# APPENDIX F-I.5

Las Vegas Wash

# Huffman-Broadway Group, Inc.

Environmental Consultants



# Investigation of the Presence of Wetlands and Other Waters of the United States DesertXpress Project HUC 8 Las Vegas Watershed Clark County, Nevada



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**Prepared for** 

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By

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# **1.0 INTRODUCTION**

#### 1.1 Project Purpose and Scope of Work

DesertXpress Enterprises, LLC (DXE) is proposing to construct and operate a dedicated two-tracked high speed passenger railway and associated operations and maintenance facilities between Victorville, California, and Las Vegas, Nevada (DesertXpress Project; Exhibit A, Figure 1). A Draft Environmental Impact Statement was issued for the project in March of 2009 and the Final EIS is nearing completion. A Supplemental Draft EIS has been prepared and will be issued shortly to address certain modifications to the proposed alignment and station locations made by the Applicant, DXE, in response to various comments made on the Draft. The U.S. Department of Transportation, Federal Railroad Administration (FRA) is the lead agency responsible for preparing the project Environmental Impact Statement (EIS).

In preparation for the permit phase of the project, DXE has retained Huffman-Broadway Group, Inc. (HBG) to investigate the presence of wetlands and other waters potentially subject to Corps and EPA regulation under Section 404 of the Clean Water Act (CWA) along the DesertXpress Project's preferred and alternative alignments and study areas for the stations and ancillary facilities.

For the purpose of the jurisdictional delineation study, the proposed DesertXpress Project has been divided into six areas using the USGS HUC 8<sup>-1</sup> level of watershed classification. The scope of this report is to evaluate the presence or absence of wetlands and waters potentially subject to Corps CWA jurisdiction within the proposed DesertXpress Project alignments and facilities located within HUC 8 Las Vegas Wash Watershed (Exhibit A, Figure 2).

This study was conducted in accordance with *Code of Federal Regulations* (CFR) definitions of jurisdictional waters, the Corps' 1987 *Wetlands Delineation Manual*, the Corps' 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, and supporting guidance documents. The remaining portions of Section 1.0 provide project contact information, describe the location of the Study Area and provide technical details regarding the general environmental conditions found within the Study Area, including relevant technical information from the Draft EIS regarding water resource data and biological and cultural resource information. Section 2.0 provides regulatory background information and details regarding the technical criteria and types of field indicators evaluated for during the study. Section 3.0 provides a description of the methods used during this investigation. Section 4.0 provides a description of technical findings and Section 5.0

<sup>&</sup>lt;sup>1</sup> HUC = U.S. Geological Survey (USGS) Hydrologic Unit Code. The Hydrologic Unit system is a standardized watershed classification system developed by USGS in the mid 1970s. Hydrologic units are watershed boundaries organized in a nested hierarchy by size. They range in size from national regions, to the smaller cataloging units (HUCs), which are roughly equivalent to local watershed.

describes the types of areas found that potentially may be subject to Corps CWA jurisdiction. Section 6.0 is a Clean Water Act jurisdictional analysis using the Rapanos Guidance.

HBG is seeking, on behalf of DXE, a <u>Preliminary Jurisdictional Determination</u> pursuant to applicable Corps guidance documents.

### **1.2 Contact Information**

Project Owner Contact	Applicant's Agent & Wetland Regulatory Scientist	
<b>DesertXpress Enterprises, LLC</b> 6750 Via Austi Parkway Suite 250 Las Vegas, NV 89119	Huffman-Broadway Group, Inc 828 Mission Avenue San Rafael, California 94901	
<u>Contact</u> : Tom Stone (702) 491-8940 <u>tstone@transmaxgroup.com</u>	<u>Contact</u> : Terry Huffman, Ph.D. (415) 925-2000 <u>thuffman@h-bgroup.com</u>	

#### 1.3 Study Area

The Study Area for this investigation is defined as the area where potential ground disturbing components of the proposed project would occur based on the alternatives identified and analyzed in conjunction with the EIS and Supplemental EIS prepared for the DesertXpress Project. The Study Area encompasses the portion of the proposed DesertXpress Project alignment alternatives and facilities located within the HUC-8 Las Vegas Wash Watershed (15010015) from the town of Sloan, Nevada, to the Las Vegas terminal station, a distance of approximately 17.5 miles. The terminal will be designed to interface with extensions of the Las Vegas Monorail<sup>TM</sup>, with shuttles serving the resorts and the central business district (Exhibit A, Figure 3).

### 1.4 Environmental Setting

The Study Area encompasses those portions of the proposed DesertXpress Project alignments and facilities referred to in the Draft EIS as Segments 6 and 7 (together with a minor portion of Segment 5 Alternative 3B in the Town of Sloan HUC-12 watershed). The final alignment and facilities in Las Vegas have not been determined, but at the present time, Segment 6 will include the Interstate I-15 corridor from Sloan north to a central Las Vegas location. Segment 7 routing will likely depend on the selected location of the terminal station.

HUC-12 watersheds in the Las Vegas Wash Watershed through which the proposed alignment alternatives and facilities passes are:

- Town of Sloan
- Town of Arden
- Duck Creek
- Tropicana Wash
- City of Las Vegas-Las Vegas Wash

Named drainages crossed by the project include Duck Creek, Tropicana Wash, and Flamingo Wash. These drainages flow east into Las Vegas Wash and ultimately to the Colorado River via Lake Mead.

#### 1.4.1 Topography

The Study Area is within the Basin and Range Geomorphic Province. The region is characterized by mountain ranges and hills of moderate relief that are partially buried and separated by broad alluviated basins. The Basin and Range province includes a large part of the southwestern United States. Elongate mountain ranges are separated by broad, nearly flat valleys.

The proposed alignments and facilities in the Las Vegas Wash Watershed extend across alleviated areas in the Las Vegas Valley. From an elevation of approximately 2,700 feet msl in Sloan, Nevada, south of Las Vegas, the alignment alternatives descend to an approximate elevation of 2,000 feet msl in the Las Vegas Valley at the proposed terminal locations.

#### 1.4.2 Land Use

Most of this section of the DesertXpress Project alignment and facilities fall within the I-15 transportation corridor. BLM manages lands south of Las Vegas; land in the city is in private ownership. Between the start of Segment 6 near Sloan Road and the Las Vegas passenger station, the Segment 6 alignment alternatives and facilities would traverse a spectrum of existing land uses. Near Sloan Road, the sparsely developed character of the Ivanpah Valley includes industrial uses near the freeway. North of St. Rose Parkway, the industrial uses give way to the outer fringes of metropolitan Las Vegas. Clusters of new single and multi family residential developments and several hotel/casinos are located near the freeway. Residences in this area are within 70 feet of the proposed alignment.

North of Blue Diamond Road (State Route 160), land uses change; industrial uses are located to the west of the freeway while east of the freeway is undeveloped. After crossing I-215, the land uses fully reflect the intensive urban development of Las Vegas. Hotel/casino and commercial land uses are located on either side of the freeway. McCarran International Airport is located approximately a half mile to the east.

#### 1.4.3 Geology and Soils

A limestone formation (Mmc, Mm) mantled by younger alluvium underlies the southern end of the Las Vegas Wash Watershed area. The majority of the area is underlain by alluvial deposits, including younger Holocene wash sediments and alluvial fan deposits (Qa, Qal, Qs), older Holocene/Pleistocene alluvial fan deposits (Qai, Qoa) that are moderately to well consolidated to cemented in places, and older Pliocene consolidated sediments (QTs) that are moderately to well consolidated to strongly cemented.

Younger Holocene alluvial wash and fan deposits (Qa) in this area may be cemented in places by petrocalcic carbonate. Older Pleistocene alluvium (Qoa) may contain a petrocalcic carbonate horizon approximately 6 feet thick near the surface. Older Plio-Pleistocene consolidated sediments in this area have moderately to well consolidated to strongly cemented layers of petrocalcic carbonate; surface exposures are capped in places by a resistant petrocalcic crust.

Geologic Unit (Symbol[s])	Geologic Age	Description - Soils
Younger alluvial deposits (Qa, Qal, Qs)	Holocene	Active wash, alluvial fan and sheet wash deposits of gravel, sand, and minor silt; unconsolidated to locally calcic-cemented.
Intermediate alluvial deposits (Qai)	Holocene- Pleistocene	Deposits of sand and gravel on relict, inactive alluvial fans; slightly to moderately consolidated.
Older alluvial deposits (Qoa)	Pleistocene	Pebble and small cobble gravel with pebbly sand; moderately to well consolidated to locally cemented; caliche horizon approx. 6 feet thick occurs at or near surface.
Consolidated sediments (Qts)	Pliocene to Pleistocene	Fine sand interbedded with silt, pebbly sand, and gravel; moderately to well consolidated to strongly cemented. Common caliche layers and resistant caliche surface crust.
Marine sedimentary and meta-sedimentary rocks (Mmc, Mm)	Mesozoic to Paleozoic (Carboniferous)	Monte Cristo limestone (Mm).

The following table provides a description of soils associated with each geologic unit described above.

Source: Ninyo & Moore, 2007.

The general geology of the Las Vegas Valley is described in a recent USGS publication<sup>2</sup>:

Las Vegas Valley is located in southern Nevada and lies within both the Great Basin and Mojave Desert sections of the Basin and Range physiographic province. The arid, northwest-trending valley is bounded on the west by several mountain ranges and drains a 1,564-square-mile watershed southeastward through Las Vegas Wash into Lake Mead.

Las Vegas Valley is a sediment-filled structural trough that has formed over many millions of years through compression, extension, and faulting of the original flat-lying marine sediments that form the bedrock. Some

<sup>2</sup> Pavelko, M. T., D. B. Wood, and R. J. Laczniak (U.S. Geological Survey, Las Vegas, Nevada). Las Vegas, Nevada: Gambling with water in the desert. Online at: http://pubs.usgs.gov/circ/circ1182/pdf/08LasVegas.pdf

bedrock blocks were down-dropped between the faults along the eastern and western margins of the present-day valley. Sediment eroded by wind and water from the surrounding bedrock highlands began filling the trough with gravel, sand, silt, and clay.

During some of the wetter periods in the past 1 million years or so, extensive playa lakes and spring-fed marshes covered the lower parts of the valley floor, depositing variably thick sequences of fine-grained sediment (citation). Coarse-grained sand and gravel tend to rim the valley, forming alluvial fans and terraces, especially in the northern, western, and southern parts. The deposits generally thicken and become finer-textured toward the central and eastern part of the valley, where their total thickness exceeds 5,000 feet (citation).

#### 1.4.4 Biological Resources

Segment 6 would extend from the Sloan area and descend into the south end of the Las Vegas Valley through creosote bush scrub habitat. Once in Las Vegas, the segment crosses through disturbed creosote bush scrub habitat, rural developments, and urban areas. Segment 7 would be located in an urban environment (Las Vegas) with little to no habitat for sensitive species. These habitats are summarized in the following table:

Vegetation Community Type	Sensitive Community	Associated Species	Description
Creosote Bush Shrubland	No	A group of alliances: creosote bush may be the only shrub, other alliances are characterized by shared dominance with white bursage and/or brittlebush; also desert holly, saltbush species, and many other shrubs may be present in low densities	Various substrates and settings, including: sandy substrates, alluvial fans, bajadas; may occur on disturbed sites; 0-1,700 meters
Barren (Disturbed, graded)	No	May have sparse growth of mostly non-native species, especially invasive annual grasses	Various substrates and settings
Rural development	No	N/A	Usually flat to gently sloping sites, valley floors
Urban	No	N/A	Usually flat to gently sloping sites, valley floors

In the table below, sensitive species listed by US Fish and Wildlife Service and the State of Nevada are identified:

Biological Resource	Status Federal/State	Description	Potential for Occurrence in Segments 6 and 7
Sensitive Plant	Communities & Wet	lands	
Sensitive plant communities		None present in segments	No
Special-Status I	Plant Species		
Las Vegas catseye	/SS	No Nevada Natural Heritage Program occurrences in vicinity of project study area.	No
Special-Status V	Wildlife Species		
Desert tortoise	T/T	No Nevada Natural Heritage Program occurrences in vicinity of project study area. Suitable habitat occurs in relatively undisturbed habitat outside of urban areas.	Yes
American peregrine falcon	/P	No Nevada Natural Heritage Program occurrences in vicinity of project study area.	Yes

#### 1.4.5 Climate

Climate in the Las Vegas Valley is described by Pavelco et al.<sup>3</sup>

More than 24 inches of precipitation fall annually in the Spring Mountains bounding the [Las Vegas] valley to the west, but less than 4 inches of rain fall annually on the valley floor; measurable amounts (greater than 0.01 inch) seldom occur more than 30 days each year. Temperatures range from below freezing in the mountains to more than 120° F on the valley floor. There are typically more than 125 days of 90° F or warmer temperatures each year in Las Vegas Valley.

#### 1.4.6 Hydrology

#### Water Resources

The DesertXpress Project proposed alignments cross named and unnamed ephemeral drainages that generally flow east into the Las Vegas Wash and ultimately into the Colorado River via Lake Mead, a reservoir of the river. Named drainages crossed by the alignments include Duck Creek, Tropicana Wash, and Flamingo Wash. The drainages are ephemeral west of the Las Vegas metropolitan area but become perennial (from urban "nuisance" flow) as they flow eastward and terminate at the Las Vegas Wash. Flamingo Wash has been channelized and routed underground through a series of culverts. There is no surface expression of the Wash within the project alignments.

#### Groundwater Resources

Segment 6 and Segment 7 are located in the Las Vegas Groundwater Basin (Nevada Basin Number 212) (DCNR, 2007). The Las Vegas Groundwater Basin is estimated to be 1,000,960 acres (DCNR, 2007).

Pavelka et al.<sup>4</sup>describe groundwater resources in the Las Vegas area:

The accelerating demand for water to support the rapid growth of the municipal-industrial sector in this desert region is being met with imported Colorado River System supplies and local ground water. The depletion of once-plentiful groundwater supplies is contributing to land subsidence and ground failures. Since 1935, compaction of the aquifer system has caused nearly 6 feet of subsidence and led to the formation of numerous earth fissures and the reactivation of several surface faults, creating hazards and potentially harmful impacts to the environment. . . .

Ground water is generally pumped from the upper 2,000 feet of unconsolidated sediments that constitute the aquifer system in the central part of the valley. The deeper aquifers, generally below 300 feet, are capable of transmitting significant quantities of ground water, and have been referred to variously as the "principal," "artesian," or "developedzone" aquifers (citations). In places, these principal aquifers are more than 1,000 feet thick and consist mainly of sands and gravels beneath the terraces along the margins of the valley. In the central and eastern parts, clays and silts predominate (citation). Overlying the principal aquifers, in most places, is a 100-to-300 foot-thick section of extensive clay, sand, and gravel deposits known as the "near-surface reservoir." The principal aquifers and the near-surface reservoir are separated by a variably-thick, laterally discontinuous aquitard, or confining unit. . . .

