Tilled (C7) marks)	Living Roof	Secon	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation V Shallow Aq	cators (2 or more cs (B1) (Riverine Deposits (B2) (Ri its (B3) (Riverine atterns (B10) in Water Table (Courrows (C8) Visible on Aerial uitard (D3)	e required) e) (verine) e)
Primary Indicators (mini Surface Water Table (Base)  Water Stained Leave Water (Base)  Surface Soil Cracks Inundation Visible of Water Stained Leave Water Water Table (Base)  Water Stained Leave Water Table Present?	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (Nonriverine; (B6) on Aerial Imagines (B9)  Yes Yes	required; control of the control of	Depth (inc	(B11)  It (B12) Vertebrates Sulfide Od Chizospheri of Reduced on Reductio Surface (Clain in Rer Ches):  Liches):  Liches	s (B13) for (C1) es along l d Iron (C4) on in Tilled (C7) marks)	Living Roof)	Secon	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation \ Shallow Aq (AC-Neutra	cators (2 or more cs (B1) (Riverine Deposits (B2) (Ri its (B3) (Riverine atterns (B10) in Water Table (Courrows (C8) Visible on Aerial uitard (D3)	e required) (verine) (e) (2) Imagery (C9
Primary Indicators (mini Surface Water (A1) High Water Table (A1) High Water Table (A2) Water Marks (B1) (C2) Sediment Deposits Drift Deposits (B3) Surface Soil Cracks Inundation Visible of	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (Nonriverine; (B6) In Aerial Imagives (B9)  Yes Yes Yes	required; c	Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Reduction Surface (Clain in Rer Ches): Lines): Lines): Lines): Lines	s (B13) for (C1) es along t d Iron (C4) on in Tilled (C7) marks)	Living Roof ) Soils (C6)	Second Se	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation \ Shallow Aq (AC-Neutra	cators (2 or more cs (B1) (Riverine Deposits (B2) (Riverine atterns (B10) of Water Table (Carrows (C8) Visible on Aerial uitard (D3) al Test (D5)	e required) (verine) (e) (2) Imagery (C9
Primary Indicators (minimary Indicators (Mainmary I	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (Nonriverine; (B6) In Aerial Imagives (B9)  Yes Yes Yes	required; c	Salt Crust Biotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Reduction Surface (Clain in Rer Ches): Lines): Lines): Lines): Lines	s (B13) for (C1) es along t d Iron (C4) on in Tilled (C7) marks)	Living Roof ) Soils (C6)	Second Se	ndary Indic Vater Mark Sediment D Drift Depos Drainage P Dry-Seasor Crayfish Bu Saturation \ Shallow Aq (AC-Neutra	cators (2 or more cs (B1) (Riverine Deposits (B2) (Riverine atterns (B10) of Water Table (Carrows (C8) Visible on Aerial uitard (D3) al Test (D5)	e required) (verine) (e) (2) Imagery (C9
Primary Indicators (minimary I	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (B6) In Aerial Imagives (B9)  Yes _ Yes _ Yes _ (Stream gau	required; c	Salt Crust  Biotic Crust  Aquatic Inv Hydrogen S  Oxidized R Presence C Recent Iron Thin Muck Other (Exp	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Of Reduction Surface (Clain in Rer Ches): Ches): Ches): Ches):	s (B13) or (C1) es along l d Iron (C4) on in Tilled C7) marks)	Living Roof  Soils (C6)  Wetla	Second Se	ndary Indic Water Mark Sediment D Drift Depos Orainage P Ory-Seasor Crayfish Bu Saturation N Shallow Aq FAC-Neutra	cators (2 or more cators (8 or more cators (8 or more cators (82) (Rivering atterns (810) or Water Table (Carrows (C8) Visible on Aerial uitard (D3) al Test (D5)	e required) (verine) (e) (2) Imagery (C9
Primary Indicators (minimary I	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (B6) In Aerial Imagives (B9)  Yes _ Yes _ Yes _ (Stream gau	required; c	Salt Crust  Biotic Crust  Aquatic Inv Hydrogen S  Oxidized R Presence C Recent Iron Thin Muck Other (Exp	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Of Reduction Surface (Clain in Rer Ches): Ches): Ches): Ches):	s (B13) or (C1) es along l d Iron (C4) on in Tilled C7) marks)	Living Roof  Soils (C6)  Wetla	Second Se	ndary Indic Water Mark Sediment D Drift Depos Orainage P Ory-Seasor Crayfish Bu Saturation N Shallow Aq FAC-Neutra	cators (2 or more cators (8 or more cators (8 or more cators (82) (Rivering atterns (810) or Water Table (Carrows (C8) Visible on Aerial uitard (D3) al Test (D5)	e required) (verine) (e) (2) Imagery (C9
Primary Indicators (minimary I	dicators: mum of one  A2)  Nonriverine; (B2) (Nonriverine; (B6) In Aerial Imagives (B9)  Yes _ Yes _ Yes _ (Stream gau	required; c	Salt Crust  Biotic Crust  Aquatic Inv Hydrogen S  Oxidized R Presence C Recent Iron Thin Muck Other (Exp	(B11) It (B12) Vertebrates Sulfide Od Chizosphero Of Reduction Surface (Clain in Rer Ches): Ches): Ches): Ches):	s (B13) or (C1) es along l d Iron (C4) on in Tilled C7) marks)	Living Roof  Soils (C6)  Wetla	Second Se	ndary Indic Water Mark Sediment D Drift Depos Orainage P Ory-Seasor Crayfish Bu Saturation N Shallow Aq FAC-Neutra	cators (2 or more cators (8 or more cators (8 or more cators (82) (Rivering atterns (810) or Water Table (Carrows (C8) Visible on Aerial uitard (D3) al Test (D5)	e required) (verine) (e) (2) Imagery (C9

WETLAND DETERMINATION DATA FORM – Arid West Region Project/Site: Chrokowalla Valley Road - Agari Dtch City/County: Rwerside Carnety Sampling Date: 2/27/19 State: CA Sampling Point: SP3 - Acari Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_ Slope (%): \_\_\_\_ Subregion (LRR): 0-Med Lat: 33.373032 Long: -115, 085170 Datum: WGS 84 NWI classification: \_\_\_\_\_\_\_RG Soil Map Unit Name: No soil data avaulable 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? No Are "Normal Circumstances" present? Yes \_\_\_\_ No \_\_\_\_ Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area
Hydric Soil Present? Yes No Within a Wetland? Yes No Within a Wetland? Remarks: Area DS of large bern w/ cracked soils. Appears that water collects here from small watershed b/w berm and road, A few swall-ish features lead to cracked soils area. Pit in low spot of cracked soils VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Dominance Test worksheet: Tree Stratum (Plot size: 30)
Absolute Mominant Indicator Species? Status

1. Props is glandulosa 40 Y Facu Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: Sapling/Shrub Stratum (Plot size: 10 )

1. Hymenocles Percent of Dominant Species That Are OBL, FACW, or FAC: 1. Hymenoclea salsola 10 Y UPL Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species \_\_\_\_\_ x 1 = \_\_\_\_ FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_ FAC species \_\_\_\_\_ x 3 = \_\_\_\_ = Total Cover FACU species \_\_\_\_\_ x 4 = \_\_\_\_ UPL species \_\_\_\_\_ x 5 = \_\_\_\_ Herb Stratum (Plot size: 1. Pectocarya Sp. Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is ≤3.01 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Woody Vine Stratum (Plot size: 5 ) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic = Total Cover Vegetation Present? % Bare Ground in Herb Stratum \_\_\_\_\_ % Cover of Biotic Crust \_\_\_\_ Remarks: Large mesquite tree in plot.