Much of the ground water found in the aquifer system originates as rain or snow falling on the Spring Mountains to the west or on the Sheep and Las Vegas Ranges to the northwest. Some of the precipitation infiltrates into the underlying bedrock through faults and fractures, eventually moving into the deposits comprising the principal aquifers. The remainder of the precipitation runs off onto the sloping alluvial terraces and rapidly enters the sand and gravel deposits, where it either recharges the underlying principal aquifers or is evaporated or transpired into the atmosphere.

#### FEMA Floodplains

The DEIS for the DesertXpress Project identifies several 100-year floodplains in the vicinity of the alignment in the I-15 transportation corridor:

- Floodplain along an unnamed wash between West Cactus Avenue and East Silverado Ranch Boulevard. This wash becomes the Duck Creek drainage.
- Tropicana Wash 100-year floodplain between I-15 and the UPRR tracks extends west of I-15 and south of East Tropicana Avenue, and along the railway tracks east of Wynn Road and north of West Oquendo Road. The flood plain is not mapped beyond Linwood Road south.
- Floodplain that extends south of West Flamingo Road, west of South Las Vegas Boulevard, north of West Tropicana Avenue, and east of I-15. The Clark County Regional Flood Control District has constructed and proposed new conveyances within this area that have also significantly reduced the area of the 100-year floodplain. *1.5 Disclaimer*

Huffman-Broadway Group, Inc. have conducted a thorough historic review and site investigation and made a good-faith effort herein to thoroughly describe and document the presence of potential factors that the Corps may consider in determining jurisdiction under their CWA jurisdiction as part of the Corps jurisdictional verification / determination process, however, DXE reserves the right to challenge or seek revision to any areas over which the Corps may assert jurisdiction.

# 2.0 REGULATORY FRAMEWORK

#### 2.1 Definition of Wetlands and Other Waters of the U.S.

Section 404 of the Federal Clean Water Act authorizes the Corps to regulate activities that discharge dredged or fill material to wetlands and other waters of the United States. As described by EPA's and the Corps' regulations (40 CFR § 230.3(s) and 33 CFR § 328.3(a), respectively), the term "waters of the United States" encompasses the following resources:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
  - (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
  - (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - (iii) Which are used or could be used for industrial purpose by industries in interstate commerce
- (4) All impoundments of waters otherwise defined as waters of the United States under the definition;
- (5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- (6) The territorial seas;
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section.

#### EPA and the Corps define wetlands as:

...those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. (EPA regulations at 40 CFR § 230.3(t); Corps regulations at 33 CFR § 328.3(b)).

#### 2.2 Limits of Jurisdiction

The following provides the regulatory definitions and criteria followed in determining the geographic extent of potential EPA/Corps jurisdiction as applicable to inland waters.

The geographic limits of relevant federal jurisdiction for non-tidal waters of the U.S. are defined as follows at 33 CFR § 328.4(c):

*Non-Tidal Waters of the United States*: The limits of jurisdiction in non-tidal waters:

- (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark.
- (2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
- (3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

The terms "adjacent" and "ordinary high water mark," used in the above definition, are defined at 33 CFR § 328.3 as follows:

The term *adjacent* means bordering, contiguous, or neighboring. Wetlands separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent wetlands." (33 CFR § 328.3(c))

The term *ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. (33 CFR § 328.3(e))

A site must meet certain water, soil, and vegetation criteria to qualify as a jurisdictional wetland. The Corps' 1987 *Wetlands Delineation Manual* and various regional supplements describe these criteria and the methods used to determine whether they are met and the geographic extent of wetland areas identified in the field.

## 2.3 Identification of Ordinary High Water Marks (OHWM)

The Corps definition of Ordinary High Water Mark (OHWM) provides the criterion by which the OHWM line can be identified which consists of "*that line on the shore established by fluctuations of water and indirect physical characteristics*" (33 CFR § 328.3(e)). The Corps has developed a delineation manual for the identification of OHWMs within the Arid West Region, entitled *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual* (Lichvar and McColley 2008). Tables 1a and 1b, below provide a summarized listing from the manual of indicators associated with areas that become flood or ponded, but are not dominated by wetland vegetation and the duration of

flooding, ponding and/or near surface soil saturation ( $\leq 12$  inches) is not sufficient to cause hydric soils to form or wetland hydrology conditions to occur.

Table 1a. Potential Geomorphic Indicators of Ordinary High Water Marksfor the Arid West *			
	Potential Geomorphic OHWM Indicators		
(A) Below OHW	(B) At OHW	(C) Above OHW	
<ol> <li>In-stream dunes</li> <li>Crested ripples</li> <li>Flaser bedding</li> <li>Harrow marks</li> <li>Gravel sheets to rippled sands</li> <li>Meander bars</li> <li>Sand tongues</li> <li>Muddy point bars</li> <li>Long gravel bars</li> <li>Cobble bars behind obstructions</li> <li>Scour holes downstream of obstructions</li> <li>Stepped-bed morphology in gravel</li> <li>Narrow berms and levees</li> <li>Streaming lineations</li> <li>Dessication / mud cracks</li> <li>Armored mud balls</li> <li>Knick Points</li> </ol>	<ol> <li>Valley flat</li> <li>Active floodplain</li> <li>Benches: low, mid, most prominent</li> <li>Highest surface of channel bars</li> <li>Top of point bars</li> <li>Break in bank slope</li> <li>Upper limit of sand-sized particles</li> <li>Change in particle size distribution</li> <li>Staining of rocks</li> <li>Exposed root hairs below intact soil layer</li> <li>Silt deposits</li> <li>Litter (organic debris, small twigs and leaves)</li> <li>Drift (organic debris, larger than twigs)</li> </ol>	<ol> <li>Desert pavement</li> <li>Rock varnish</li> <li>Clast weathering</li> <li>Salt splitting</li> <li>Carbonate etching</li> <li>Depositional topography</li> <li>Caliche rubble</li> <li>Soil development</li> <li>Surface color/tone</li> <li>Drainage development</li> <li>Surface relief</li> <li>Surface rounding</li> </ol>	

\* Adapted from A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual (Lichvar and McColley 2008).

Table 1b. Potential Vegetation Indicators of Ordinary High Water Marksfor the Arid West *				
	Potential Vegetat	tion OHWM Indicators		
	(D) Below OHW (E) At OHW (F) Above O		(F) Above OHW	
Hydroriparian indicators	<ol> <li>Herbaceous marsh species</li> <li>Pioneer tree seedlings</li> <li>Sparse, low vegetation</li> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> </ol>	<ol> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> <li>Pioneer tree seedlings</li> <li>Pioneer tree saplings</li> </ol>	<ol> <li>Annual herbs, xeric ruderals</li> <li>Perennial herbs, non-clonal</li> <li>Perennial herbs, clonal and non-clonal co-dominant</li> <li>Mature pioneer trees, no young trees</li> <li>Mature pioneer trees w/upland species</li> <li>Late-successional species</li> </ol>	
Mesoriparian indicators	<ol> <li>Pioneer tree seedlings</li> <li>Sparse, low vegetation</li> <li>Pioneer tree saplings</li> <li>Xeroriparian species</li> </ol>	<ol> <li>Sparse, low vegetation Annual herbs, hydromesic</li> <li>ruderals</li> <li>Perennial herbs, hydromesic clonals</li> <li>Pioneer tree seedlings</li> <li>Pioneer tree saplings</li> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> </ol>	<ol> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> <li>Perennial herbs, non-clonal</li> <li>Perennial herbs, clonal and non-clonal codominent</li> <li>Mature pioneer trees, no young trees</li> <li>Mature pioneer trees, xeric understory</li> <li>Mature pioneer trees w/upland species</li> <li>Late-successional species</li> <li>Upland species</li> </ol>	
Xeroriparian indicators	<ol> <li>Sparse, low vegetation</li> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> </ol>	<ol> <li>Sparse, low vegetation</li> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> </ol>	<ol> <li>Annual herbs, xeric ruderals</li> <li>Mature pioneer trees w/upland species</li> <li>Upland species</li> </ol>	

\* Adapted from A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual (Lichvar and McColley 2008).

#### 2.4 Wetlands Delineation Criteria

The Corps' 1987 *Wetlands Delineation Manual* identifies the key diagnostic criteria for determining the presence of wetlands. These include:

- 1. Wetland Hydrology: Inundation or saturation to the surface during the growing season.
- 2. Hydric Soils: Soils classified as hydric or that possess characteristics associated with reducing soil conditions.
- 3. Predominance of Wetland Vegetation: Vegetation classified as facultative, facultative wet, or obligate according to its tolerance of saturated (i.e., anaerobic) soil conditions.

Specific criteria used to determine the presence or absence of wetland hydrology, soil, and vegetation conditions are described in the sections below.

### 2.4.1 Wetland Hydrology

The 1987 Corps *Manual* states that wetland hydrology conditions occur when a "site is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation." Whether a site meets either of these criteria is determined by the presence of diagnostic indicators of wetland hydrology, which include those listed in Table 2.

Table 2. Wetland Hydrology Indicators           (Based on 1987 Corps Manual and Corps Guidance Documents)		
Primary Indicators Secondary Indicators		
Watermarks	Oxidized Rhizospheres Associated with Living Roots	
Drift Lines	Water-Stained Leaves	
Water-Borne Sediment Deposits	FAC-Neutral Test	
Drainage Patterns Within Wetlands	Local Soil Survey Data	

A March 8, 1992 Corps memorandum entitled *Clarification and Interpretation of the 1987 Manual* provides further clarification:

Areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas wet between 5 percent and 12.5 percent of the growing season in most years may or may not be wetlands. Sites saturated to the surface for less than 5 percent of the growing season are non-wetlands.

Wetland hydrology indicators have also been further defined and described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Corps 2008). These indicators are similar to the indicators listed above from the 1987 Corps *Manual* and are presented in Table 3.

Table 3. Wetland Hydrology Indicators for the Arid West           (Based on Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West           Region, Version 2.0)			
	<b>Primary Indicators</b> (any one indicator is sufficient to make a determination that wetland hydrology is present)	<b>Secondary Indicators</b> (two or more indicators are required to make a determination that wetland hydrology is present)	
G	roup A – Observation of Surface Water	r or Saturated Soils	
A1* – Surface Water	X		
A2 – High Water Table	X		
A3 – Saturation	X		
	Group B – Evidence of Recent I	nundation	
B1 – Water Marks	X (Nonriverine)	X (Riverine)	
B2 – Sediment Deposits	X (Nonriverine)	X (Riverine)	
B3 – Drift Deposits	X (Nonriverine)	X (Riverine)	
B6 – Surface Soil Cracks	Х		
B7 – Inundation Visible on Aerial Imagery	X		
B9 –Water-Stained Leaves	X		
B10 – Drainage		Х	
B11 – Salt Crust	Х		
B12 – Biotic Crust	X		
B13 – Aquatic Invertebrates	X		
	Group C – Evidence of Current or Rece	ent Soil Saturation	
C1 – Hydrogen Sulfide Odor	X		
C2 – Dry-Season Water Table		X	
C3 – Oxidized Rhizospheres along Living Roots	X		
C4 – Presence of Reduced Iron	X		
C6 – Recent Iron Reduction in Tilled Soils	X		
C7 – Thin Muck Surface	X		
C8 – Crayfish Burrows		X	

Table 3. Wetland Hydrology Indicators for the Arid West           (Based on Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West           Region, Version 2.0)				
	<b>Primary Indicators</b> (any one indicator is sufficient to make a determination that wetland hydrology is present)	<b>Secondary Indicators</b> (two or more indicators are required to make a determination that wetland hydrology is present)		
C9 – Saturation Visible on Aerial Imagery		X		
(	Group D – Evidence from Other Site Conditions or Data			
D3 – Shallow Aquitard		X		
D5 – FAC-Neutral Test		X		
* Denotes number of wetland hydrology indicator described in detail in the <i>Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).</i>				

### 2.4.2 Hydric Soils

The 1987 Corps *Manual* states that the diagnostic environmental characteristics indicative of wetland soil conditions are met when "soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions." According to the Manual, indicators of soils developed under reducing conditions may include:

- 1. Organic soils (Histosols);
- 2. Histic epipedons;
- 3. Sulfidic material;
- 4. Aquic or peraquic moisture regime;
- 5. Reducing soil conditions;
- 6. Soil colors (chroma of 2 or less);
- 7. Soil appearing on hydric soils list; and
- 8. Iron and manganese concretions.

A February 20, 1992, Corps memorandum entitled *Regional Interpretation of the 1987 Manual* states that the most recent version of National Technical Committee for Hydric Soils (NTCHS) hydric soil criteria will be used (to make hydric soil determinations). These soil criteria specify at least 15 consecutive days of saturation or 7 days of inundation (flooding or ponding) during the growing season in most years.

The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. Also, soils in which the hydrology has been artificially modified are hydric if the soil, in an unaltered state, was hydric. Some series, designated as hydric, have phases that are not hydric depending on water table, flooding, and ponding characteristics. As indicated above, like the NRCS, the Corps has typically accepted guidance for the identification of hydric soils developed by the National Technical Committee for Hydric Soils (NTCHS). The

NTCHS, a working group organized by NRCS, has developed criteria for identifying and mapping hydric soils throughout the United States and defines a hydric soil as "a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part [of the soil profile]" (http://soils.usda.gov/use/hydric/intro.html). The most recent (2000) version of the NTCHS hydric soils criteria identifies those soils that are likely to meet this definition. These criteria, which are accepted by most state and federal agencies, are as follows (http://soils.usda.gov/use/hydric/criteria.html):

- 1. All Histels except Folistels and Histosols except Folists, or
- 2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Andic, Vitrandic, and Pachic subgroups, or Cumulic subgroups that are:
  - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and have either:
    - (i.) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils,
    - (ii.) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
    - (iii.) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
- 3. Soils that are frequently ponded for a long duration or a very long duration (7 to 30 days) during the growing season, or
- 4. Soils that are frequently flooded for a long duration or a very long duration (7 to 30 days) during the growing season.

On the basis of computer database searches for soils meeting the second criterion, NRCS has developed hydric soils lists for many parts of the country. Although they are useful for determining whether a particular soil series <u>has the potential to support current hydric</u> <u>soil conditions</u>, caution should be used when using these lists for site-specific hydric soil determinations. Many soils on the lists have ranges in water table depths and other characteristics that allow them to be either hydric or nonhydric depending on landscape position and other site-specific factors (e.g., soil clay content, depth to bedrock). Accordingly, hydric soils lists are good ancillary tools to facilitate wetland determinations, but are not a substitute for onsite investigations.