Sampling Point: 3

Profile Description: (Describe to the de	pth needed to docum	nent the i	naicator	001111111	if the absence of mo	10010101
Depth Matrix	Redox	x Feature				
(inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	_Loc <sup>2</sup>		Remarks
0-12 7.5YR 4/4 100		-	-	-	silty loam	
12-17 7.5 yR 5/3 100	-	-	-	-	sond	
		_				
<sup>1</sup> Type: C=Concentration, D=Depletion, RN	/=Reduced Matrix, CS	S=Covered	d or Coate	d Sand G	rains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a	I LRRs, unless other	wise not	ed.)			oblematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redo	ox (S5)			1 cm Muck (A	A9) (LRR C)
Histic Epipedon (A2)	Stripped Ma	atrix (S6)			2 cm Muck (A	
Black Histic (A3)	Loamy Muc	ky Minera	I (F1)		Reduced Ver	tic (F18)
Hydrogen Sulfide (A4)	Loamy Gley		(F2)			Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Ma				Other (Explai	n in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark					
Depleted Below Dark Surface (A11)	Depleted Da		, ,		3	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)	Redox Depr		F8)			rophytic vegetation and
Sandy Mucky Milleral (S1) Sandy Gleyed Matrix (S4)	Vernai Pool	8 (1.9)				ogy must be present, d or problematic.
Restrictive Layer (if present):		-	-		uniess disturbe	d or problematic.
Type: None						
Type: None					Hudrig Sail Brass	-12 V N- V
Depth (inches):  Remarks: No hydric Soil	indicators	0551	erved.		Hydric Soil Prese	nt? Yes No
Depth (inches):  Remarks: No hydric soil	indicators	0551	erved.		Hydric Soil Prese	nt? Yes No
Depth (inches):  Remarks: No hydric soil	indicators	0554	erved.		Hydric Soil Prese	nt? Yes No/_
Depth (inches):  Remarks: No hydric soil  HYDROLOGY			erved.			
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:		у)	erved.		Secondary Ir	ndicators (2 or more required)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require	ed; check all that apply	y) (B11)	erved.		Secondary I	ndicators (2 or more required) larks (B1) (Riverine)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)	ed; check all that apply	y) (B11) st (B12)			Secondary Ir  Water M Sedimer	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)	ed; check all that apply Salt Crust Biotic Crus	y) (B11) st (B12) vertebrate	s (B13)		Secondary Ir  Water M Sedimer Drift De	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required Surface Water (A1)  High Water Table (A2)  Saturation (A3)	ed; check all that apply Salt Crust Biotic Crust Aquatic Inv	y) (B11) st (B12) vertebrate Sulfide Od	s (B13) dor (C1)		Secondary Ir  Water M Sedimer Drift Der Drainage	andicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)	ed; check all that apply Salt Crust Biotic Crus Aquatic Inv Hydrogen S	y) (B11) st (B12) vertebrate Sulfide Od thizosphe	s (B13) dor (C1) res along l	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)	ed; check all that apply  Salt Crust  Biotic Crus  Aquatic Inv  Hydrogen 3	(B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce	s (B13) dor (C1) res along l	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Crayfish	andicators (2 or more required)  larks (B1) (Riverine)  and Deposits (B2) (Riverine)  posits (B3) (Riverine)  a Patterns (B10)  son Water Table (C2)  Burrows (C8)
Pepth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require  Surface Water (A1)  High Water Table (A2)  Saturation (A3)  Water Marks (B1) (Nonriverine)  Sediment Deposits (B2) (Nonriverine)  Drift Deposits (B3) (Nonriverine)	ed; check all that apply  Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence co	(B11) st (B12) vertebrate Sulfide Od Rhizosphe of Reduce n Reduction	s (B13) dor (C1) res along I d Iron (C4 on in Tilled	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage Dts (C3) Dry-Sea Crayfish Saturation	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one require 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)	ed; check all that apply  Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence co	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface (	s (B13) dor (C1) res along I dd Iron (C4 on in Tilled C7)	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Dry-Sea Crayfish Saturatie Shallow	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) cosits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 (I	ed; check all that apply  Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface (	s (B13) dor (C1) res along I dd Iron (C4 on in Tilled C7)	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Dry-Sea Crayfish Saturatie Shallow	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require)  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 (Inches Marks (B9))  Field Observations:	ed; check all that apply  Salt Crust Biotic Crus Aquatic Inv Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( elain in Re	s (B13) dor (C1) res along I dd Iron (C4 on in Tilled C7)	Living Roo	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Dry-Sea Crayfish Saturatie Shallow	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) cosits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required inches)  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 (Mater-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes	ed; check all that apply Salt Crust Biotic Crust Aquatic Inv Hydrogen 3 Oxidized R Presence c Recent Irol Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reduction Surface ( olain in Re	s (B13) dor (C1) res along l ed Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (C6	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Dry-Sea Crayfish Saturatie Shallow	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) cosits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require)  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 (Inches Water-Stained Leaves (B9)  Field Observations:  Surface Water Present? Yes  Water Table Present? Yes  Water Table Present? Yes	Salt Crust Salt Crust Biotic Crust Aquatic Inv Hydrogen 3 Oxidized R Presence of Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( plain in Re ches): ches):	s (B13) dor (C1) res along l ed Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (Ce	Secondary Ir  Water M Sedimer Drift Der Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required in the second	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( olain in Re ches):	s (B13) dor (C1) res along l ed Iron (C4 on in Tilled C7) marks)	Living Root) I Soils (Co	Secondary Ir  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) cosits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one require 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 (Invited Deposits (B9))  Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes Saturation Present? Yes	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( olain in Re ches):	s (B13) dor (C1) res along l ed Iron (C4 on in Tilled C7) marks)	Living Root) I Soils (Co	Secondary Ir  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required in the second	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reduce n Reducti Surface ( olain in Re ches):	s (B13) dor (C1) res along l ed Iron (C4 on in Tilled C7) marks)	Living Root) I Soils (Co	Secondary Ir  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Depth (inches):  Remarks: No hydric Soil  HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required in the second	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reducti Surface ( clain in Re ches): ches): ches): ches):	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Root) I Soils (Co	Secondary II  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one require)  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 (Inundation Visible on Aerial	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reducti Surface ( clain in Re ches): ches): ches): ches):	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (Co	Secondary II  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one require)  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 (Inundation Visible on Aerial	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reducti Surface ( clain in Re ches): ches): ches): ches):	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (Co	Secondary II  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one require)  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 (Inundation Visible on Aerial	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reducti Surface ( clain in Re ches): ches): ches): ches):	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (Co	Secondary II  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)
Remarks: No hydric Soil  Remarks: No hydric Soil  Remarks: No hydric Soil  Remarks: No hydric Soil  Wetland Hydrology Indicators:  Primary Indicators (minimum of one require 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 (Inundation Visible on Aerial Imagery (Inundation Visible on Aerial Imagery (Inundation Visible Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, manufacture)	Salt Crust Salt Crust Siotic Crust Aquatic Inv Hydrogen S Oxidized R Presence C Recent Iron Thin Muck Other (Exp	y) (B11) st (B12) vertebrate Sulfide Oc Rhizosphe of Reducti Surface ( clain in Re ches): ches): ches): ches):	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Roo ) I Soils (Co	Secondary II  Water M Sedimer Drift Dep Drainage ots (C3) Dry-Sea Crayfish Saturati Shallow FAC-Ne	ndicators (2 or more required) larks (B1) (Riverine) nt Deposits (B2) (Riverine) posits (B3) (Riverine) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) Aquitard (D3) utral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Region

Specialis Trace Maria Marie Comp - reserve Eller	ity/County:	State: (A Sampling Point: SP4 - Ac
oplicani/Owner: NCVI)		
vestigator(s): Paul Schwart 7 S	Section, Township, Rar	nge: 530 T65 K180
andform (hillstone terrace etc.). Sandy wash	ocal relief (concave, o	convex, none): Slope (%)
ubregion (LRR): C-Med Lat: 33,	37-2952	Long: -115.085007 Datum: Was 84
oil Map Unit Name: No soil data available		NWI classification: K6
e climatic / hydrologic conditions on the site typical for this time of year	r? Yes V No	(If no, explain in Remarks.)
re Vegetation, Soil, or Hydrology significantly d	listurbed? No Are "	Normal Circumstances" present? Yes No
e Vegetation, Soil, or Hydrology naturally prob	elematic? No (If ne	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site map showing	sampling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled	Area
Netland Hydrology Present? Yes No	within a Wetlan	nd? fes
Remarks: Que a lalat st base of loss	ac Pala ve	rde tree just us from .
beidge Assa has deed Sought Sail	e Meete v	edetation due to the
and the second s	LA 10 1756 1750	nonlinear til the tree to the
EGETATION - Use scientific names of plants.	Hional FAC	+ vegetation.
EGETATION – Use scientific names of plants.	Deminant Indicates	Dominance Test worksheet:
Absolute	Dominant Indicator Species? Status	Number of Dominant Species
- Parknsonia acuelata 45	Y FAC	That Are OBL, FACW, or FAC: (A)
- CARDISAN O		Total Number of Dominant
		Species Across All Strata: (B)
		Percent of Dominant Species
26	= Total Cover	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum (Plot size:		Prevalence Index worksheet:
· N/A		Total % Cover of: Multiply by:
		OBL species x 1 =
		FACW species x 2 =
		FAC species x 3 =
-	= Total Cover	FACU species x 4 =
erb Stratum (Plot size:5		UPL species x 5 =
NA		Column Totals: (A) (B)
		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)
	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Voody Vine Stratum (Plot size: 30 )	- 10(a) 00761	
N/A		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_14/4		
	= Total Cover	Hydrophytic
	- 10tal 0010.	Manatation
% Bare Ground in Herb Stratum % Cover of Biotic Cru		Present? Yes No

Sampling Point:

Profile Description: (Describe to the dept				
Depth Matrix (inches) Color (moist) %	Redox Features Color (moist) % T	ype <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0-17 757R 4/3 100	Coloi (Illoist) 70 I	ype Loc	Sand	Kemano
0 11 13 1K 1/3 100			20014	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=	-Paduced Matrix CS-Covered or	Coated Sand G	Grains <sup>2</sup> I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all I				roblematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Redox (S5)			(A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)			(A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F	()	Reduced Ve	
Hydrogen Sulfide (A4)				
	Loamy Gleyed Matrix (F2	)		Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)		Other (Expl	nin in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)			
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F	7)	3	
Thick Dark Surface (A12)	Regox Depressions (F8)			drophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)			logy must be present,
Sandy Gleyed Matrix (S4)			unless disturb	ed or problematic.
Restrictive Layer (if present):				
Type: None				,
Depth (inches):			Hydric Soil Pres	ent? Yes No
No hydric soil ind	cobble @ ~ 12." Alcohors observed	deptn.		
	cobble @ ~ 12." Alcohors observed	deptn.		
HYDROLOGY	/cobble @ ~ 12." Alcotors observed	deptn.		
HYDROLOGY Wetland Hydrology Indicators:		depth.	Secondary	Indicators (2 or more required)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required	d; check all that apply)	depth.		Indicators (2 or more required)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)	i; check all that apply) Salt Crust (B11)	depth.	Water	Marks (B1) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12)		Water Sedime	Marks (B1) (Riverine) ent Deposits (B2) (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 (B	13)	Water Sedime	Marks (B1) (Riverine)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required  Surface Water (A1)  High Water Table (A2)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12)	13)	Water Sedime Drift De	Marks (B1) (Riverine) ent Deposits (B2) (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 (B	13) (C1)	Water Sedime Drift De Draina	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine)
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 (B Hydrogen Sulfide Odor	.13) (C1) along Living Ro	Water Sedime Drift De Drainage ots (C3) Dry-Se	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2)
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 (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In	.13) (C1) along Living Ro on (C4)	WaterSedimeDrift DeDrainag ots (C3)Dry-SeCrayfis	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th 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 (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in	.13) (C1) along Living Ro on (C4)	Water Sedime Drift De Drainag ots (C3) Crayfis Saturat	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) ion Visible on Aerial Imagery (C9)
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 (B7)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in Thin Muck Surface (C7)	13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
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 (B7  Water-Stained Leaves (B9)	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in	13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) th Burrows (C8) ion Visible on Aerial Imagery (C9)
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 (B7  Water-Stained Leaves (B9)  Field Observations:	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Reman	n13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
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 (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes N	d; check all that apply)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (E Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Remai	n13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
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 (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes N	Salt Crust (B11)  — Salt Crust (B12)  — Aquatic Invertebrates (E  — Hydrogen Sulfide Odor  — Oxidized Rhizospheres  — Presence of Reduced In  — Recent Iron Reduction in  — Thin Muck Surface (C7)  — Other (Explain in Reman	n13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3)
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 (B7  Water-Stained Leaves (B9)  Field Observations:  Surface Water Present?  Yes N	Salt Crust (B11)  — Salt Crust (B12)  — Aquatic Invertebrates (E  — Hydrogen Sulfide Odor  — Oxidized Rhizospheres  — Presence of Reduced In  — Recent Iron Reduction in  — Thin Muck Surface (C7)  — Other (Explain in Reman	n13) (C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Drainag ots (C3) Dry-Se Crayfis Satural Shallov FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 No staturation Present?  Yes No staturation Present?  Yes No staturation Present?  Yes No staturation Present?	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (E  Hydrogen Sulfide Odor  Oxidized Rhizospheres  Presence of Reduced In  Recent Iron Reduction in  Thin Muck Surface (C7)  Other (Explain in Remai	(C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis Satural Shallov FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and and and and and and and and and an	Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrates (E  Hydrogen Sulfide Odor  Oxidized Rhizospheres  Presence of Reduced In  Recent Iron Reduction in  Thin Muck Surface (C7)  Other (Explain in Remai	(C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis Satural Shallov FAC-N	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 (E  Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Reman	(C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis 6) Satural Shallov FAC-N land Hydrology Pres	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 (E  Hydrogen Sulfide Odor Oxidized Rhizospheres Presence of Reduced In Recent Iron Reduction in Thin Muck Surface (C7) Other (Explain in Reman	(C1) along Living Ro on (C4) n Tilled Soils (C	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis 6) Satural Shallov FAC-N land Hydrology Pres	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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 Notes that the present? Yes Notes the present? Yes Notes that the present includes capillary fringe)  Describe Recorded Data (stream gauge, more surface)  Remarks: Dr. F. J. P.	Salt Crust (B11)  — Salt Crust (B12)  — Aquatic Invertebrates (E  — Hydrogen Sulfide Odor  — Oxidized Rhizospheres  — Presence of Reduced In  — Recent Iron Reduction in  — Thin Muck Surface (C7)  — Other (Explain in Reman	(C1) along Living Ro on (C4) n Tilled Soils (C ks)  Wet	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis 6) Satural Shallov FAC-N land Hydrology Pres	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
HYDROLOGY  Wetland Hydrology Indicators:  Primary Indicators (minimum of one required and 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)  — Salt Crust (B12)  — Aquatic Invertebrates (E  — Hydrogen Sulfide Odor  — Oxidized Rhizospheres  — Presence of Reduced In  — Recent Iron Reduction in  — Thin Muck Surface (C7)  — Other (Explain in Reman	(C1) along Living Ro on (C4) n Tilled Soils (C ks)  Wet	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis 6) Satural Shallov FAC-N land Hydrology Pres	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)
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 (B7 Water-Stained Leaves (B9)  Field Observations: Surface Water Present? Water Table Present? YesN Saturation Present? Yes N Saturation Present? Yes N (includes capillary fringe)  Describe Recorded Data (stream gauge, model)	Salt Crust (B11)  — Salt Crust (B12)  — Aquatic Invertebrates (E  — Hydrogen Sulfide Odor  — Oxidized Rhizospheres  — Presence of Reduced In  — Recent Iron Reduction in  — Thin Muck Surface (C7)  — Other (Explain in Reman	(C1) along Living Ro on (C4) n Tilled Soils (C ks)  Wet	Water Sedime Drift De Draina ots (C3) Dry-Se Crayfis 6) Satural Shallov FAC-N land Hydrology Pres	Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) h Burrows (C8) ion Visible on Aerial Imagery (C9) v Aquitard (D3) eutral Test (D5)

WETLAND DETERMINATION DATA FORM - Arid West Region

I Map Unit Name: No soil data available climatic / hydrologic conditions on the site typical for Vegetation, Soil, or Hydrology	Lat: 23,40  this time of year?  significantly dist naturally proble	Yes No _ curbed? No Are "matic? (If ne	Slope (%):   Slope (%):   Slope (%):   Datum:   WGS 84   NWI classification:   RG
Aydrophytic Vegetation Present? Yes	No		d? Yes No
Falo verde (FAC).  EGETATION - Use scientific names of p  Tree Stratum (Plot size: 30 )  Parkinsonia occupiata	Absolute D % Cover S 45	ominant Indicator pecies? Status  Y FAC	Dominance Test worksheet:  Number of Dominant Species That Are OBL, FACW, or FAC:  Total Number of Dominant Species Across All Strata:  (B)
Sapling/Shrub Stratum (Plot size:)  1. N/A  2	45 =	Total Cover	Percent of Dominant Species         3 3 (A/B)           Prevalence Index worksheet:
Herb Stratum (Plot size: 5)  1. Perityle emoryii  2. Pectocarya sp.  3. Phacelia distans  4.	5	Y UPL N UPL	FACU species x 4 =  UPL species x 5 =  Column Totals: (A) (B)  Prevalence Index = B/A =  Hydrophytic Vegetation Indicators:  Dominance Test is >50%  Prevalence Index is ≤3.0¹  Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)  Problematic Hydrophytic Vegetation¹ (Explain)
Noody Vine Stratum (Plot size: 3 0 )  1	= = = = = = = = = = = = = = = = = = =	Total Cover	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Hydrophytic Vegetation Present? Yes No