Field indicators of hydric soils are morphological properties known to be associated with soils that meet the definition of a hydric soil. Presence of one or more field indicators suggests that processes associated with hydric soil formation have taken place on the site being observed. The field indicators are essential for hydric soil identification because

once formed, they persist in the soil during both wet and dry seasonal periods. However, few hydric soil indicators identify soils at a site as being currently hydric in accordance with the NTCHS hydric soils criteria described above. Field indicators of hydric soil conditions are listed in Table 4:

	Table 4. Field Indicators of Hydric Soil Conditions(Based on 1987 Corps Manual and Corps Guidance Documents)				
1. Indicators of Historical Hydric Soil Conditions:		2. Indicators of Current Hydric Soil Conditions:			
a. b. c. d. e. f. g.	Histosols Histic epipedons; Soil colors (e.g., gleyed or low-chroma colors, soils with bright mottles (Redoximorphic features) and/or depleted soil matrix High organic content in surface of sandy soils Organic streaking in sandy soils Iron and manganese concretions Soil listed on county hydric soils list	<ul> <li>a. Aquic or peraquic moisture regime (inundation and/or soil saturation for ≥7 continuous days)</li> <li>b. Reducing soil conditions (inundation and/or soil saturation for ≥ 7 continuous days)</li> <li>c. Sulfidic material (rotten egg smell)</li> </ul>			

The presence of one or more of the field indicators in "1 a, b, c, and/or d" above suggests that historical processes associated with hydric soil development have taken place at a given site. These indicators are useful in determining if soils at a site were historically formed under hydric soil conditions because the indicators persist in soils during both wet and dry periods and may remain for decades and even centuries after changes in site conditions occur that inhibit subsequent wetland development, such as the elimination of wetland hydrology (NRCS 1995). However, only the presence of field indicators "2 a, b, and/or c" confirms that hydric soils occur at a site during the period of observation.

Hydric soil indicators have also been further defined and described in the *Regional* Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Corps 2008). These indicators are similar to those listed above from the 1987 Corps Manual and are presented below in Table 5.

	Hydric Soil Indicators		
All Soils	Sandy Soils	Loamy & Clayey Soils	for Problem Soils**
A1* – Histosol	S1 – Sandy Mucky Mineral	F1 – Loamy Mucky Mineral	A9 – 1 cm Muck
A2 – Histic Epipedon	S4 – Sandy Gleyed Matrix	F2 – Loamy Gleyed Matrix	A10 – 2 cm Muck
A3 – Black Histic	S5 – Sandy Redox	F3 – Depleted Matrix	F18 – Reduced Vertic
A4 – Hydrogen Sulfide	S6 – Stripped Matrix	F6 – Redox Dark Surface	TF2 – Red Parent Material
A5 – Stratified Layers		F7 – Depleted Dark Surface	Other (See Section 5 of the Regional Supplement Version 2.0)
A9 – 1 cm Muck		F8 – Redox Depressions	
A11 – Depleted Below Dark Surface		F9 – Vernal Pools	
A12 – Thick Dark Surface			

\* Denotes number of hydric soil indicator described in detail in *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).* 

\*\* Indicators of hydrophytic vegetation and wetland hydrology must be present.

It should also be noted for problematic areas that the 2008 Corps Regional Supplement specifies 14 days continuous ponding as an acceptable indicator of problematic hydric soils (USACE 2008, p. 101).

#### 2.4.3 Prevalence of Wetland Vegetation

#### Species Classifications

Species classifications (e.g., tolerance of anaerobic soil conditions) are determined by consulting the *National List of Plant Species that Occur in Wetlands* (Reed 1988) and the relevant regional lists, which are published by FWS' National Wetlands Inventory (NWI). Regional Interagency Review Panels develop the lists by determining species' estimated probability of occurrence in wetlands vs. non-wetlands. Classifications are made by unanimous agreement of the Panel. If the Panel is unable to reach a unanimous decision on the status of a species, "no agreement" (NA) is recorded. If insufficient information exists to determine the status of a species, "no indicator" (NI) is recorded. Species that are not included in the NWI list are assigned a "not listed" (NL) designation in this report.

The resulting NWI lists include plants that grow in a range of soil conditions from permanently wet to dry. Species are divided into the following "indicator categories":

- 1. **"Obligate wetland" (OBL)** species, which, under natural conditions, occur almost always in wetlands (estimated probability >99 percent);
- "Facultative wetland" (FACW) species, which usually occur in wetlands (estimated probability 67 – 99 percent), but are occasionally found in nonwetlands;
- 3. **"Facultative" (FAC)** species, which are equally likely to occur in wetlands or non-wetlands (estimated probability 34 66 percent);
- 4. **"Facultative upland" (FACU)** species, which sometimes occur in wetlands (estimated probability 1 33 percent), but more often occur in non-wetlands; and
- 5. **"Obligate upland" (UPL)** species, which occur in wetlands in other regions, but, under natural conditions, occur almost always in non-wetlands in the region specified (estimated probability >99 percent).

Species that have an indicator status of OBL, FACW, and FAC are typically considered to be adapted for life in anaerobic soil conditions (Corps 1987) and are used as evidence of hydrophytic vegetation when they dominate plant community composition or cover. Despite widespread use of the lists for wetland delineations, it is important to note that wetland indicator species assignments are not based on the results of a statistical analysis of species occurrence. The indicator assignments are approximations of wetland affinity based on a synthesis of submitted review comments, published botanical literature, and the field experience of the members of the Interagency Review Panel. For this reason and because many plants have properties that enable them to occur in a range of microhabitats (i.e., wetlands and non-wetlands), the presence of wetland indicator species is not unequivocal evidence of the presence of wetland hydrology and hydric soils. A positive indicator or indicators of wetlands should be emphasized, such as an assemblage of plants that can only be considered "hydrophytes" when they are growing in water or partly drained hydric soils (not effectively drained hydric soils) (Corps 1987). From the FWS perspective, all species on the NWI plant lists are hydrophytes at one time or another and the wetland indicator status (OBL, FACW, FAC, or FACU) reflects the likelihood that a given individual of a species is a hydrophyte or a certain population of these plants is hydrophytic. While OBL and FACW species are the most reliable plant indicators of wetlands, FAC and FACU species also contain populations of hydrophytes (Tiner 2006).

For the reasons stated above, the 1987 Corps *Manual* does not solely rely on the presence of hydrophytic vegetation to make wetland determinations.

#### Hydrophytic Vegetation Definitions

The Corps' 1987 *Manual* states that the wetland vegetation conditions are met when the prevalent vegetation (i.e., more than 50 percent of vegetation cover or tree basal area) consists of macrophytes that are typically adapted to sites having wetland hydrologic and soil conditions (e.g., periodic or continuous inundation or soil saturation). Hydrophytic vegetation is defined as "plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content" (Cowardin *et al.* 

1979). Hydrophytic vegetative species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Positive indicators of the presence of hydrophytic vegetation include:

- 1. More than 50 percent of the dominant species are rated as Obligate ("OBL"), Facultative Wet ("FACW"), or Facultative ("FAC") on lists of plant species that occur in wetlands (see Reed 1988 for California);
- 2. Visual observations of plant species growing in sites of prolonged inundation or soil saturation; and
- 3. Reports in the technical literature indicating the prevalent vegetation is commonly found in saturated soils.

Hydrophytic vegetation indicators have been further defined and described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Corps 2008). These indicators include:

- 1. <u>Dominance Test</u>. More than 50 percent of the dominant plant species across all strata are rated OBL, FACW, or FAC.
- 2. <u>Prevalence Index</u>. The prevalence index is 3.0 or less with indicators of hydric soils and wetland hydrology being present.
- 3. <u>Morphological Adaptations</u>. The plant community passes either the dominance test or the prevalence index after reconsideration of the indicator status of certain plant species that exhibit morphological adaptations for life in wetlands.

# 3.0 DELINEATION METHOD

This study was conducted in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps' 1987 Wetlands Delineation Manual, the Corps' 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual, and supporting guidance documents. The following provides an overview of the objective of the delineation approach, how the Study Area is defined, and the methods used to identify and map (delineate) areas potentially subject to Corps jurisdiction under Section 404 of the CWA.

### 3.1 Objective and Establishment of Study Area Boundary

The objective of this investigation is to identify and map areas potentially meeting the Clean Water Act definition of wetlands and Other Waters of the United States within the potential impact footprint of the DesertXpress Project. This impact footprint, which is encompassed within the Study Area, includes the proposed alignment and any alternative alignment and support facilities such as passenger stations and operations and maintenance facilities (e.g., maintenance yard, power substations, and transmission lines). Temporary construction areas for equipment and materials laydown, new access roads, and borrow areas are also included within the Study Area. The boundary of the Study Area also represents a slightly larger area (increased alignment and facility ROW width by an average of 200 feet) to accommodate potential minor changes in the impact footprint.

### 3.2 Study Area Reconnaissance

Prior to initiating detailed field survey work, existing land forms within the Study Area that may potentially contain wetlands or other waters of the United States were identified by conducting vehicle and pedestrian on-site reconnaissance inspections during the month of April 2010 in conjunction with review of the following information:

- Aerial photography and satellite imagery of the area;
- USGS topographic mapping;
- NRCS soils mapping;
- Engineer scale topographic mapping of segment alternatives
- USGS National Hydrology Dataset; and
- Preliminary level vegetation mapping and wetland / OHWM data collection efforts conducted during February and March 2008 and September and October 2009 as part of an on-going Federal EIS process by the FRA's EIS contractor.

The above efforts led to the development, in coordination with Corps regulatory staff, and use of the project-specific methods described below.

#### 3.3 Wetlands Identification and Delineation

Field surveys designed to identify the presence or absence of field indicators of wetland

vegetation, soils and hydrology conditions were conducted within low-lying landscape features where wetlands could potentially occur. These field surveys were conducted during the months of April, May, and June 2010.

#### 3.3.1 Dominance of Wetland Vegetation

Presence or absence of a dominance of wetland vegetation / hydrophytes within the Study Area was evaluated using the methodology described in Sections 2.2 and 2.4.3. Indicator status of plants was confirmed by referring to the National List of Plant Species that Occur in Wetlands: 1988 National Summary (Reed). Plant cover data were collected for individual species associated within and immediately adjacent to the landscape features identified during the site reconnaissance survey as having the potential to meet the Corps' technical criteria for wetlands. Plant cover was visually estimated within 3-foot diameter plots at each soil sample location and was recorded on a Corps Wetland Determination Data Form - Arid West Region. Copies of completed data forms are provided in Exhibit B2. Subsequently, field data were analyzed to assess whether 50 percent or greater of the dominant species within the area sampled are hydrophytes. Sites that are depressional landforms that do not have a dominance of wetland vegetation forming at least 5 percent cover were not considered to be dominated by hydrophytes and were classified as a potential "other water of the United States" following the methodology described in Section 3.4, below, except if conditions for problematic vegetation were met as described in the Corps' 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).

### 3.3.2 Presence of Hydric Soil Indicators

The presence or absence of hydric soil field indicators was evaluated following the methodology described in Section 2.3.2 using the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Corps 2008). At each potential wetland sampling location within the Study Area, hand-dug soil pits were excavated to a minimum of 20 inches or until a limiting layer or standing water is reached. The presence or absence of hydric soil indicators found at each soil pit location was recorded on a Corps Wetland Determination Data Form – Arid West Region. Copies of completed data forms are provided in Exhibit B2. For sampling locations where the possibility of problematic hydric soils is found, procedures for the identification of problematic hydric soils as defined by the above described publication were followed.

### 3.3.3 Presence of Wetland Hydrology Indicators

The presence or absence of wetland hydrology field indicators were assessed following the methodology described in Section 2.3.1 using the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (Corps 2008). The presence or absence of wetland hydrology indicators at each soil pit location was recorded on a Corps Wetland Determination Data Form – Arid West Region. Copies of completed data forms are provided in Exhibit B2. For sampling locations where the possibility of problematic hydrology indicators was found, procedures for the identification of problematic hydrology indicators, as defined by the above-described publication, were followed.

#### 3.4 Identification and Delineation of Other Waters

Field surveys designed to identify the presence or absence of field indicators of an ordinary high water mark (OHWM) were conducted within low-lying landscape features where other waters of the United States could potentially occur. These field surveys were conducted during the months of April, May, and June 2010 after the detailed methodology was reviewed and approved by Corps staff during May 2010.

HBG identified drainages within each watershed that potentially met the Corps technical criteria for Other Waters of the United States (presence of field indicators of active surface water flow and associated Ordinary High Water Mark [OHWM]) using the following approach based on *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual.* 

Initial efforts involved identification of all drainages within the Study Area having the potential for active surface flow. This was accomplished through field reconnaissance and imagery interpretation. Detailed sampling was then conducted to identify and delineated active drainages with an OHWM. This was accomplished by randomly sampling the identified drainages in a stratified manner by geographically dividing the Study Area into HUC 12 watershed units.

Field sampling within each HUC 12 watershed consisted of gathering OHWM data, including the measured width of the OHWM, for 3 to 5 main drainages (> 3 feet), if present, selected at random; and 6 to 10 (depending on watershed size) random samples of minor drainages ( $\leq$  3 feet), if present. Each of the HCC 12 watersheds located within the Study Area was divided into approximate thirds. Then a minimum of one major drainage and two minor drainages, if present, was sampled within each third of a watershed. Where the length of the watershed along the project alignment alternatives was less than 5 miles, the watershed was divided into approximate halves instead. If the minor drainages ( $\leq$  3 feet) occurring within each one-third watershed varied in OHWM width by more than 33 percent, sampling was increased in that third of the watershed.

Drainage data for each of the watershed drainages sampled were collected on a standardized field data sheet (Exhibit B2). Exhibit A, Figures 5-12 provide examples of the types of field indicators observed within various drainages along the DesertXpress Project alternative alignments. Each field sampling point was memorialized using a handheld GPS unit with submeter accuracy. Where stormwater flows originated upslope of the side of I-15 opposite the alignment, those drainages were hydrologically cut off by the freeway during construction and channeled into detention basins and / or manmade drainages on that side of I-15. As a consequence, drainages on the proposed alignment side of I-15 were hydrologically cut off from their sources and no longer technically meet the Corps OHWM criterion. This condition was noted on the field data sheets. Detailed OHWM indicator data for these historical drainage features were not collected.

All drainage data (field and photointerpreted drainage data) are summarized by HUC 12 watershed on the required Los Angeles District Excel JD Summary Data Sheet (see Exhibit B1). Widths for active drainages identified through photointerpretation are based on an average width calculated from field data. The length of each drainage is based on photointerpretation. Standardized field data sheets are provided in Exhibit B2. Representative photographs of various drainage features are presented in Exhibit A on Figures 13 - 23. The field data collected from each watershed were used to aid in the imagery interpretation process described in Section 3.5, below.

#### 3.5 Mapping

Wetland indicator data sample locations and the locations of areas identified during field surveys that are potentially Other Waters of the United States due to the presence of an OHWM were mapped using a hand-held Trimble XT global positioning system (GPS) unit with sub-meter accuracy. This GPS data was incorporated into a Geographic Information System (GIS) and geo-referenced in overlay fashion onto digital orthorectified satellite imagery and/or high resolution aerial photograph depending on availability. Overlays were used to assist in analysis, identification, and digitization of the location and geographic extent of areas that could potentially qualify as waters of the United States. The imagery interpretation process involved the combined use of available imagery, field data, engineer level topographic mapping, field verification of mapped features and best professional judgment to map the geographic extent of areas potentially subject to Corps CWA jurisdiction. Exhibit C comprises detailed 1"=200' scale mapping of the Study Area with field sampling points and delineated active linear drainage features. Labeling indicating their average OHWM width was overlain on orthorectified digital imagery. The maps are provided in digital PDF format due to the extensive numbers of maps required to show such detail.