	5 YR 5/3 100	Color (moist) % Type¹		exture Remarks	
2-15 7	5 YR 3/3 100			5and,	
Type: C=Concer	ntration, D=Depletion, RM=Re	duced Matrix, CS=Covered or Coated	d Sand Grains	<sup>2</sup> Location: PL=Pore Lining, M=M	Matrix
ydric Soil Indic	ators: (Applicable to all LRI	Rs, unless otherwise noted.)		dicators for Problematic Hydric Soi	
_ Histosol (A1)					
Histic Epiped		Sandy Redox (S5)	_	1 cm Muck (A9) (LRR C)	
		Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)	
Black Histic (		Loamy Mucky Mineral (F1)	-	Reduced Vertic (F18)	
Hydrogen Su		Loamy Gleyed Matrix (F2)	_	Red Parent Material (TF2)	
	vers (A5) (LRR C)	Depleted Matrix (F3)		Other (Explain in Remarks)	
1 cm Muck (/	49) (LRR D)	Redox Dark Surface (F6)			
Depleted Bel	ow Dark Surface (A11)	Depleted Dark Surface (F7)			
Thick Dark S	urface (A12)	Redox Depressions (F8)	3In	dicators of hydrophytic vegetation and	1
Sandy Mucky	v Mineral (S1)	Vernal Pools (F9)		wetland hydrology must be present,	
	d Matrix (S4)			unless disturbed or problematic.	
Restrictive Laye				unless disturbed of problematic.	
Type: _Cob		_			,
Depth (inches	): 15"		Hyd	Iric Soil Present? Yes N	0/
VDDOI OCV		•			
YDROLOGY					
Wetland Hydrole					
Primary Indicator	s (minimum of one required; cl	neck all that apply)		Secondary Indicators (2 or more req	uired)
Surface Water	er (A1)	Salt Crust (B11)		Water Marks (B1) (Riverine)	
High Water	Table (A2)	Biotic Crust (B12)		Sediment Deposits (B2) (Rivering	nal
Saturation (A		Aquatic Invertebrates (B13)			ne)
				Drift Deposits (B3) (Riverine)	
	(B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	D	Drainage Patterns (B10)	
	eposits (B2) (Nonriverine)			Dry-Season Water Table (C2)	
Drift Deposit	s (B3) (Nonriverine)	Presence of Reduced Iron (C4)		Crayfish Burrows (C8)	
Surface Soil	Cracks (B6)	Recent Iron Reduction in Tilled S	Soils (C6)	Saturation Visible on Aerial Imag	nery (CS
Inundation V	isible on Aerial Imagery (B7)	Thin Muck Surface (C7)		Shallow Aquitard (D3)	90.7 (00
	ed Leaves (B9)	Other (Explain in Remarks)		FAC-Neutral Test (D5)	
Field Observation				The Heddal Test (DS)	
I ICIU ODSCI VALIC		1 - 4 0 - 4 - 4			
0 5 14/-1 0		Depth (inches):			
Surface Water Pr		Depth (inches):			
Surface Water Programmer Surface Water Programmer Programmer Surface Water Programmer Pr	sent? Yes No	/	Wetland Hy	drology Present? Yes No	
		Depth (inches):			
Water Table Pres	nt? Yes No_	Depth (inches):			
Water Table Pres Saturation Prese (includes capillar	nt? Yes No _	Depth (inches):  pring well, aerial photos, previous inspe			
Water Table Pres Saturation Prese (includes capillar	nt? Yes No _				
Water Table Pres Saturation Prese (includes capillar Describe Record	nt? Yes No _ y fringe) ed Data (stream gauge, monito	oring well, aerial photos, previous inspe	ections), if availa		
Water Table Pres Saturation Prese (includes capillar Describe Record	nt? Yes No _ y fringe) ed Data (stream gauge, monito		ections), if availa		

WETLAND DETERMINATION DATA FORM - Arid West Region Project/Site: Chuckwalla Valley Road - Tarantula City/County: Rivers de Country Sampling Date: 2-27-19

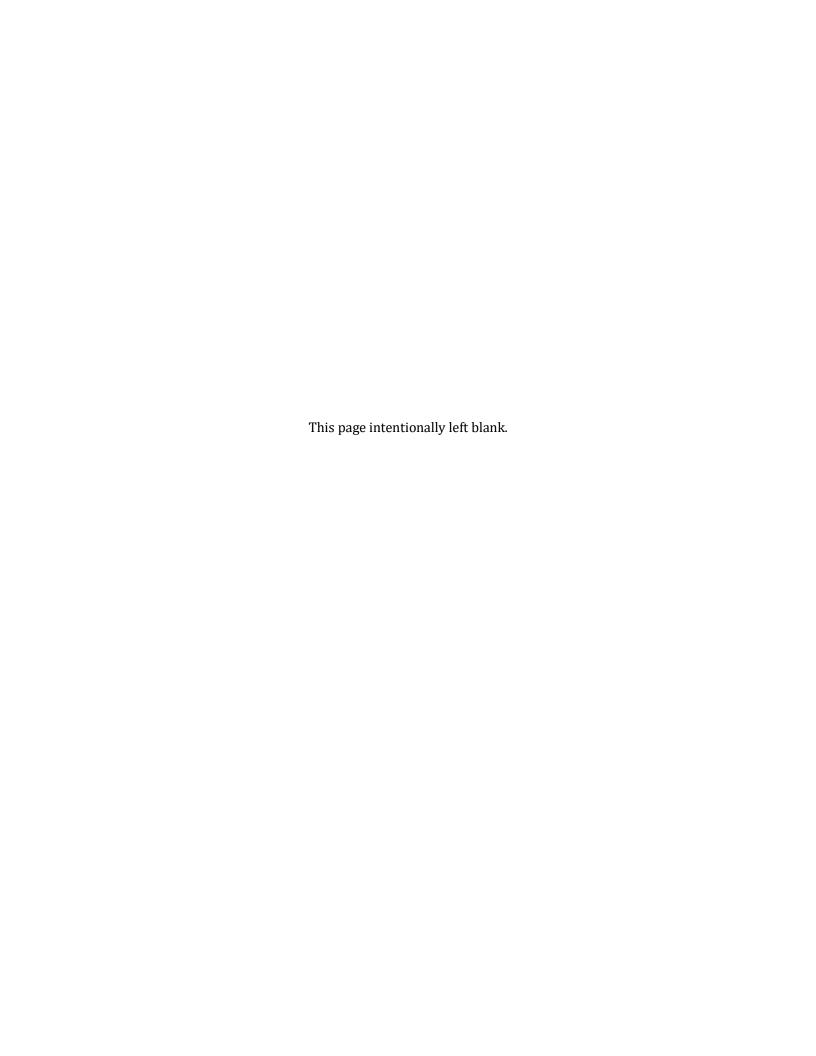
Applicant/Owner: RCTD State: CA Sampling Point: SP6 - Tarantu Investigator(s): Paul Sahwartz Section, Township, Range: 59 T65 RITE Landform (hillslope, terrace, etc.): Sandy wash Local relief (concave, convex, none): Frat Slope (%): Subregion (LRR): 0-Med Lat: 33.394831 Long: -115, 125265 Datum: 1005 84 Soil Map Unit Name: No soil data available NWI classification: R6 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? No \_\_\_\_ Are "Normal Circumstances" present? Yes \_\_\_\_ No \_\_\_ Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. tree (FAC). VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30 ) Absolute Dominant Indicator % Cover Species? Status

1. Parkinsonia acuetata 45 Y PAC Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: Percent of Dominant Species
That Are OBL, FACW, or FAC: Sapling/Shrub Stratum (Plot size: 1. N/A Prevalence Index worksheet: Total % Cover of: Multiply by: 2. OBL species \_\_\_\_\_ x 1 = \_\_\_\_ FACW species \_\_\_\_\_ x 2 = \_\_\_ FAC species 45 x3 = 135 FACU species \_\_\_\_\_ x 4 = \_\_\_ = Total Cover Herb Stratum (Plot size: 5 UPL species \_\_\_\_ x5=\_\_ / 0 1. Phaselia distans 2 Y upc Column Totals: 47 (A) 145 (B) Prevalence Index = B/A = 3.08Hydrophytic Vegetation Indicators: \_\_ Dominance Test is >50% No Prevalence Index is ≤3.01 No Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Woody Vine Stratum (Plot size: \_\_\_\_\_) <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic = Total Cover Vegetation % Bare Ground in Herb Stratum \_\_\_\_\_ % Cover of Biotic Crust \_\_\_\_\_ Present? (50% in herb layer.