# 4.0 TECHNICAL FINDINGS

The following sections describe the landscape features and field indicators found within the Study Area that provide a technical basis for (a) determining the presence or absence of a potential water of the United States; and (b) defining the geographic extent of any potential water of the United States identified. Two types of landscape features were found that potentially contain waters of the United States. These include:

- 1. Natural drainages
- 2. Manmade drainages

#### 4.1 Field Indicators of Hydric Soils

Based on field observations within the Study Area soil indicators were <u>not</u> found that meet the wetland hydrology criteria defined by current Corps' regulatory guidance, including the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) except for a few locations within manmade ephemeral drainage channels that periodically receive irrigation runoff from adjacent landscaped areas. When periodic maintenance of broken irrigation sprinklers and piping occurs, the localized area no longer floods, ponds and/or saturates for long to very long periods of time. Onsite observations of surface conditions, including road and channel bank cuts and interpretation of aerial photography revealed three primary soil types, disturbed urban land, desert pavement, and more active wash sediments. Onsite examination revealed that soils or substrates within both natural drainages and manmade drainages consist of alluvial materials primarily made up of sorted sands and gravel, and are well drained, ranging from moderately well drained to excessively well drained.

### 4.2 Field Indicators of Wetland Hydrology Conditions

Based on field observations within the Study Area wetland hydrology indicators were <u>not</u> found that meet the wetlands hydrology criteria defined by current Corps' regulatory guidance, including the *2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0). Onsite observations revealed evidence of flooding within the low-lying natural and manmade drainages. These observations also showed that there was no evidence of ponding and soil saturation for long to very long periods of time. The lack of ponding and soil saturation conditions meeting the wetland hydrology criteria is a direct result of the moderately well drained to excessively well drained alluvial soils. This is also the case for portions of manmade drainages receiving irrigation runoff water (nuisance flow) from adjacent landscaped areas. When periodic maintenance of broken irrigation sprinklers and piping occurs, the localized area no longer floods, ponds, and/or saturates for long to very long periods of time.

Although wetland hydrology conditions were not found within the Study Area, the field indicators of active surface water flow or flooding found within natural and manmade drainages were sufficient enough to form Ordinary High Water Marks (OHWM). As indicated in Section 2.0, an OHWM provides a technical basis for (a) determining the

presence a potential water of the United States; and (b) defining the geographic extent of potential water of the United States.

The natural and manmade drainages within the Study Area found with an OHWM exhibited the following characteristics which are discussed in detail in the following subsections:

- 1. identifiable field indicators of surface flow
- 2. identifiable landscape features that supports surface flow
- 3. identifiable landscape features with a recognizable OHWM

Exhibit A, Figures 5-12 provides typical examples of field indicators of active surface water flow and OHWMs found within ephemeral drainages occurring within the DesertXpress Project Study Area. Exhibit A, Figures 13-23 provide photographs of various types of drainages observed within the HUC 8 Las Vegas Wash watershed.

#### 4.2.1 Field Indicators of Surface Flow

Review of topographic mapping (USGS and Engineer scale) and imagery of the Study Area provided visual indication of the presence of curvilinear depressional land surface features where focused surface water flow could potentially be directed. Linear drainage features associated with road drainage and flood control were also found. Field investigations confirmed the presence of surface flow within a number of these channels or drainages while others lacked evidence / field indicators of active ephemeral surface water flow. No drainages were found to contain evidence of perennial or intermittent surface water flow, and no evidence of subsurface flow was found in the form of spring discharges, artesian flows or evidence of a high groundwater table. An exception to this was occasional points where nuisance flow discharges from landscaped areas adjacent to the Study Area were evident, but the runoff water in these areas appeared (on the basis of a lack of hydric soil indicators) to have flowed through the porous soils, neither ponding and/or causing saturated soil conditions to occur for long to very long durations. Channels further toward the Las Vegas Wash appeared to have perennial to intermittent flows.

Observation of active natural and manmade ephemeral drainages revealed evidence of surface water / hydrologic connectivity with other active drainages within and outside the Study Area. These ephemeral drainages are locally referred to as "desert dry washes." The manmade drainages served to redirect surface flow from altered natural drainages. Indicators of drainages having active surface water flow paths included (1) water marks defined by linear deposits of fine-grained sediment, minerals and/or plant debris; (2) bank scour, erosion and/or shelving; (3) deposits of sorted alluvial materials; and (4) flow-deposited woody and soft tissue plant debris (Exhibit B2).

Flow-deposited woody and soft tissue plant debris were typically absent in drainages that did not have active surface flow. If woody debris was present, the pieces observed were relatively thick (i.e., greater that <sup>1</sup>/<sub>4</sub> inch) weathered limb or root material or milled posts

or lumber. The wood pieces found were randomly placed and were not part of a collective flow line of deposited woody and/or soft tissue plant debris, which would be indicative of an active channel. The historical drainages were found to possess one or more of the same type of indicators found in active drainages, but the indicators found were considerably weathered. Surface flow indicators such as bank scour, erosion and shelving areas had rounded edges in contrast to those found in active drainages having angular edges. Water marks defined by linear deposits of fine grained sediment and minerals, and sorted alluvial materials such as gravels, cobbles and boulders were etched or varnished from weathering. The historical drainages were found to consist of the historical remains of channel drainages that were abandoned due to upslope changes in drainage due to either channel down-cutting or the channel becoming abandoned as the surface drainage became redirected or changed course due to deposition of alluvial material damming the channel flow path. The historical drainages were found to lack indicators of active flow.

Surface water flow patterns were also found within various portions of the landscape that were relatively flat. These surface flow areas were defined by flow-deposited finegrained sediment or soft tissue plant debris. The visible surface flow pattern at these locations would continue for several feet then disappear either on a relatively flat soil surface or localized depression.

Based on the above technical findings and as documented in Exhibits B and C, drainages were found with indicators of active surface water flows within the Study Area.

### 4.2.2 Landscape Features that Support Surface Flow

Detailed field surveys identified land surface features that have the potential to convey surface flows. These features included a bed or channel and abutting banks. These physical features were found associated with both active flow areas and historical drainages. These drainage types can be summarized as follows:

- 1. Active drainage channel and abutting banks containing evidence of recent surface flows as indicated by the presence of unweathered sediment material (sand, gravel, cobbles, etc.) with unweathered surfaces, and the presence of flow deposited woody debris and/or soft tissue plant debris.
- 2. Active drainage channel and abutting banks containing evidence of historical surface flows as indicated by the presence of unweathered sediment material (sand, gravel, cobbles, etc.) with unweathered surfaces, but lacked the presence of flow deposited woody debris and/or soft tissue plant debris.
- 3. Historical drainage channels and abutting banks having no evidence of recent surface flow as indicated by weathered sedimentary gravel, cobbles, boulders, erosional or depositional deposits, and the lack of flow deposited woody debris and/ or soft tissue plant debris.

The frequency interval of flow events within drainages with observable plant debris (1 above) and unweathered sediment material is estimated to be within the 1 to 15 year

range. Strojan, et. al. (1987) found that surface litter decomposition rates for creosote bush and burro bush in the Mojave Desert were 42.5% and 58.4%, respectively over a 54 week period of study. Kemp, et. al. (2003) reported a similar one year decomposition rate for creosote bush and a 74% loss within a 41 month period. This lends support to qualitative observations made by one of the preparers of this report, Dr. Terry Huffman, who has observed over 20 + years of delineating wetlands within arid environments that soft plant tissue (i.e., pieces of plant leaves and thin bark) will decompose in arid drainage environments within a 2 to 3 year period. In addition, field observations over these years indicated that small woody stems (<1/4 inch) decompose over many more years, perhaps 10 + years. For older drainages where the surfaces of the sediment material (e.g., sand, gravel, cobbles, etc.) is no longer smoothed by the interaction of surface water flow and transport, but weathered, and lacks flow deposited woody and thin tissue plant debris, the frequency interval likely ranges to well over a decade in shallower channels to prehistoric times for deeply incised channels (i.e. > 6 feet in desert pavement areas).

The land surface of the Study Area is characterized by the presence of active and inactive alluvial fan systems. Ephemeral drainage channels are found on both types of these alluvial fan types. The majority of the ephemeral channels supporting active surface water flow were narrow, with an average width of less than 3 feet. Active alluvial fans were characterized by sandy soils, a uniform vegetation type, and evidence by surface flow patterns indicative of surface water sheetflow. Narrow channels within these areas were both weakly expressed and discontinuous. This discontinuity indicated that new channels could be formed with each major flood event resulting in the current channels being bypassed and blocked off. Channels >3 feet wide were also found. These channels were considerably deeper that the narrow channels found and were less common when considering the landscape as a whole in relationship to the Study Area. Evidence was found within both of these channel types where previously bypassed cutoff channels where becoming filled with sediment. The specific conditions varied within the Study Area.

Based on the above technical findings, drainages with active surface flow were found within the Study Area with physical features that allow for the conveyance of surface flows.

### 4.2.3 Landscape Features with a Recognizable OHWM

The desert dry washes with active flow were found to have identifiable features which represented the geographic reach of lateral surface water. These features included channels or beds with evidence of active flow and abutting banks which demarcated the lateral reach or extent of flow. Field indicators of the extent of active flow along the banks included water marks defined by linear deposits of fine grained sediment and/or minerals, bank scour, erosion, and/or shelving, and flow deposited woody and soft tissue plant debris (Exhibit B2).

Based on the above technical findings, the active drainages, described in the above

subsections, have recognizable landscape features from which the lateral extent of surface water flow can be geographically delineated. Field indicators of this surface water flow were used to identify the OHWM. Exhibit C shows the location of these active ephemeral drainages.

#### 4.3 Field Indicators of Wetland Vegetation

Based on field observations within the Study Area, a dominance of wetland plant species was found within portions of manmade ephemeral drainages adjacent to or downdrainage of irrigated landscaped areas. These patches of wetland vegetation were typically found along the edge of the drainages in association with what appeared to be where periodic releases of runoff water from landscape irrigation was occurring. The wetland vegetation typically dominated < 5% of the total area of the ephemeral drainages. Wetland plant species found within these types of areas included Arrow Weed (*Pluchea sericea*; FACW), Bermuda Grass (*Cynodon dactylon*; FAC), Mule Fat (*Baccharis salicifolia*; FACW), Turpentine Broom (*Tamarix ramosissima*; NL), Narrow Leaf Cattail (*Typha angustifolia*; OBL) and California Fan Palm (*Washingtonia filifera*; NO).

Based on this result, the criteria defined by current Corps' regulatory guidance, including the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), for wetland vegetation were met in these artificially irrigated portions of the manmade ephemeral drainages. However, the vegetation did not dominate entire drainages and, therefore the drainages were not determined to be dominated by wetland vegetation, but rather delineated as ephemeral drainages as described above through the measurement of an identifiable OHWM, if found to be present.

A dominance of wetland plant species or hydrophytes was <u>not</u> found within natural drainages or the majority of manmade drainages encountered within the Study Area where active ephemeral drainages were found. Based on this result, the criteria defined by current Corps' regulatory guidance, including the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) for wetland vegetation was <u>not</u> met for these areas.

# 5.0 AREAS POTENTIALLY SUBJECT TO JURISDICTION

This section presents the findings of this delineation with respect to the identification and geographic extent of areas found that could potentially be regulated by the Corps and the EPA as wetlands or other waters of the United States under Section 404 of the Clean Water Act.

#### 5.1 Wetlands

No areas meeting the Corps technical criteria for wetlands were identified within the Study Area. These findings are based on the absence of hydric soil, wetland hydrology, and / or wetland vegetation indicators as required by the Corps' *1987 Manual, the Arid West Regional Supplement*, guidance documents, and regulations.

#### 5.2 Other Waters of the U.S.

Ephemeral drainages or desert dry washes were found within the Study Area that meet the technical criteria to potentially be subject to CWA Section 404 jurisdiction as Other Waters of the United States (Exhibit C). This finding is based on the presence of an OHWM as required by Corps regulations. Length and width measurements of the ephemeral drainages found to contain an observable OHWM are provided by Exhibit B2.

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# Exhibit A

# Figures

Figure 1	DesertXpress Project Alignment Alternatives
Figure 2	Location of Alignment Alternatives Within HUC-8 Watershed
Figure 3	Location of Study Area
Figure 4	Location of Study Area Within HUC-8 / HUC-12 Watersheds
Figures 5-12	Typical Examples of Field Indicators of Active Surface Water Flow and
	Ordinary High Water Marks Found Within Ephemeral Drainages
	Occurring Within the DesertXpress Project Study Area.
Figures 13-23	Examples of Drainages Found Within HUC-8 Watershed