Sampling Point	6	

nches) Color (moist)	% Color (n	Redox Features		Loc2	Texture	Remarks
0-15 7.5 YR 5/3	100 -	70	1700		Sand	
7-15 113 11 13					30-101	
			_			
					2, ,,	DI Desiliate Manager
ype: C=Concentration, D=Deplet ydric Soil Indicators: (Applicab				d Sand Gra	Indicators for	n: PL=Pore Lining, M=Matrix. Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1)		andy Redox (S5)	,			(A9) (LRR C)
Histic Epipedon (A2)		ripped Matrix (S6)				(A10) (LRR B)
Black Histic (A3)		amy Mucky Minera	L(F1)		Reduced V	
_ Hydrogen Sulfide (A4)		amy Gleyed Matrix				Material (TF2)
_ Stratified Layers (A5) (LRR C)		epleted Matrix (F3)	(1 2)			ain in Remarks)
1 cm Muck (A9) (LRR D)		edox Dark Surface (	E6)		Other (Exp	uninintentanto
Depleted Below Dark Surface (		epleted Dark Surface				
_ Thick Dark Surface (A12)		edox Depressions (I			3Indicators of hy	drophytic vegetation and
Sandy Mucky Mineral (S1)		ernal Pools (F9)	0)			ology must be present,
Sandy Gleyed Matrix (S4)		emai Poois (F9)				ped or problematic.
Restrictive Layer (if present):				-	uniess distan	bed of problematic.
Type: cobble						
Type: Cobble Depth (inches): 15"	soil indi	colors of	slvv	ed	Hydric Soil Pres	sent? Yes No
Type:Cobble Depth (inches):15" Remarks: No hydric	soil indi	cators of	SLVV-	ed	Hydric Soil Pres	eent? Yes No
Type: Cobble Depth (inches): 15" Remarks: No hydric	soil indi	colors of	SLVV	ed	Hydric Soil Pres	sent? Yes No
Type: Cobble Depth (inches): 15" Remarks: No hydric  YDROLOGY Wetland Hydrology Indicators:			SLVV	ed		
Type: Cobble Depth (inches): 15" Remarks: No hydric  YDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one	e required; check all	that apply)	SLVV	ed	Secondary	Indicators (2 or more required)
Type: Cobble Depth (inches): 15" Remarks: No hydric  YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	e required; check all	that apply) Salt Crust (B11)	SLVV	ed .	Secondary  Water	Indicators (2 or more required) Marks (B1) (Riverine)
Type:	e required; check all	that apply)	SLVV	ed .	Secondary  Water  Sedim	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Type: Cobble Depth (inches): 15" Remarks: No hydric  YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1)	e required; check all	that apply) Salt Crust (B11)		e d	Secondary  Water  Sedim	Indicators (2 or more required) Marks (B1) (Riverine)
Type: Cobble Depth (inches): 15"  Remarks: No hydric  YDROLOGY  Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2)	e required; check all S E F	that apply) Salt Crust (B11) Biotic Crust (B12)	s (B13)	ed	Secondary  Water  Sedim  Drift D	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine)
Type:Cobble_ Depth (inches):15"  Remarks:	e required; check all S E A e) H	that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate:	s (B13) dor (C1)		Secondary  Water  Sedim  Drift D  Draina	Indicators (2 or more required)  Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10)
Type:Cobble_ Depth (inches):15"  Remarks:	e required; check all  S E E E E O E O O O O O O O O O O O O	that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Oc Dxidized Rhizospher	s (B13) dor (C1) res along l	Living Root	Secondary  Water  Sedim  Drift D  Draina s (C3) Dry-Se	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2)
Type: Cobile Depth (inches): 15"  Remarks: hydric  YDROLOGY  Wetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonrivering Drift Deposits (B3) (Nonrivering	e required; check all	that apply)  Salt Crust (B11)  Biotic Crust (B12)  Aquatic Invertebrate: Hydrogen Sulfide Oc  Dxidized Rhizospher  Presence of Reduce	s (B13) dor (C1) res along l d Iron (C4	Living Root	Secondary  Water  Sedim  Drift D  Draina s (C3)  Crayfis	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) th Burrows (C8)
Type: Cobble Depth (inches): 15"  Remarks: Lyo Lydric  YDROLOGY  Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonrivering Sediment Deposits (B2) (Nonrivering Drift Deposits (B3) (Nonrivering Surface Soil Cracks (B6)	e required; check all	that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Octobroised Rhizospher Presence of Reduce Recent Iron Reduction	s (B13) dor (C1) res along I d Iron (C4 on in Tilled	Living Root	Secondary  Water  Sedim  Drift D  Draina s (C3)  Crayfis  Satura	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (CS)
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Type: Cobble Depth (inches): 15"  Remarks: Lyp Lydric  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) (Nonr Drift Deposits (B3) (Nonriverine Surface Soil Cracks (B6) Inundation Visible on Aerial Im Water-Stained Leaves (B9)  Field Observations:	e required; check all	that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrate: Hydrogen Sulfide Oc Dxidized Rhizospher Presence of Reduce Recent Iron Reduction Thin Muck Surface (Other (Explain in Re	s (B13) dor (C1) res along I d Iron (C4 on in Tilled C7) marks)	Living Root ) Soils (C6)	Secondary  Water  Sedim  Drift D  Draina s (C3)  Crayfis  Satura  Shallon	Indicators (2 or more required) Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) eason Water Table (C2) th Burrows (C8) tion Visible on Aerial Imagery (C9) w Aquitard (D3)
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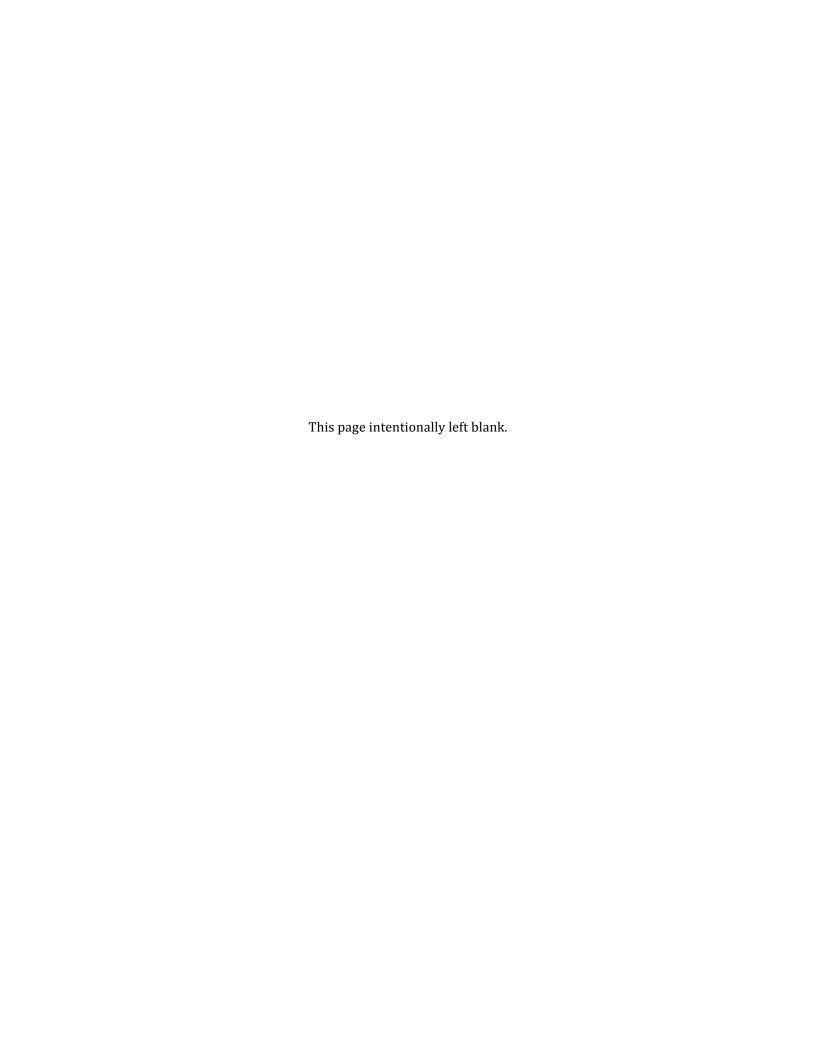
# Appendix E **Study Area Plant List**



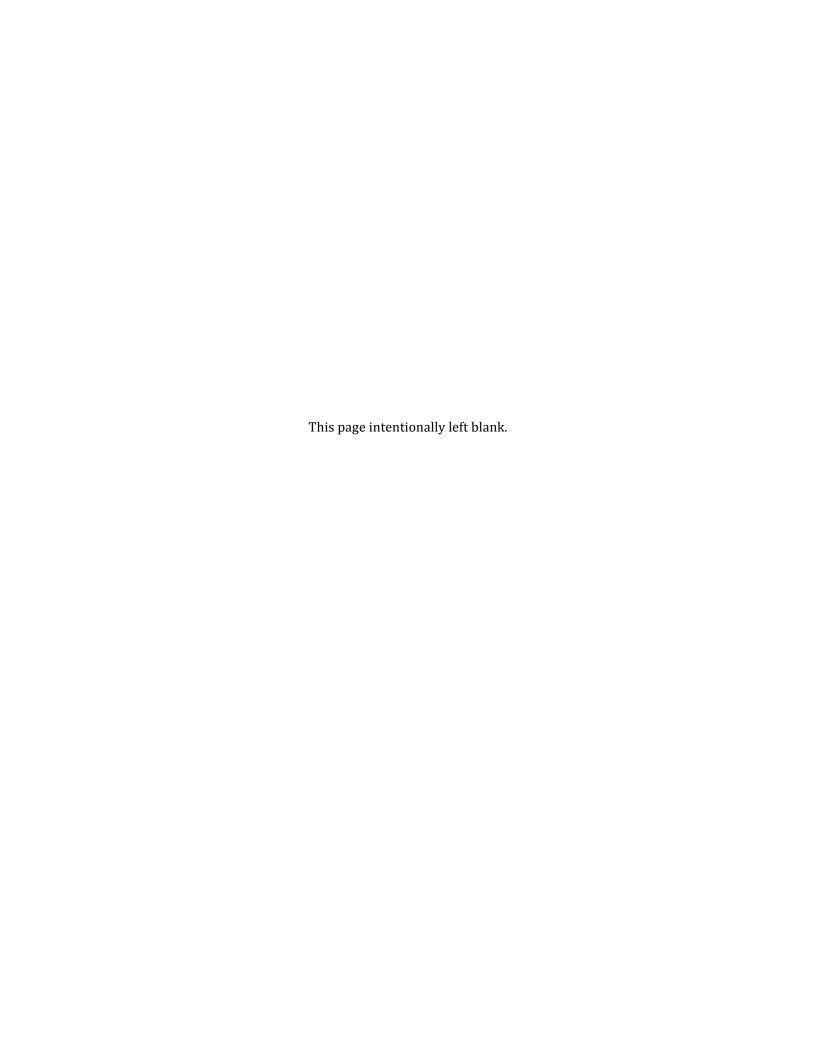
Species	Common Name				
Agavaceae  Hesperocallis undulata  Desert lily					
Aizoaceae					
Sesuvium verrucosum	Verrucose seapurslane				
Apocynaceae					
Asclepias albicans	White stemmed milkweed				
Funastrum hirtellum	Annual burrweed				
Asteraceae					
Ambrosia acanthicarpa	Annual burrweed				
Ambrosia dumosa	White bursage				
Ambrosia salsola	Burrobrush				
Atrichoseris platyphylla	Gravel ghost				
Chaenactis carphoclinia var. carphoclinia	Pebble pincushion				
Erigeron canadensis	horseweed				
Geraea canescens	Desert sunflower				
Malacothrix glabrata	Desert dandelion				
Palafoxia arida var. arida	Desert needle				
Pectis papposa	Many bristle pinchweed				
Perityle emoryi	Emory's rock daisy				
Boragi	naceae				
Amsinckia tessellata	Bristly fiddleneck				
Cryptantha angustifolia	Narrow leaved cryptantha				
Cryptantha intermedia	Common cryptantha				
Pectocarya sp.	Combseed				
Phacelia crenulata var. minutiflora	Little flowered heliotrope phacelia				
Brassi	caceae				
Brassica tournefortii	Saharan mustard*				
Hirschfeldia incana	Mediterranean hoary mustard*				
Lepidium lasiocarpum	Shaggyfruit pepperweed*				
Sisymbrium altissimum	Tumble mustard*				
Sisymbrium irio	London rocket*				
Caryophyllaceae					
Achyronychia cooperi	Frost mat				
Loeflingia squarrosa	Spreading loeflingia				
Chenopodiaceae					
Atriplex canescens	Fourwing saltbush				
Chenopodium album	Lamb's quarters*				
Salsola tragus	Russian thistle*				
Cucurbitaceae					
Brandegea bigelovii	Desert star vine				
Euphorbiaceae					
Euphorbia micromera	Sonoran sand mat				
Euphorbia polycarpa	Smallseed sandmat				
Euphorbia serpillifolia ssp. hirtula	Thyme-leafed spurge				
Stillingia linearifolia	Linear leaved stillingia				

Species	Common Name					
•	ae (continued)					
Stillingia spinulosa Annual stillingia						
Ditaxis neomexicana	Common ditaxis					
Fabaceae						
Dalea mollis	Hairy prairie clover					
Marina parryi	Parry delea					
Olneya tesota	Desert ironwood					
Parkinsonia florida	Blue palo verde					
Psorothamnus spinosus	Smoke tree					
Lamiaceae						
Condea emoryi	Desert lavender					
Salvia columbariae	Chia					
Loasaceae						
Mentzelia affinis	Yellow blazing star					
Mentzelia involucrata	Bracted blazing star					
Mal	vaceae					
Eremalche rotundifolia	Desert five spot					
Nycta	ginaceae					
Abronia villosa	Desert sand verbena					
Allionia incarnata	Trailing allionia					
Mirabilis laevis	Desert wishbone bush					
Onag	graceae					
Eremothera boothii	Booth's sun cup					
Eremothera refracta	Narrow leaved primrose					
Eulobus californicus	California primrose					
Papaveraceae						
Eschscholzia minutiflora	Pygmy poppy					
	ginaceae					
Plantago ovata	Desert indianwheat					
	aceae					
Bouteloua aristidoides var. aristidoides	Needle gama					
Hilaria rigida	Big galleta					
Schismus barbatus	Common Mediterranean grass*					
Polemoniaceae						
Aliciella latifolia	Broad leaf gilia					
Loeseliastrum schottii	Schott's calico					
Polygonaceae  Charicanatha branicana						
Chorizanthe brevicornu	Brittle spineflower					
Chorizanthe rigida	Devil's spineflower					
Eriogonum reniforme	Kidney leaf buckwheat					
Eriogonum thomasii	Thomas eriogonum					
Resedaceae    Leaved combess						
Oligomeris linifolia Leaved cambess						
Simmondsia chinansis ioinha						
Simmondsia chinensis	jojoba					

Species	Common Name				
Solanaceae					
Nicotiana obtusifolia	Desert tobacco				
Tamaricaceae					
Tamarix ramosissima	Saltcedar*				
Zygophyllaceae					
Fagonia pachyacantha	Sticky fagonia				
Larrea tridentata	Creosote				



## Appendix F **Preliminary Jurisdictional Determination Form**



#### PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

District Office Los Angeles District File/ORM #	PJD Date: Feb 19, 2019			
State CA City/County Riverside	Name/ R			
Nearest Waterbody: Palen Lake	Address of Person Senior Transportation Planner			
Location: TRS, LatLong or UTM: 33.385074, -115.111127	Requesting PJD  3525 14th Street Riverside, CA 92501			
Identify (Estimate) Amount of Waters in the Review Area:  Non-Wetland Waters:  Stream Flow:    6,725   linear ft	Name of Any Water Bodies Tidal: on the Site Identified as Section 10 Waters: Non-Tidal:			
Wetlands: 0 acre(s) Cowardin Class: Riverine	☐ Office (Desk) Determination ☐ Field Determination: ☐ Date of Field Trip: Feb 19, 2019			
and requested, appropriately reference sources below):  ☐ Maps, plans, plots or plat submitted by or on behalf of the ☐ Data sheets prepared/submitted by or on behalf of the ☐ Office concurs with data sheets/delineation ☐ Office does not concur with data sheets/delineation ☐ Data sheets prepared by the Corps ☐ Corps navigable waters' study:  ☐ U.S. Geological Survey Hydrologic Atlas:  ☐ USGS NHD data.  ☐ USGS 8 and 12 digit HUC maps.  ☐ U.S. Geological Survey map(s). Cite quad name:	e applicant/consultant. report. ineation report.  dewinder Well and Aztec Mines  Survey. Citation: Soil Survey Geographic (SSURGO) Database for In			
□ 100-year Floodplain Elevation is:  □ Photographs: □ Aerial (Name & Date): ESRI imagery 2016; Google Earth 2019  □ Other (Name & Date):  □ Previous determination(s). File no. and date of response letter:  □ Other information (please specify):				
	been verified by the Corps and should not be relied upon for later jurisdictional determinations.			
Signature and Date of Regulatory Project Manager (REQUIRED)	Signature and Date of Person Requesting Preliminary JD (REQUIRED, unless obtaining the signature is impracticable)			

#### ${\bf EXPLANATION\ OF\ PRELIMINARY\ AND\ APPROVED\ JURISDICTIONAL\ DETERMINATIONS:}$

- 1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.
- 2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; a

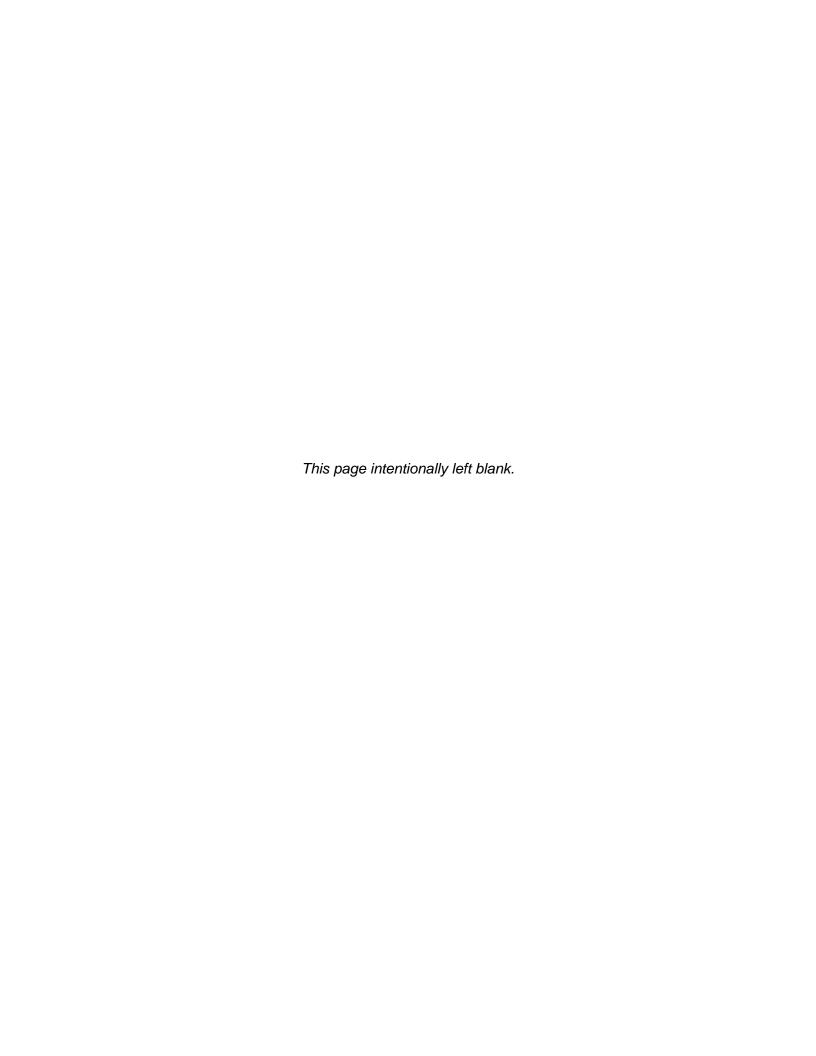
#### PRELIMINARY JURISDICTIONAL DETERMINATION FORM

This preliminary JD finds that there "may be" waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