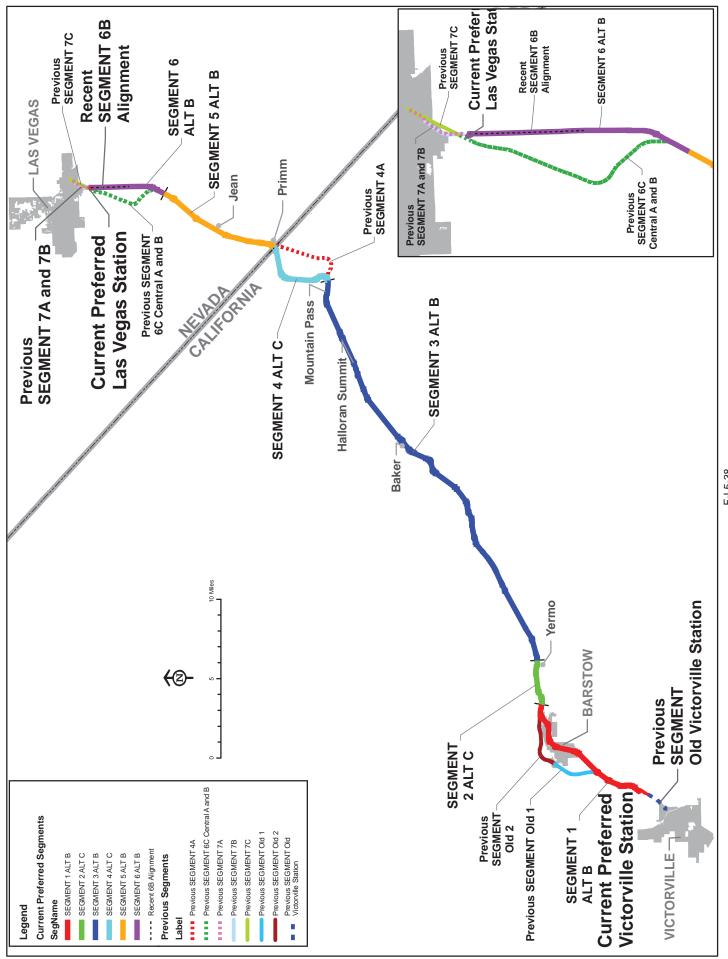


Figure 1. DesertXpress Project Alignment Alternatives F-L5-38

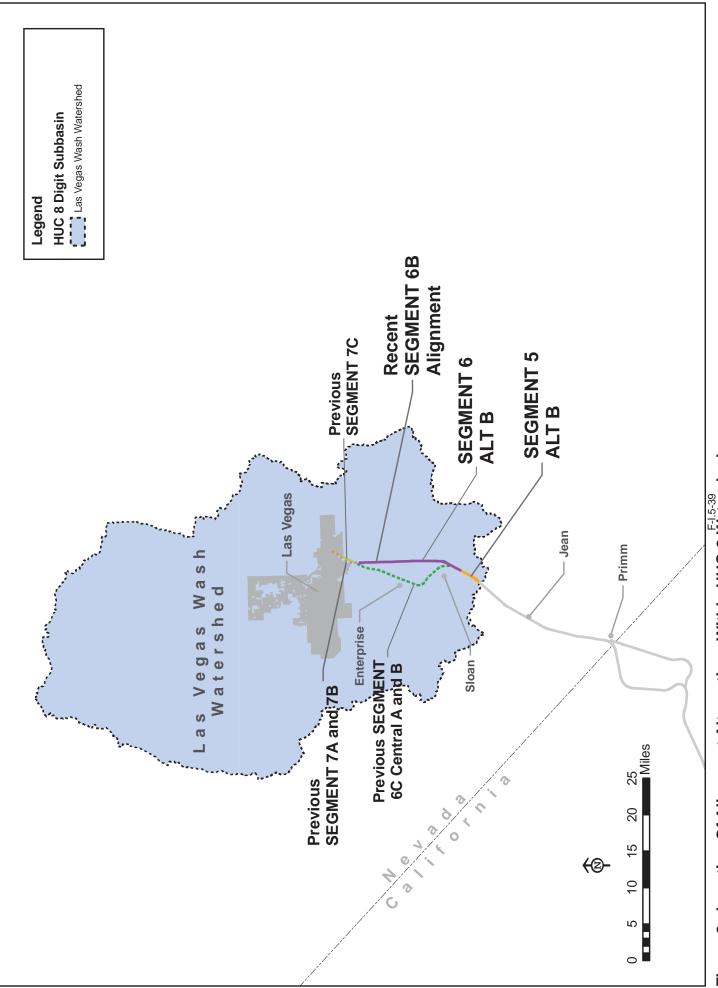
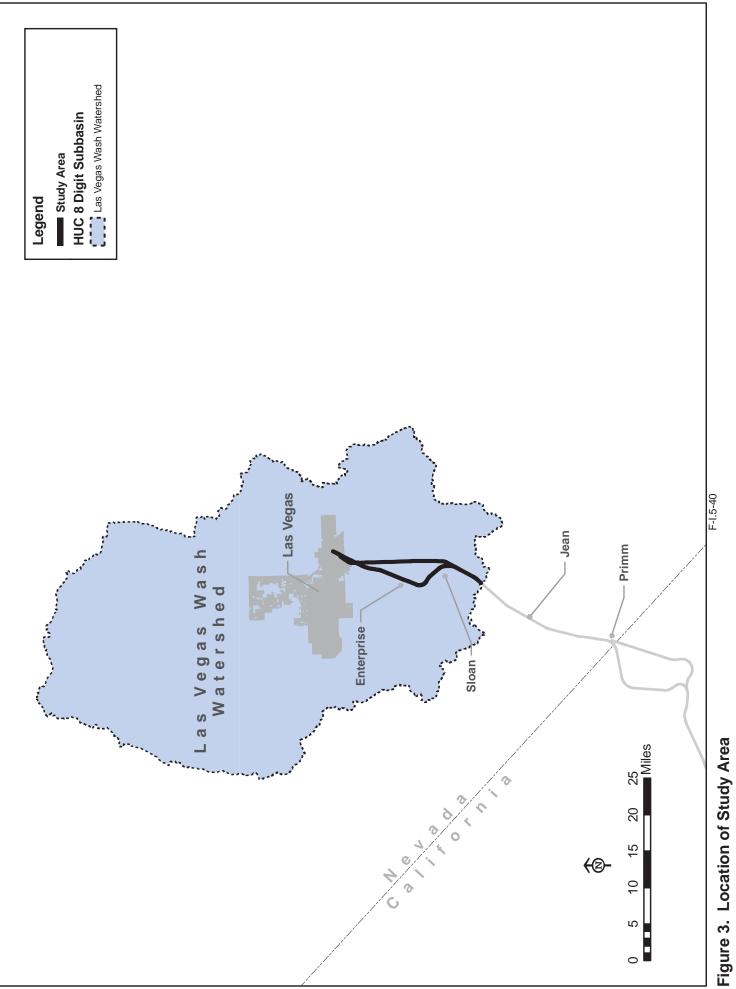


Figure 2. Location Of Alignment Alternatives Within HUC-8 Watershed



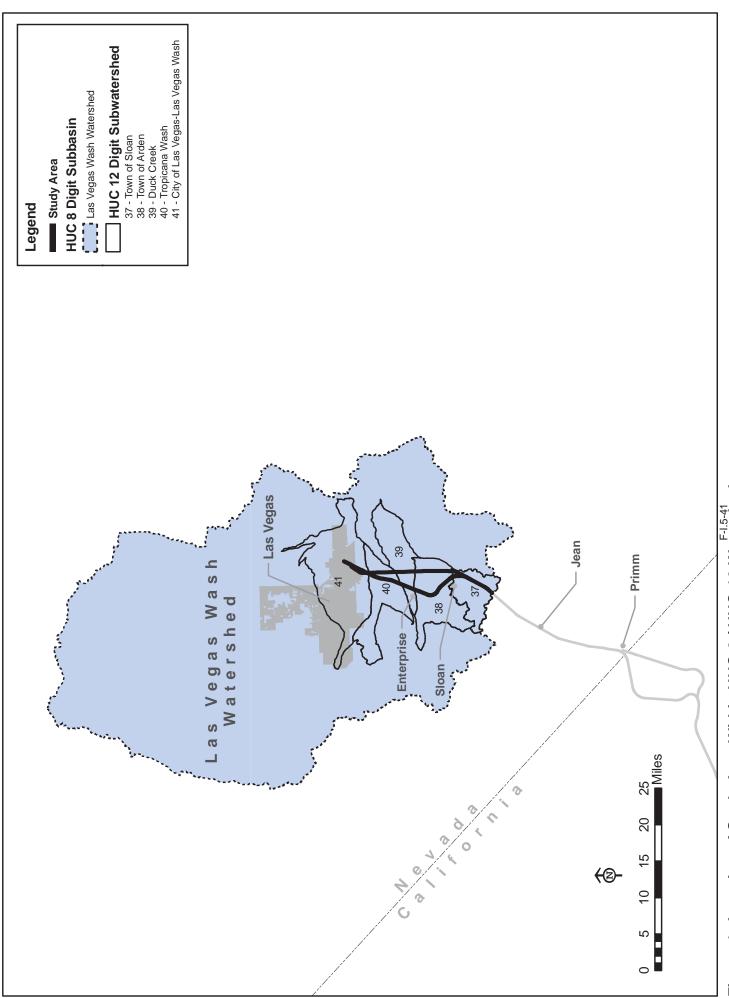


Figure 4. Location of Study Area Within HUC-8 / HUC-12 Watersheds



Exhibit A. Figure 5. Typical examples of field indicators of active surface water flow and Ordinary High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.

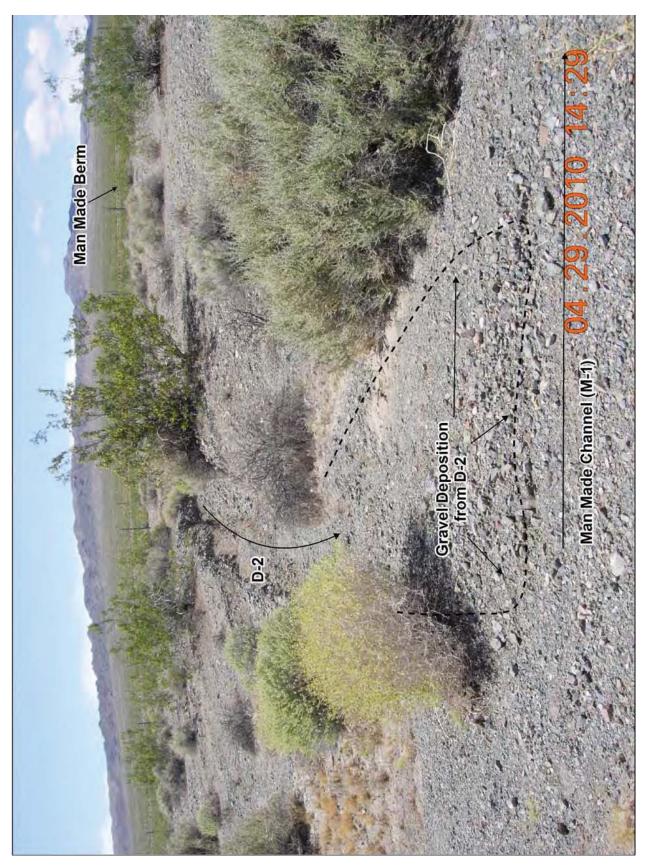


Exhibit A. Figure 6. Typical examples of field indicators of active surface water flow and Qrdingry High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.

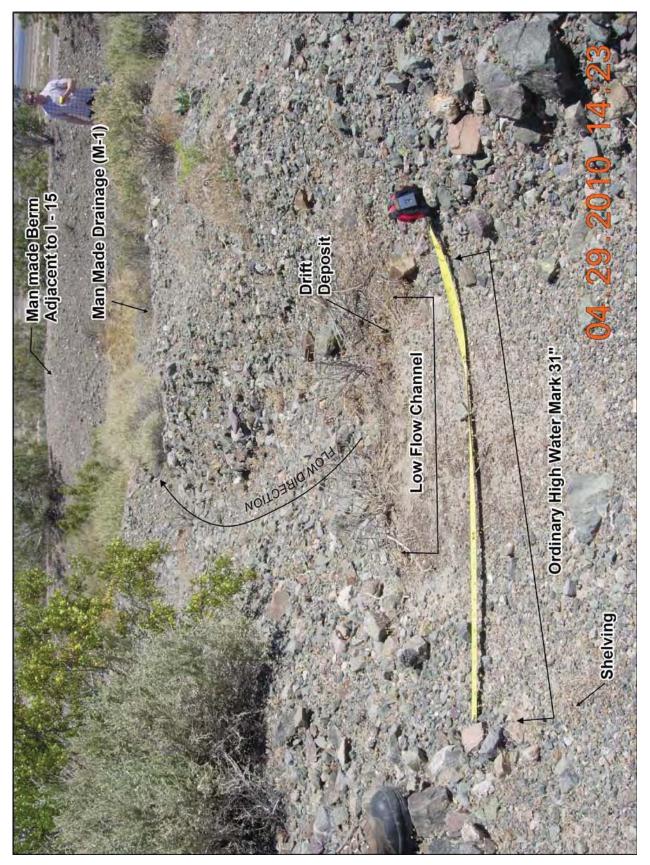


Exhibit A. Figure 7. Typical examples of field indicators of active surface water flow and Qrdinary High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.



Exhibit A. Figure 8. Typical examples of field indicators of active surface water flow and Qrdingry High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.

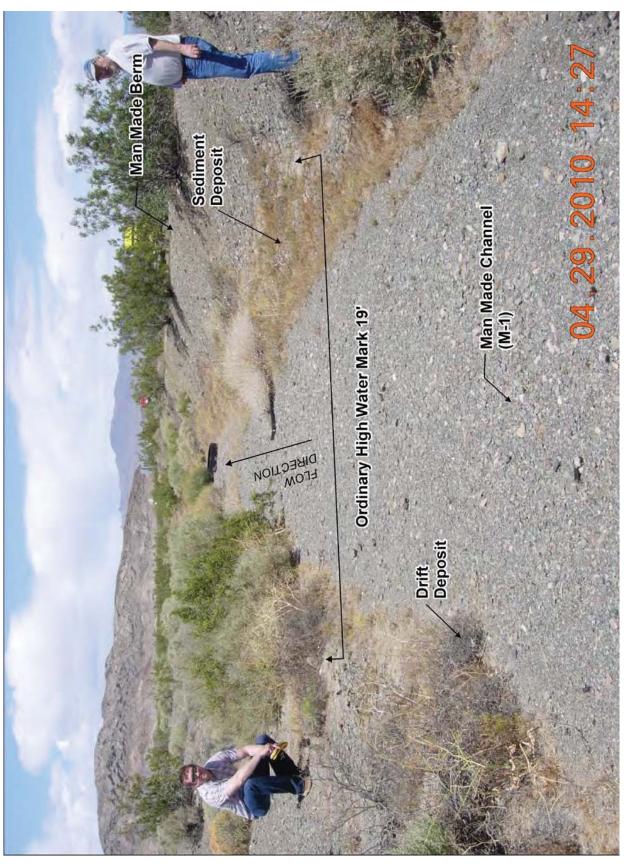


Exhibit A. Figure 9. Typical examples of field indicators of active surface water flow and Ordinary High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.

F-I.5-46

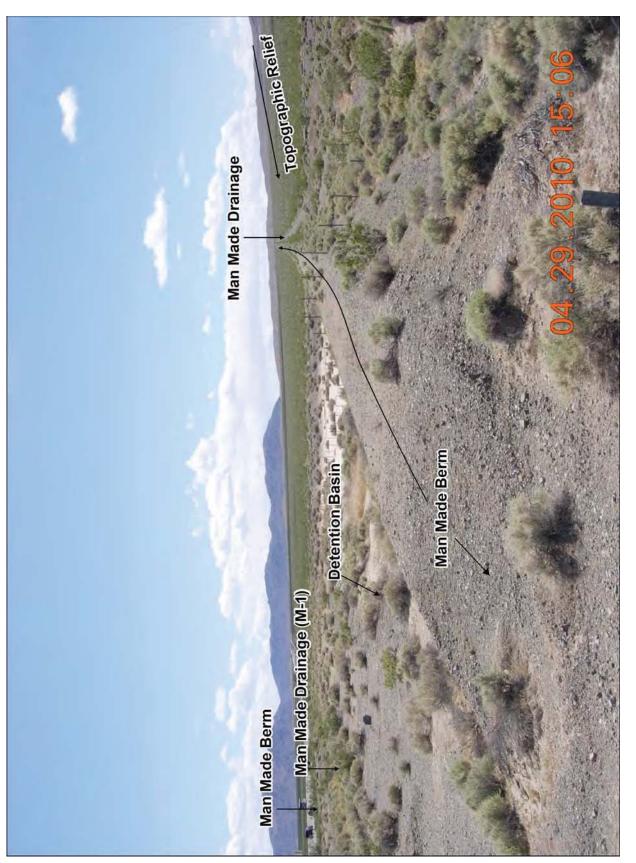


Exhibit A. Figure 10. Typical examples of field indicators of active surface water flow and Ordinary High Water Marks found within ephemerals drainages occurring F-I.5-47 within the DesertXpress Project Study Area.

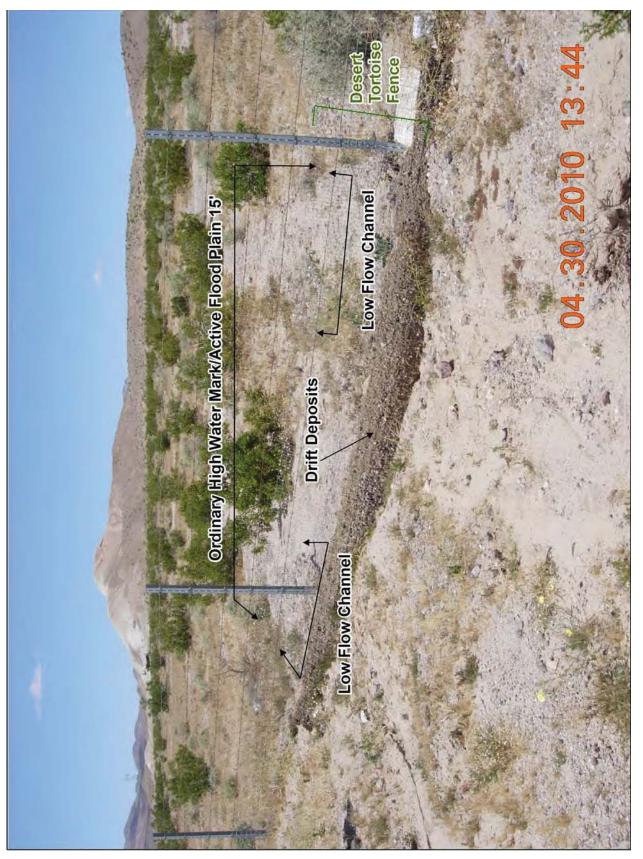


Exhibit A. Figure 11. Typical examples of field indicators of active surface water flow and Ordinary High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.

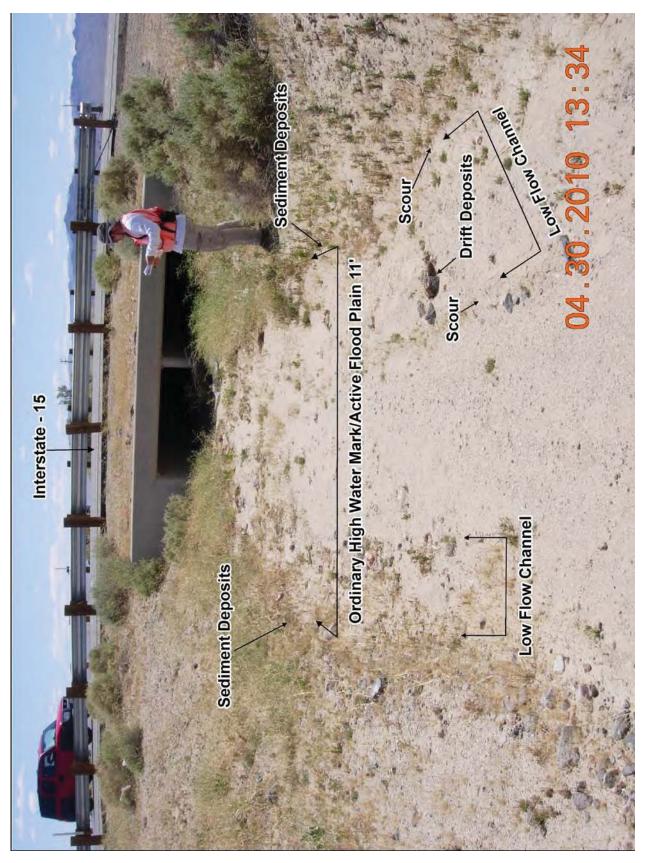


Exhibit A. Figure 12. Typical examples of field indicators of active surface water flow and P<sub>1,3-49</sub>ry High Water Marks found within ephemerals drainages occurring within the DesertXpress Project Study Area.



Exhibit A. Figure 13. Manmade drainage connecting to ephemeral drainage within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 14. Manmade drainage connecting to ephemeral drainage within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 15. Ephemeral drainage within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 16. Manmade drainage connecting to road culvert within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 17. Manmade drainage connecting to road culvert within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 18. Manmade drainage connecting to road culvert within HUC 8 Las Vegas Wash Watershed / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 19. Manmade drainage connecting to road culvert within HUC 8 Las Vegas Wash Watershed / HUC 12, Town of Sloan Subwatershed



Exhibit A. Figure 20. Manmade drainage connecting to road culvert within HUC 8 Las Vegas Wash Watershed / HUC 12, Town of Sloan Subwatershed



Exhibit A. Figure 22. Manmade drainage connecting to ephemeral drainage within HUC 8 Las Vegas Watershed Wash / HUC 12 Town of Sloan Subwatershed



Exhibit A. Figure 23. Manmade drainage connecting to ephemeral drainage within HUC 8 Las Vegas Watershed Wash / HUC 12 Town of Sloan Subwatershed

# Exhibit B

# Field Data

Exhibit B1 Required Corps Waters Data Summary Table

### Exhibit B2 Field Data\*

(Exhibit B2 provided on attached CD in PDF format.)

### Exhibit B1

### **Required Corps Waters Data Summary Table**

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Exhibit B1. Route Drair		Exhibit B1. Study Area Field Data for Areas Route Drainages Desert Xnress Project	reas	Potentially Subject to Corps Jurisdiction, HUC-8 Las Vegas Wash Watershed, Preferred	Corps Jurisdic	ction, HUC-8 L	as Vegas Wash Wa	tershed, Pre	ferred
Waters_Na Cowardi	Cowardi		Area	Linear Waters	Latitude	Longitude		width	HBG Data
me	n_Code	HGM_Code	(acres)	(ft) Types	(dd nad83)	(dd nad83)	Local_Waterway	(MWHO)	<b>Field Point</b>
D-37-1	R6	RIVERINE	0.025903	352.6 NRPW	35.877964	-115.233649	-115.233649 Town of Sloan	3.20	37D1
D-37-2	R6	RIVERINE	0.018175	263.9 NRPW	35.878678	-115.233233	-115.233233 Town of Sloan	3.00	
D-37-3	R6	RIVERINE	0.011081	160.9 NRPW	35.878945	-115.232851	-115.232851 Town of Sloan	3.00	
D-37-4	R6	RIVERINE	0.015186	220.5 NRPW	35.879045	-115.232115	-115.232115 Town of Sloan	3.00	
D-37-5	R6	RIVERINE	0.038685	561.7 NRPW	35.879092	-115.232525	-115.232525 Town of Sloan	3.00	
D-37-7	R6	RIVERINE	0.221648	965.5 NRPW	35.885425	-115.225507	-115.225507 Town of Sloan	10.00	
D-37-8	R6	RIVERINE	0.012257	410.7 NRPW	35.889421	-115.223178	-115.223178 Town of Sloan	1.30	
D-37-18	R6	RIVERINE	0.085973	374.5 NRPW	35.892545	-115.220865	-115.220865 Town of Sloan	10.00	
D-37-25	R6	RIVERINE	0.018905	305.0 NRPW	35.898664	-115.216580	-115.216580 Town of Sloan	2.70	37D5
D-37-45	R6	RIVERINE	0.325895	1774.5 NRPW	35.934212	-115.191339	-115.191339 Town of Sloan	8.00	
D-37-46	R6	RIVERINE	0.004745	68.9 NRPW	35.932887	-115.192141	-115.192141 Town of Sloan	3.00	
D-37-47	R6	RIVERINE	0.154676	2245.9 NRPW	35.926199	-115.196701	-115.196701 Town of Sloan	3.00	
D-37-48	R6	RIVERINE	1.242528	3608.3 NRPW	35.903009	-115.212979	-115.212979 Town of Sloan	15.00	
D-37-55	R6	RIVERINE	0.004043	58.7 NRPW	35.886265	-115.225889	-115.225889 Town of Sloan	3.00	
D-37-56	R6	RIVERINE	0.011102	161.2 NRPW	35.880020	-115.230963	-115.230963 Town of Sloan	3.00	
D-37-59	R6	RIVERINE	0.041024	178.7 NRPW	35.883952	-115.226761	-115.226761 Town of Sloan	10.00	
D-37-60	R6	RIVERINE	0.005331	77.4 NRPW	35.885817	-115.224867	-115.224867 Town of Sloan	3.00	
D-37-65	RG	RIVERINE	0.059573	103.8 NRPW	35.950254	-115.182943	-115.182943 Town of Sloan	25.00	
D-37-66	R6	RIVERINE	0.332989	483.5 NRPW	35.949601	-115.183252	-115.183252 Town of Sloan	30.00	
D-37-67	R6	RIVERINE	0.029289	184.9 NRPW	35.947882	-115.183353	-115.183353 Town of Sloan	6.90	6.90 37MD2
D-37-68	R6	RIVERINE	0.675039	976.9 NRPW	35.946586	-115.183724	-115.183724 Town of Sloan	30.10	30.10 37M3
D-37-69	R6	RIVERINE	0.203159	1106.2 NRPW	35.944064	-115.184695	-115.184695 Town of Sloan	8.00	8.00 37MD9
D-37-71	R6	RIVERINE	0.075161	327.4 NRPW	35.940047	-115.187513	-115.187513 Town of Sloan	10.00	
D-37-72	R6	RIVERINE	0.014862	107.9 NRPW	35.939471	-115.188081	-115.188081 Town of Sloan	6.00	
D-37-73	RG	RIVERINE	0.252342	549.6 NRPW	35.939887	-115.187098	-115.187098 Town of Sloan	20.00	
D-37-74	R6	RIVERINE	0.004986	72.4 NRPW	35.949807	-115.183649	-115.183649 Town of Sloan	3.00	
D-37-75	R6	RIVERINE	0.010062	146.1 NRPW	35.940688	-115.186977	-115.186977 Town of Sloan	3.00	
D-37-76	R6	RIVERINE	0.168733	245.0 NRPW	35.943000	-115.185228	-115.185228 Town of Sloan	30.00	30.00 37M10
D-37-77	R6	RIVERINE	0.013113	190.4 NRPW	35.925353	-115.197513	-115.197513 Town of Sloan	3.00	
D-37-79	R6	RIVERINE	0.041667	605.0 NRPW	35.894414	-115.219772	-115.219772 Town of Sloan	3.00	3.00 37MD8
D-37-80	R6	RIVERINE	0.007441	216.1 NRPW	35.876315	-115.235396	-115.235396 Town of Sloan	1.50	
D-37-81	R6	RIVERINE	0.024787	399.9 NRPW	35.896261	-115.218203	-115.218203 Town of Sloan	2.70	2.70 37D7
D-37-82	R6	RIVERINE	0.087009	3790.1 NRPW	35.911727	-115.206926	-115.206926 Town of Sloan	1.00	1.00 37M4