#### Appendix A - Sites

ct Office	Los	Angeles District	t File/ORM #			PJD Date: Feb 19, 2019
CA	City/	County Uninco	orporated area of R	iverside County Per	rson Requestinq P	JD Frances Segovia
Site Num		Latitude	Longitude	Cowardin Class	Est. Amount o Aquatic Resou in Review Area	rce Class of
Azte	c Di	33.402698	-115.135704	Riverine	1.859 acres	Non-Section 10 non-wetland
Tara	ntul	33.394941	-115.125201	Riverine	2.006 acres	Non-Section 10 non-wetland
Sutr	o Dit	33.39670	-115.113823	Riverine	1.026 acres	Non-Section 10 non-wetland
Acar	i Dit	33.372979	-115.84950	Riverine	1.331 acres	Non-Section 10 non-wetland





**Table G-1. Survey Personnel and Qualifications** 

Personnel	Company	Years of Experience	Survey Performed
Marisa Flores	ICF	14 years of experience performing general biological assessments in Southern California. Experienced in conducting jurisdictional delineations and habitat evaluations for burrowing owl and least Bell's vireo.	Bat Habitat Assessment
Shannon Crossen	ICF	10 years of experience performing general biological assessments in Southern California. Experienced in habitat evaluations for burrowing owl, bats, and wildlife movement.	Bat Habitat Assessment
James Hickman	ICF	15 years of experience performing general biological assessments in Southern California for sensitive species. Performs surveys for burrowing owl, least Bell's vireo, bats, desert tortoise, rare plants, and jurisdictional delineations.	Bat Emergence Survey, Jurisdictional Delineation, Desert Tortoise Survey
Camilla Estes	ICF	5 years of experience performing general biological assessments and general biological surveys. Performs surveys for small mammals, nesting birds, burrowing owl, and desert tortoise.	Burrowing Owl Habitat Assessment, Burrowing owl Focused survey, Desert Tortoise Survey
Shawn Johnston	ICF	8 years of experience performing botanical surveys.	Rare Plant Survey
Kolby Olson	BRC*	8 years of experienced conducting general biological surveys, construction monitoring, burrowing owl focused surveys, and nesting bird surveys.	Burrowing Owl Habitat Assessment.
Francis Lin	ICF	6 years of experience conducting general biological surveys. Performs surveys for rare plants, burrowing owl, desert tortoise, and jurisdictional delineations.	Desert Tortoise Survey
Dennis Miller	URS	15 years of experience performing general biological assessments in Southern California for sensitive species. Performs surveys for burrowing owl, least Bell's vireo, bats, desert tortoise, and conducts jurisdictional delineations.	Bat Emergence Survey
Will Kohn	ICF	20 years of experience performing general biological surveys, habitat assessments, and biological monitoring. Performs focused surveys for burrowing owl, Swainson's hawk, California red-legged frog, and bats.	Bat Emergence Survey, Burrowing Owl Survey
Marissa Maggio	ICF	6 years of experience performing general biological surveys, wildlife/construction monitoring, nesting bird surveys, jurisdictional delineations, and rare plant surveys	Bat Emergence Survey
Danny Cuellar	SWCA*	5 years of experience conducting general biological surveys.	Desert Tortoise Survey
Lance Wooley	ICF	15 years of experience performing biological and botanical surveys.	Rare Plant Survey

Personnel	Company	Years of Experience	Survey Performed
Ryan Layden	ICF	8 years of experience performing general biological assessments in Southern California for sensitive species, including burrowing owl, riparian birds, and desert tortoise.	Desert Tortoise Survey
Shelly Dayman	ICF	10 plus years of experience general biological surveys	Desert Tortoise
Paul Schwartz	ICF	15 years of experience performing biological surveys, jurisdictional delineations, rare plant surveys, and restoration projects.	Jurisdictional Delineation
Kristen Klinefelter	ICF	6 years conducting general biological surveys, jurisdictional delineation, restoration monitoring, and rare plant surveys	Jurisdictional Delineation

<sup>\*</sup>BRC- BioResource Consultants, SWCA - Steven W. Carothers & Associates

### Table G-2. Survey Dates, Types, Weather, and Personnel Aztec Ditch Bridge (#56C0102)

Dates	Survey Type	Weather Conditions	Personnel	
2017				
4/10/2017	Burrowing Owl Habitat Assessment and Focused Survey #1	Time 0830–1000, Temperature 67°F, Wind 6 mph, Cloud Cover 1%	Kolby Olson and Camilla Estes	
5/08/2017	Desert Tortoise Focused Survey	Time 0923-1256, Temperature 70-80 °F, Wind 1-6 mph, Cloud Cover 5-30%	Shelly Dayman, Danny Cuellar, and Camilla Estes	
5/11/2017	Burrowing Owl Focused Survey #2	Time 1850–1950, Temperature 88–91°F, Wind, 1–3 mph, Cloud Cover 10%	Will Kohn and Ryan Layden	
5/12/2017	Rare Plant Survey (Spring)	N/A	Shawn Johnston and Lance Wooley	
6/15/2017	Burrowing Owl Focused Survey #3	Time 1750–1850, Temperature 110°F, Wind 5–10 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
6/27/2017	Bat Habitat Assessment	N/A	Marisa Flores and Shannon Crossen	
7/13/2017	Burrowing Owl Focused Survey #4	Time 0845–0940, Temperature 87°F, Wind 5–10 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
7/19/2017	Bat Emergence Survey		Will Shtanke and Dennis Miller	
7/21/2017	Rare Plant Survey #2 (Summer)	N/A	Shawn Johnston and Lance Wooley	
10/20/2017	Rare Plant Survey #3 (Fall)	N/A	Shawn Johnston and Lance Wooley	
2019				
2/19/2019	Jurisdictional Delineation	N/A	Paul Schwartz and Kristen Klinefelter	
2/27/2019	Jurisdictional Delineation	N/A	Paul Schwartz and Kristen Klinefelter	
4/16/2019	Desert Tortoise Focused Survey	Time 0815-1345, Temperature 68-75°F, Wind 0-3 mph, Cloud Cover 90%	James Hickman and Frances Lin	

Dates	Survey Type	Weather Conditions	Personnel
4/29/2019	Habitat Assessment & Rare Plant Survey (Spring)	N/A	Shawn Johnston

Table G-3. Survey Dates, Types, Weather, and Personnel Tarantula Ditch Bridge (#56C0103)

Dates	Survey Type	Weather Conditions	Personnel	
2017				
4/10/2017	Burrowing Owl Habitat Assessment and Focused Survey #1	Time 0730–0830, Temperature 63°F, Wind 6 mph, Cloud Cover 2%	Kolby Olson and Camilla Estes	
5/08/2017	Desert Tortoise Focused Survey	Time 1305-1600, Temperature 80-88°F, Wind 1-6 mph, Cloud Cover 30-45%	Shelly Dayman, Danny Cuellar, and Camilla Estes	
5/11/2017	Burrowing Owl Focused Survey #2	Time 1730–1835, Temperature 91°F, Wind, 1–7 mph, Cloud Cover 10%	Will Kohn and Ryan Layden	
5/12/2017	Rare Plant Survey (Spring)	N/A	Shawn Johnston and Lance Wooley	
6/15/2017	Burrowing Owl Focused Survey #3	Time 1855–1950, Temperature 108°F, Wind 5–10 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
6/27/2017	Bat Habitat Assessment	N/A	Marisa Flores and Shannon Crossen	
7/13/2017	Burrowing Owl Focused Survey #4	Time 0745–0835, Temperature 85°F, Wind 0–5 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
7/19/2017	Bat Emergence Survey	N/A	Will Kohn and Kolby Olson	
7/21/2017	Rare Plant Survey #2 (Summer)	N/A	Shawn Johnston and Lance Wooley	
10/20/2017	Rare Plant Survey #3 (Fall)	N/A	Shawn Johnston and Lance Wooley	
		2019		
2/19/2019	Jurisdictional Delineation	N/A	Paul Schwartz and Kristen Klinefelter	
2/27/2019	Jurisdictional Delineation	N/A	Paul Schwartz and Kristen Klinefelter	
4/16/2019	Desert Tortoise Focused Survey	Time 0815-1345, Temperature 68-75°F, Wind 0-3 mph, Cloud Cover 90%	James Hickman and Frances Lin	
4/29/2019	Habitat Assessment & Rare Plant Survey (Spring)	N/A	Shawn Johnston	

Table G-4. Survey Dates, Types, Weather, and Personnel Sutro Ditch Bridge (#56C0104)

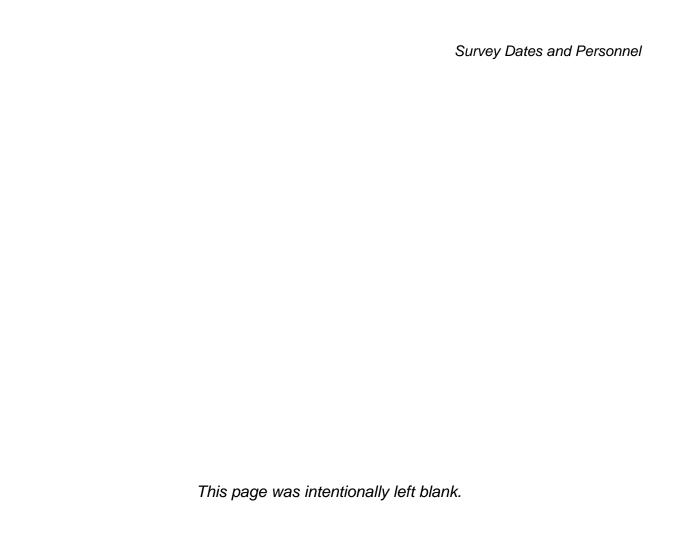
Dates	Survey Type	Weather Conditions	Personnel
		2017	
4/10/2017	Burrowing Owl Habitat Assessment and Focused Survey #1	Time 0700–0730, Temperature 50°F, Wind 5 mph, Cloud Cover 3%	Kolby Olson and Camilla Estes
5/08/2017	Desert Tortoise Focused Survey	Time 1605-1655, Temperature 88-83°F, Wind 1-2mph, Cloud Cover 45-40%	Shelly Dayman, Danny Cuellar, and Camilla Estes

Dates	Survey Type	Weather Conditions	Personnel
5/10/2017	Burrowing Owl Focused Survey #2	Time 1830–1852, Temperature 81–79°F, Wind 3–6 mph, Cloud Cover 0%	Will Kohn and Ryan Layden
5/12/2017	Rare Plant Survey (Spring)	N/A	Shawn Johnston and Lance Wooley
6/01/2017	Burrowing Owl Focused Survey #3	Time 1746–1852, Temperature 94°F, Wind 5–8 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar
6/27/2017	Bat Habitat Assessment	n/a	Marisa Flores and Shannon Crossen
6/28/2017	Burrowing Owl Focused Survey #4	Time 0855–0950, Temperature 90°F, Wind 5–10 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar
7/18/2017	Bat Emergence Survey	n/a	Dennis Miller and Cara Snellen
7/21/2017	Rare Plant Survey #2 (Summer)	n/a	Shawn Johnston and Lance Wooley
10/20/2017	Rare Plant Survey #3 (Fall)	n/a	Shawn Johnston and Lance Wooley
		2019	
2/27/2019	Jurisdictional Delineation	n/a	Paul Schwartz and Kristen Klinefelter
4/16/2019	Desert Tortoise Focused Survey	Time 0815-1345, Temperature 68-75°F, Wind 0-3 mph, Cloud Cover 90%	James Hickman and Frances Lin
4/29/2019	Habitat Assessment & Rare Plant Survey (Spring)	n/a	Shawn Johnston

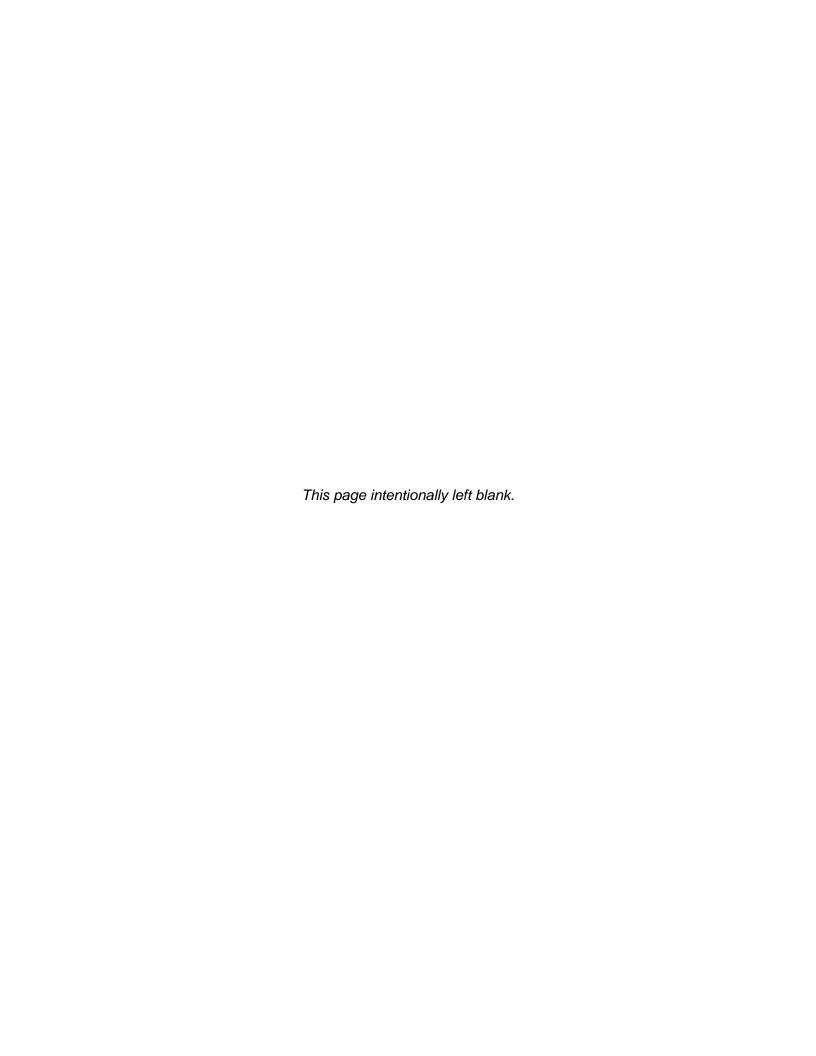
## Table G-5. Survey Dates, Types, Weather, and Personnel Acari Ditch Bridge (#56C0108)

Dates	Survey Type	Weather Conditions	Personnel	
	2017			
4/10/2017	Burrowing Owl Habitat Assessment and Focused Survey #1	Time 0615–0700, Temperature 49°F, Wind 5 mph, Cloud Cover 1%	Kolby Olson and Camilla Estes	
5/03/2017	Desert Tortoise Focused Survey	Time 0800-1510, Temperature 79-86°F, Wind 1-15 mph, Cloud Cover 0%	Ryan Layden and Camilla Estes	
5/11/2017	Burrowing Owl Focused Survey #2	Time 1730–1830, Temperature 81–84°, Wind 3–6 mph, Cloud Cover 10%	Will Kohn and Ryan Layden	
5/12/2017	Rare Plant Survey (Spring)	N/A	Shawn Johnston and Lance Wooley	
6/01/2017	Burrowing Owl Focused Survey #3	Time 1902–1958, Temperature 90°F, Wind 3–7 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
6/27/2017	Bat Habitat Assessment	N/A	Marisa Flores and Shannon Crossen	
6/28/2017	Burrowing Owl Focused Survey #4	Time 0745–0845, Temperature 89°F, Wind 0–5 mph, Cloud Cover 0%	Ryan Layden and Danny Cuellar	
7/18/2017	Bat Emergence Survey	N/A	Will Kohn and Will Shtanke	
7/21/2017	Rare Plant Survey #2 (Summer)	N/A	Shawn Johnston and Lance Wooley	
10/20/2017	Rare Plant Survey #3 (Fall)	N/A	Shawn Johnston and Lance Wooley	
		2019		

2/27/2019	Jurisdictional Delineation	N/A	Paul Schwartz and Kristen Klinefelter
4/16/2019	Desert Tortoise Focused Survey	Time 0815-1345, Temperature 68-75°F, Wind 0-3 mph, Cloud Cover 90%	James Hickman and Frances Lin
4/29/2019	Habitat Assessment & Rare Plant Survey (Spring)	N/A	Shawn Johnston



APPENDIX H: SITE PHOTOS FOR THE CHUCKWALLA VALLEY ROAD BRIDGES (#56C0102, #56C0103, #56C0104, AND #56C0108)



# Appendix H. Site Photographs for the Chuckwalla Valley Road Bridges (#56C0102, #56C0103, #56C0104, and #56C0108)



**Photo 1.** View southwest of Aztec Ditch Bridge (#56C0102) and the desert wash.



**Photo 2.** View of the timber bridge at Aztec Ditch.



**Photo 3.** View of Chuckwalla Valley Road at Aztec Ditch Bridge (#56C0102).



**Photo 4.** View north from Aztec Ditch Bridge (#56C0102) and the desert wash.



**Photo 5**. View southwest of Tarantula Ditch Bridge #56C0103) and the desert wash under the existing timber bridge.



**Photo 6.** View of existing bridge footings at Tarantula Ditch Bridge (#56C0103).



Photo 7. View of Sutro Ditch Bridge (#56C0104).



**Photo 8**. View of Chuckwalla Valley Road adjacent to Sutro Ditch Bridge (#56C0104).



**Photo 9.** View downstream of the Acari Ditch Bridge (#56C0108).



**Photo 10.** View of creosote bush scrub habitat, Acari Ditch Bridge (#56C0108) facing northeast.



**Photo 11.** View of vegetated portions of the desert wash from Acari Ditch Bridge (#56C0108). Diversion dikes are present in along the banks of the wash. Facing west.



**Photo 12.** View north from Sutro Ditch Bridge (#56C0104) of the creosote bush scrub habitat.