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Waters         Linear         Waters         Lunear         Waters         Long (mit with waters)         Mut with waters         Lunear (mit with waters)         Mut with waters         Linear         Waters         Long (mit with waters)         Mut waters         Mut waters	Exhibit B1	. Study A	rea Field Data	a for Areas P( troiect	otentially Subject to	Corps Jurisdic	Exhibit B1. Study Area Field Data for Areas Potentially Subject to Corps Jurisdiction, HUC-8 Las Vegas Wash Watershed, Preferred Boute Drainance, DecertYrinese Project	tershed, Preferred
n_Code         HGM_Code         (th)         Types         (df nad83)         Local         Waterway         (DHWM)           28         RivERINE         0.6247221         1590.0         NRPW         35.941570         115.1806.8         Nown of Sloann         30.00           28         RivERINE         0.6347521         1590.0         NRPW         35.941570         115.1806.8         Nown of Sloann         10.00           28         Ric         RIVERINE         0.647521         1590.0         NRPW         35.941570         115.122167         Nown of Sloann         10.00           28         Riv         RIVERINE         0.0010855         283.1878V         35.981935         115.222167         Nown of Sloann         10.00           26         Riv         RivERINE         0.0010855         283.1878V         35.93179         115.183075         Nown of Adden         3.00           26         RivERINE         0.0010851         143.1878V         35.93171         115.183075         Nown of Adden         1.00           278         RivERINE         0.011083         143.1878V         35.93171         115.183075         Nown of Adden         1.00           286         RivERINE         0.011083         143.1878V	Waters_Né	a Cowardi		Area	-	Latitude	Longitude	width HBG Data
3         Re         RIVERNE         0.623623         905.5         NRPW         35.941570         -115.213670         Town of Sioan         310.0           28         Re         RIVERNE         0.047434         602.3         NRPW         35.963766         -115.213071         Town of Sioan         15.00           2         Re         RIVERNE         0.047431         602.3         NRPW         35.951465         -115.222167         Town of Sioan         15.00           2         Re         RIVERNE         0.009433         32.44         NRPW         35.951465         -115.222167         Town of Sioan         -10.0           2         Re         RIVERNE         0.009365         288.3         NRPW         35.951478         -115.123007         Town of Sioan         -10.0           7         Re         RIVERNE         0.003632         181.8         NRPW         35.95148         -115.182377         Town of Aiden         3.00           7         Re         RIVERNE         0.003633         464.8         NRPW         35.95179         -115.182377         Town of Aiden         -10.0           7         Re         RIVERNE         0.010633         464.8         NRPW         35.951797         -115.182377 <th>me</th> <th>n_Code</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>(OHWM) Field Point</th>	me	n_Code						(OHWM) Field Point
28         R0         RVERNE         0.017984         783.4         NFPW         35.96070         115.217301         Town of Sioann         10.0           1         R6         RVERNE         0.047431         6623         NRPW         35.8966801         115.217301         Town of Sioann         310.0           2         R6         RVERNE         0.04743         42.4         NRPW         35.896682         115.227660         Town of Sioann         310.0           2         R6         RVERNE         0.009182         118.8         NRPW         35.955726         115.182076         Town of Sioann         310.0           7         R6         RIVERNE         0.009182         118.8         NRPW         35.955973         115.182076         Town of Aiden         30.0           7         R6         RIVERNE         0.009182         14.8         NRPW         35.959110         115.182075         Town of Aiden         30.0           7         R6         RIVERNE         0.000373         14.5         NRPW         35.959110         115.181377         Town of Aiden         30.0           7         R6         RIVERNE         0.000571         145.3         NRPW         35.959110         115.181377	D-37-83	R6	RIVERINE	0.623623	905.5 NRPW	35.941570	-115.186058 Town of Sloan	30.00
0         Re         RVERINE         0.54751         15900         NRPW         36.8966801         -115.217301         Town of Sloan         15.00           1         R6         RVERINE         0.009743         60.3.3 <nrpw< td="">         35.951746         -115.272601         70wn of Sloan         10.00           7         R6         RVERINE         0.009743         424.4<nrpw< td="">         35.951746         -115.183071         Fown of Arden         3.00           7         R6         RVERINE         0.0106312         218.3<nrpw< td="">         35.951746         -115.183071         Fown of Arden         3.00           7         R6         RVERINE         0.010632         274.1<nrpw< td="">         35.968388         -115.182475         Fown of Arden         2.00           7         R6         RIVERINE         0.010637         481.3<nrpw< td="">         35.969438         -115.182475         Fown of Arden         2.00           7         R6         RIVERINE         0.010657         17.45<nrpw< td="">         35.999438         -115.181475         Fown of Arden         2.00           7         R6         RIVERINE         0.009650         140.7<nrpw< td="">         35.999438         -115.181475         Fown of Arden         2.00           7         R6</nrpw<></nrpw<></nrpw<></nrpw<></nrpw<></nrpw<></nrpw<>	D-37-82B	R6	RIVERINE	0.017984	783.4 NRPW	35.908706	-115.209322 Town of Sloan	1.00
1         R6         RIVERINE         0.041401         602.3         INPW         35.890582         -115.223167         Town of Sloan         3.00           2         R6         RIVERINE         0.0039743         42.4         NRPW         35.891746         115.183301         Town of Sloan         1.00           7         R6         RIVERINE         0.0039433         30.44         NRPW         35.851736         115.183301         Town of Arden         3.00           7         R6         RIVERINE         0.003122         217.4         NRPW         35.951746         115.183307         Town of Arden         3.00           7         R6         RIVERINE         0.003783         164.3         NRPW         35.939317         115.183307         Town of Arden         3.00           7         R6         RIVERINE         0.003783         164.3         NRPW         35.939311         115.183327         Town of Arden         3.00           1         R6         RIVERINE         0.003783         164.3         NRPW         35.939311         115.181347         Town of Arden         1.00           2         R6         RIVERINE         0.003601         145.3         NRPW         36.00227         115.1814367	D-37-90	R6	RIVERINE	0.547521	1590.0 NRPW	35.896901	-115.217301 Town of Sloan	15.00
2         R6         RUVERINE         0.009743         44.4         IRPW         35.831833         -115.227860         Town of Arden         3.00           R6         RUVERINE         0.009555         30.4         NRPW         35.95729         -115.183016         Town of Arden         3.00           R6         RUVERINE         0.009552         207.4         NRPW         35.95729         -115.182307         Town of Arden         3.00           R6         RUVERINE         0.0019655         48.19         NRPW         35.95779         -115.182307         Town of Arden         3.00           R6         RUVERINE         0.019060         14.4.8         NRPW         35.99310         -115.182475         Town of Arden         3.00           1         R6         RUVERINE         0.013060         14.4.8         NRPW         35.99310         -115.181455         Town of Arden         -1.00           1         R6         RUVERINE         0.012690         14.5         NRPW         35.99310         -115.181457         Town of Arden         -1.00           2         R6         RUVERINE         0.012691         14.5         NRPW         35.000232         -115.181457         Town of Arden         -1.00	D-37-91	R6	RIVERINE	0.041481	602.3 NRPW	35.890582	-115.222167 Town of Sloan	3.00
R6         RUVERINE         0.020964         30.4         IRPW         35.951746         -115.183001         Town of Arden         3.00           R6         RUVERINE         0.0091855         288.3         NRPW         35.952029         -115.183001         Town of Arden         3.00           R6         RUVERINE         0.0091855         288.3         NRPW         35.95029         -115.183207         Town of Arden         3.00           R6         RUVERINE         0.0091853         164.3         NRPW         35.95093         -115.183273         Town of Arden         2.00           R6         RUVERINE         0.0019160         175.4         NRPW         35.999438         -115.183273         Town of Arden         3.00           2         R6         RUVERINE         0.009303         14.0.7         NRPW         35.999438         -115.181373         Town of Arden         2.00           3         R6         RUVERINE         0.004574         114.8         NRPW         35.000222         -115.181437         Town of Arden         2.00           3         R6         RUVERINE         0.007520         119.8         NRPW         36.00223         -115.181445         Town of Arden         1.00           4 <td>D-37-92</td> <td>R6</td> <td>RIVERINE</td> <td>0.009743</td> <td>424.4 NRPW</td> <td>35.881835</td> <td>-115.227860 Town of Sloan</td> <td>1.00</td>	D-37-92	R6	RIVERINE	0.009743	424.4 NRPW	35.881835	-115.227860 Town of Sloan	1.00
R6         RIVERINE         0.013855         288.3         NRPW         35.955023         115.183307         Town of Arden         3.00           R6         RUVERINE         0.008522         118.8         NRPW         35.9561979         -115.183307         Town of Arden         2.00           R6         RUVERINE         0.000522         118.8         NRPW         35.97811         -115.18236         Town of Arden         2.00           R6         RUVERINE         0.010633         140.1         NRPW         35.97911         -115.18247         Town of Arden         1.00           R6         RUVERINE         0.019804         278.5         NRPW         35.939438         -115.181456         Town of Arden         2.00           R6         RUVERINE         0.004671         140.1         NRPW         35.000222         -115.181457         Town of Arden         2.00           R6         RUVERINE         0.004671         140.1         NRPW         35.000223         -115.181457         Town of Arden         2.00           R6         RUVERINE         0.0033776         120.8         NRPW         36.002282         -115.181457         Town of Arden         2.00           R6         RUVERINE         0.0033776	D-38-1	R6	RIVERINE	0.020964	304.4 NRPW	35.951746	-115.183015 Town of Arden	3.00
R6         RIVERINE         0.008182         118.         NRPW         35.951970         115.183307         Town of Arden         3.00           R6         RIVERINE         0.003733         164.8         NRPW         35.967910         115.182475         Town of Arden         1.00           R6         RIVERINE         0.003783         164.8         NRPW         35.97910         115.182375         Town of Arden         1.00           R6         RIVERINE         0.003783         164.8         NRPW         35.999438         115.181372         Town of Arden         1.00           R6         RIVERINE         0.006671         175.4         NRPW         35.999438         115.181372         Town of Arden         2.00           R6         RIVERINE         0.006671         175.1         NRPW         35.000622         115.181437         Town of Arden         2.00           R6         RIVERINE         0.004674         101.8         NRPW         36.000222         115.181437         Town of Arden         2.00           R6         RIVERINE         0.003733         12.90         NRPW         36.000232         115.181436         Town of Arden         2.00           R6         RIVERINE         0.003783         1	D-38-2	R6	RIVERINE	0.019855	288.3 NRPW	35.952029	-115.183092 Town of Arden	3.00
R6         RIVERINE         0.003522         2074   NRPW         35.978191         115.182245         Town of Arden         2.00           R6         RIVERINE         0.011063         481.9         NRPW         35978191         115.182268         Town of Arden         1.00           R6         RIVERINE         0.010630         140.7         NRPW         35999110         115.181372         Town of Arden         1.00           R6         RIVERINE         0.019630         175.4         NRPW         35999110         -115.181375         Town of Arden         30.00           R6         RIVERINE         0.006671         145.3         NRPW         36000222         -115.181435         Town of Arden         30.00           R6         RIVERINE         0.003571         129.5         NRPW         36000224         -115.181435         Town of Arden         30.00           R6         RIVERINE         0.003203         180.0         NRPW         36002242         -115.181437         Town of Arden         30.00           R6         RIVERINE         0.002503         180.0         NRPW         36002343         -115.181437         Town of Arden         30.00           R6         RIVERINE         0.002503 <t< td=""><td>D-38-3</td><td>R6</td><td>RIVERINE</td><td>0.008182</td><td>118.8 NRPW</td><td>35.951979</td><td>-115.183307 Town of Arden</td><td>3.00</td></t<>	D-38-3	R6	RIVERINE	0.008182	118.8 NRPW	35.951979	-115.183307 Town of Arden	3.00
R6         RIVERIME         0.011063         481.9         NRPW         35.978731         -115.182.08         Town of Arden         1.00           R6         RIVERINE         0.003783         164.8         NRPW         35.979110         -115.182.065         Town of Arden         1.00           R6         RIVERINE         0.003650         140.7         NRPW         35.939110         -115.181451         Town of Arden         30.00           R6         RIVERINE         0.004671         145.3         NRPW         35.0006227         -115.181451         Town of Arden         30.00           R6         RIVERINE         0.004674         145.3         NRPW         35.0006227         -115.181451         Town of Arden         30.00           R6         RIVERINE         0.004674         140.3         NRPW         36.002237         -115.181455         Town of Arden         30.00           R6         RIVERINE         0.005028         219.0         NRPW         36.002437         -115.181457         Town of Arden         30.00           R6         RIVERINE         0.005028         219.0         NRPW         36.002547         -115.181457         Town of Arden         30.0           R6         RIVERINE         0.0050228	D-38-5	R6	RIVERINE	0.009522	207.4 NRPW	35.966888	-115.182475 Town of Arden	2.00
R6         RIVERINE         0.003783         164.8         NRPW         35.939110         -115.182065         Town of Arden         1.00           R6         RIVERINE         0.191804         278.5         NRPW         35.939310         -115.181372         Town of Arden         3.00           R6         RIVERINE         0.0012080         175.4         NRPW         35.909213         -115.181455         Town of Arden         3.00           R6         RIVERINE         0.006671         145.3         NRPW         36.000222         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.004674         101.8         NRPW         36.000222         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.004674         101.8         NRPW         36.007422         -115.181457         Town of Arden         3.00           R6         RIVERINE         0.005228         219.0         NRPW         36.007432         -115.1814334         Town of Arden         3.00           R6         RIVERINE         0.005228         219.0         NRPW         36.024871         -115.181334         Town of Arden         5.00           R6         RIVERINE         0.0025282	D-38-6	R6	RIVERINE	0.011063	481.9 NRPW	35.978791	-115.182238 Town of Arden	1.00
R6         RIVERINE         0.191804         278.5         NRPW         35.998438         -115.181372         Town of Arden         30.00           R6         RIVERINE         0.009690         140.7         NRPW         35.999110         -115.181486         Town of Arden         3.00           R6         RIVERINE         0.0006571         140.7         NRPW         36.000222         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.003671         140.7         NRPW         36.000232         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.037176         299.9         NRPW         36.000232         -115.1814145         Town of Arden         2.00           R6         RIVERINE         0.037176         299.9         NRPW         36.002342         -115.1814145         Town of Arden         3.00           R6         RIVERINE         0.0025281         129.0         NRPW         36.002432         -115.1814347         Town of Arden         3.00           R6         RIVERINE         0.0025281         180.0         NRPW         36.024373         -115.181344         Town of Arden         1.00           R6         RIVERINE         0.0025281<	D-38-7	R6	RIVERINE	0.003783	164.8 NRPW	35.979110	-115.182065 Town of Arden	1.00
R6         RIVERINE         0.009690         140.7         NRPW         35.999110         115.181436         Town of Arden         3.00           R6         RIVERINE         0.012080         175.4         NRPW         36.000222         -115.181437         Town of Arden         3.00           R6         RIVERINE         0.004674         101.8         NRPW         36.000282         -115.181437         Town of Arden         2.00           R6         RIVERINE         0.0329821         129.9         NRPW         36.000282         -115.181437         Town of Arden         2.00           R6         RIVERINE         0.0323756         203         NRPW         36.007242         -115.181437         Town of Arden         3.00           R6         RIVERINE         0.012397         180.0         NRPW         36.02473         -115.181437         Town of Arden         3.00           R6         RIVERINE         0.005028         219.0         NRPW         36.024737         -115.181437         Town of Arden         1.00           R6         RIVERINE         0.005028         219.0         NRPW         36.024737         -115.181436         Town of Arden         1.00           R6         RIVERINE         0.005028	D-38-10	R6	RIVERINE	0.191804	278.5 NRPW	35.998438	-115.181372 Town of Arden	30.00
R6         RIVERINE         0.012080         175.4         NRPW         36.000227         -115.181417         Town of Arden         3.00           R6         RIVERINE         0.006671         145.3         NRPW         36.000282         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.004674         101.8         NRPW         36.000282         -115.181457         Town of Arden         2.00           R6         RIVERINE         0.0037176         289.9         NRPW         36.007242         -115.181334         Town of Arden         10.00           R6         RIVERINE         0.0012393         219.0         NRPW         36.007242         -115.181334         Town of Arden         10.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024377         -115.181334         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.024377         -115.181376         Town of Arden         1.00           R6         RIVERINE         0.002560         36.0         NRPW         36.025581         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.0025203	D-38-11	R6	RIVERINE	0.009690	140.7 NRPW	35.999110	-115.181486 Town of Arden	3.00
R6         RIVERINE         0.006671         145.3         NRPW         36.000223         -115.181455         Town of Arden         2.00           R6         RIVERINE         0.004674         101.8         NRPW         36.000222         -115.181553         Town of Arden         2.00           R6         RIVERINE         0.023821         129.9         NRPW         36.00622         -115.181553         Town of Arden         2.00           R6         RIVERINE         0.023021         180.0         NRPW         36.00843         -115.181371         Town of Arden         1.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024371         -115.181370         Town of Arden         1.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024371         -115.181370         Town of Arden         1.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024371         -115.181475         Town of Arden         1.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024737         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.004537	D-38-12	R6	RIVERINE	0.012080	175.4 NRPW	36.000227		3.00
R6         RIVERINE         0.004674         101.8         NRPW         36.000622         -115.181553         Town of Arden         2.00           R6         RIVERINE         0.023821         129.9         NRPW         36.000843         -115.181357         Town of Arden         10.00           R6         RIVERINE         0.037176         269.9         NRPW         36.007842         -115.181341         Town of Arden         10.00           R6         RIVERINE         0.012397         180.0         NRPW         36.07242         -115.181334         Town of Arden         3.00           R6         RIVERINE         0.002750         119.0         NRPW         36.028471         -115.181374         Town of Arden         -1.00           R6         RIVERINE         0.002750         119.8         NRPW         36.028673         -115.181376         Town of Arden         -1.00           R6         RIVERINE         0.0045317         58.026673         -115.181478         Town of Arden         -1.00           R6         RIVERINE         0.003380         136.5         NRPW         36.025673         -115.181478         Town of Arden         -1.00           R6         RIVERINE         0.003380         136.5         NRPW <td>D-38-13</td> <td>R6</td> <td>RIVERINE</td> <td>0.006671</td> <td>145.3 NRPW</td> <td>36.000282</td> <td></td> <td>2.00</td>	D-38-13	R6	RIVERINE	0.006671	145.3 NRPW	36.000282		2.00
R6         RIVERINE         0.023821         129.9         NPW         36.007342         -115.181457         Town of Arden         10.00           R6         RIVERINE         0.037176         269.9         NPW         36.007342         -115.181181         Town of Arden         6.00           R6         RIVERINE         0.012397         180.0         NPW         36.007342         -115.181334         Town of Arden         3.00           R6         RIVERINE         0.012397         180.0         NPW         36.02348         -115.181370         Town of Arden         3.00           R6         RIVERINE         0.005283         219.0         NPW         36.024371         -115.181370         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NPW         36.025631         -115.181376         Town of Arden         3.00           R6         RIVERINE         0.004534         197.5         NPW         36.025631         -115.181476         Town of Arden         3.00           R6         RIVERINE         0.003302         136.2         NPW         36.025631         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.003302 <td< td=""><td>D-38-14</td><td>R6</td><td>RIVERINE</td><td>0.004674</td><td>101.8 NRPW</td><td>36.000622</td><td></td><td>2.00</td></td<>	D-38-14	R6	RIVERINE	0.004674	101.8 NRPW	36.000622		2.00
R6         RIVERINE         0.037176         269.9         NRPW         36.007242         115.181131         Town of Arden         6.00           R6         RIVERINE         0.012397         180.0         NRPW         36.018883         -115.181374         Town of Arden         3.00           R6         RIVERINE         0.012397         180.0         NRPW         36.023487         -115.181374         Town of Arden         1.00           R6         RIVERINE         0.027563         240.3         NRPW         36.024737         -115.181374         Town of Arden         5.00           R6         RIVERINE         0.027563         197.5         NRPW         36.024737         -115.181373         Town of Arden         1.00           R6         RIVERINE         0.025263         240.3         NRPW         36.025613         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.025263         366.3         NRPW         36.025613         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.025263         366.3         NRPW         35.025581         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.003380	D-38-15	R6	RIVERINE	0.029821	129.9 NRPW	36.000843		10.00
R6         RIVERINE         0.012397         180.0         NRPW         36.018833         -115.181334         Town of Arden         3.00           R6         RIVERINE         0.005028         219.0         NRPW         36.023180         -115.181370         Town of Arden         1.00           R6         RIVERINE         0.002750         219.0         NRPW         36.024871         -115.181376         Town of Arden         5.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024871         -115.181375         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.024373         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.004534         197.5         NRPW         36.024373         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.004534         136.2         NRPW         36.024106         -115.181476         Town of Arden         3.00           R6         RIVERINE         0.005202         226.6         NRPW         35.975147         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.005202	D-38-20	R6	RIVERINE	0.037176	269.9 NRPW	36.007242	-	6.00
R6         RIVERINE         0.005028         219.0         NRPW         36.023180         -115.181370         Town of Arden         1.00           R6         RIVERINE         0.027583         240.3         NRPW         36.024871         -115.181394         Town of Arden         5.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024737         -115.181376         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.024737         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.024363         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.005380         136.2         NRPW         36.024363         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.005380         136.2         NRPW         35.998810         -115.181461         Town of Arden         3.00           R6         RIVERINE         0.005380         136.2         NRPW         35.9589603         -115.181461         Town of Arden         3.00           R6         RIVERINE         0.0043380	D-38-21	R6	RIVERINE	0.012397	180.0 NRPW	36.018883	-115.181334 Town of Arden	3.00
R6         RIVERINE         0.027583         240.3         NRPW         36.024871         -115.181374         Town of Arden         5.00           R6         RIVERINE         0.002750         119.8         NRPW         36.024737         -115.181575         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.025673         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.025673         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.004531         136.2         NRPW         36.025681         -115.181426         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.025673         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.025673         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.939810         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.009380	D-38-25	R6	RIVERINE	0.005028	219.0 NRPW	36.023180	-115.181370 Town of Arden	1.00 38D2
R6         RIVERINE         0.002750         119.8         NRPW         36.024737         -115.181575         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.025673         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.004534         197.5         NRPW         36.025673         -115.181478         Town of Arden         3.00           R6         RIVERINE         0.025269         366.9         NRPW         36.025673         -115.181476         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.024106         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.999810         -115.181469         Town of Arden         3.00           R6         RIVERINE         0.005202         226.6         NRPW         35.998003         -115.181463         Town of Arden         2.00           R6         RIVERINE         0.005302         226.6         NRPW         35.975147         -115.181463         Town of Arden         2.00           R6         RIVERINE         0.004380	D-38-30	R6	RIVERINE	0.027583	240.3 NRPW	36.024871	-115.181394 Town of Arden	5.00 38D6
R6         RIVERINE         0.004534         197.5         NRPW         36.025673         -115.181478         Town of Arden         1.00           R6         RIVERINE         0.025269         366.9         NRPW         36.025581         -115.181160         Town of Arden         3.00           R6         RIVERINE         0.040517         588.3         NRPW         36.025581         -115.181160         Town of Arden         3.00           R6         RIVERINE         0.040517         588.3         NRPW         36.024106         -115.181122         Town of Arden         3.00           R6         RIVERINE         0.009380         136.2         NRPW         35.999810         -115.181122         Town of Arden         3.00           R6         RIVERINE         0.003380         136.2         NRPW         35.999810         -115.181441         Town of Arden         2.00           R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.181441         Town of Arden         2.00           R6         RIVERINE         0.003861         168.2         NRPW         35.975147         -115.181441         Town of Arden         3.00           R6         RIVERINE         0.0013861	D-38-31	RG	RIVERINE	0.002750	119.8 NRPW	36.024737		1.00 38D5
R6         RIVERINE         0.025269         366.9         NRPW         36.025581         -115.181160         Town of Arden           R6         RIVERINE         0.040517         588.3         NRPW         36.024106         -115.181122         Town of Arden           R6         RIVERINE         0.009380         136.2         NRPW         35.099810         -115.181122         Town of Arden           R6         RIVERINE         0.005202         226.6         NRPW         35.998603         -115.181469         Town of Arden           R6         RIVERINE         0.005202         226.6         NRPW         35.9566055         -115.18141         Town of Arden           R6         RIVERINE         0.003861         168.2         NRPW         35.956055         -115.181841         Town of Arden           R6         RIVERINE         0.0073861         168.2         NRPW         36.022831         -115.18103         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.0128331         -115.18103         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.0128331         -115.181030         Town of Arden           R6	D-38-32	R6	RIVERINE	0.004534	197.5 NRPW	36.025673		1.00 38D8
R6         RIVERINE         0.040517         588.3         NRPW         36.024106         -115.181122         Town of Arden           R6         RIVERINE         0.009380         136.2         NRPW         35.999810         -115.181469         Town of Arden           R6         RIVERINE         0.005202         226.6         NRPW         35.99810         -115.181469         Town of Arden           R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.181841         Town of Arden           R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.181841         Town of Arden           R6         RIVERINE         0.003861         168.2         NRPW         35.056055         -115.181841         Town of Arden           R6         RIVERINE         0.0073872         114.3         NRPW         36.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.012897         -115.181034         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.002028         -115.181034         Town of Arden           R6 <td< td=""><td>D-38-33</td><td>R6</td><td>RIVERINE</td><td>0.025269</td><td>366.9 NRPW</td><td>36.025581</td><td></td><td>3.00</td></td<>	D-38-33	R6	RIVERINE	0.025269	366.9 NRPW	36.025581		3.00
R6         RIVERINE         0.009380         136.2         NRPW         35.999810         -115.181469         Town of Arden           R6         RIVERINE         0.005202         226.6         NRPW         35.998603         -115.182135         Town of Arden           R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.182135         Town of Arden           R6         RIVERINE         0.004380         95.4         NRPW         35.966055         -115.182625         Town of Arden           R6         RIVERINE         0.0017190         249.6         NRPW         36.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181082         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.012897         -115.181044         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.0012803         -115.181044         Town of Arden	D-38-34	R6	RIVERINE	0.040517	588.3 NRPW	36.024106		3.00
R6         RIVERINE         0.005202         226.6         NRPW         35.980603         -115.182135         Town of Arden           R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.181341         Town of Arden           R6         RIVERINE         0.003861         168.2         NRPW         35.966055         -115.182625         Town of Arden           R6         RIVERINE         0.017190         249.6         NRPW         36.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181034         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.0018897         -115.181034         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.183004         Town of Arden	D-38-37	R6	RIVERINE	0.009380	136.2 NRPW	35.999810		3.00
R6         RIVERINE         0.004380         95.4         NRPW         35.975147         -115.181841         Town of Arden           R6         RIVERINE         0.003861         168.2         NRPW         35.966055         -115.182625         Town of Arden           R6         RIVERINE         0.017190         249.6         NRPW         35.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181044         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.0012028         -115.181044         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.183004         Town of Arden	D-38-40	R6	RIVERINE	0.005202	226.6 NRPW	35.980603		1.00
R6         RIVERINE         0.003861         168.2         NRPW         35.966055         -115.182625         Town of Arden           R6         RIVERINE         0.017190         249.6         NRPW         36.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181082         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.018897         -115.181044         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.002028         -115.181044         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.183004         Town of Arden	D-38-42	R6	RIVERINE	0.004380	95.4 NRPW	35.975147		2.00
R6         RIVERINE         0.017190         249.6         NRPW         36.022831         -115.181082         Town of Arden           R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181430         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.012028         -115.181044         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.181044         Town of Arden	D-38-44	R6	RIVERINE	0.003861	168.2 NRPW	35.966055		1.00
R6         RIVERINE         0.007872         114.3         NRPW         36.018897         -115.181430         Town of Arden           R6         RIVERINE         0.006067         88.1         NRPW         36.002028         -115.181044         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.183004         Town of Arden	D-38-45	R6	RIVERINE	0.017190	249.6 NRPW	36.022831		3.00
R6         RIVERINE         0.006067         88.1         NRPW         36.002028         -115.181044         Town of Arden           R6         RIVERINE         0.018602         270.1         NRPW         36.001480         -115.183004         Town of Arden	D-38-47	R6	RIVERINE	0.007872		36.018897		3.00
R6 RIVERINE 0.018602 270.1 NRPW 36.001480 -115.183004 Town of Arden	D-38-48	R6	RIVERINE	0.006067		36.002028		3.00
	D-38-49	R6	RIVERINE	0.018602		36.001480	Town of	3.00

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Exhibit B1. Route Drai	. Study A	Exhibit B1. Study Area Field Data for A Route Drainaree, DesertYpress Project	I for Areas Pote	entially Sul	oject to (	Corps Jurisdic	Exhibit B1. Study Area Field Data for Areas Potentially Subject to Corps Jurisdiction, HUC-8 Las Vegas Wash Watershed, Preferred Route Drainance, Desert Xnress Project	/egas Wash Wat	ershed, Pref	erred
Waters_Na Cowardi	(Cowardi			Linear W	Waters	Latitude	Longitude		width	HBG Data
me	n_Code	HGM_Code	(acres) (ft)	-	Types	(dd nad83)	(dd nad83) Loc	Local_Waterway	(MWHO)	Field Point
D-38-50	R6	RIVERINE	0.017135	248.8 NF	NRPW	36.001122	-115.183038 Town of Arden	vn of Arden	3.00	
D-38-51	R6	RIVERINE	0.016811	244.1 NRPW	RPW	36.002222	-115.181244 Town of Arden	vn of Arden	3.00	
D-38-52	R6	RIVERINE	0.002163	31.4 NRPW	RPW	36.002082	-115.181058 Town of Arden	vn of Arden	3.00	
D-38-53	R6	RIVERINE	0.018602	270.1 NRPW	RPW	36.001654	-115.181071 Town of Arden	vn of Arden	3.00	
D-38-54	RG	RIVERINE	0.005599	81.3 NRPW	RPW	36.002247	-115.181055 Town of Arden	vn of Arden	3.00	
D-38-55	R6	RIVERINE	0.053168	772.0 NRPW	RPW	36.000214	-115.181224 Town of Arden	vn of Arden	3.00	
D-38-56	R6	RIVERINE	0.010138	220.8 NRPW	RPW	35.972548	-115.181859 Town of Arden	vn of Arden	2.00	
D-38-57	R6	RIVERINE	0.003843	55.8 NRPW	λPW	35.965841	-115.182657 Town of Arden	vn of Arden	3.00	
D-38-59	R6	RIVERINE	0.001410	30.7 NRPW	λPW	35.968325	-115.182055 Town of Arden	vn of Arden	2.00	
D-38-60	R6	RIVERINE	0.002998	130.6 NRPW	λPW	35.980891	-115.181663 Town of Arden	vn of Arden	1.00	
D-38-70	R6	RIVERINE	0.004589	199.9 NRPW	λPW	36.022988	-115.181410 Town of Arden	vn of Arden	1.00	
D-38-71	R6	RIVERINE	0.004320	188.2 NRPW	RPW	36.022565	-115.181412 Town of Arden	vn of Arden	1.00	38D1
D-38-72	R6	RIVERINE	0.084532	1227.4 NRPW	RPW	36.017171	-115.181362 Town of Arden	vn of Arden	3.00	
D-38-73	R6	RIVERINE	0.002594	113.0 NRPW	RPW	36.019313	-115.181441 Town of Arden	vn of Arden	1.00	
D-38-74	R6	RIVERINE	0.090310	1311.3 NRPW	RPW	36.020681	-115.181045 Town of Arden	vn of Arden	3.00	
D-38-75	R6	RIVERINE	0.004656	202.8 NRPW	λPW	36.022037	-115.181393 Town of Arden	vn of Arden	1.00	
D-38-76	R6	RIVERINE	0.004293	187.0 NRPW	λPW	36.022144	-115.181402 Tow	Town of Arden	1.00	
D-38-77	R6	RIVERINE	0.004201	183.0 NRPW	۲PW	36.022378	-115.181396 Town of Arden	vn of Arden	1.00	
D-38-78	RG	RIVERINE	0.002324	202.5 NRPW	۲PW	36.024190	-115.181470 Town of Arden	vn of Arden	0.50	38D3
D-38-79	R6	RIVERINE	0.002312	201.4 NRPW	۲PW	36.024248	-115.181445 Tow	Town of Arden	0:50	38D4
D-38-80	RG	RIVERINE	0.002374	206.8 NRPW	RPW	36.024346	-115.181473 Town of Arden	vn of Arden	0.50	
D-38-81	R6	RIVERINE	0.005115	222.8 NRPW	RPW	36.025421	-115.181534 Town of Arden	vn of Arden	1.00	38D7
D-38-82	R6	RIVERINE	0.037955	551.1 NRPW	RPW	36.001489	-115.184644 Tow	Town of Arden	3.00	
D-38-83	R6	RIVERINE	0.036804	534.4 NRPW	RPW	36.002205	-115.184596 Tow	Town of Arden	3.00	
D-38-84	R6	RIVERINE	0.037424	543.4 NRPW	RPW	36.002247	-115.182540 Tow	Town of Arden	3.00	
D-38-85	R6	RIVERINE	0.022803	331.1 NF	WGAN	36.002376	-115.182187 Tow	Town of Arden	3.00	
D-39-3	R6	RIVERINE	0.057810	419.7 NF	NRPW	36.037465	-115.181789 Duck Creek	sk Creek	6.00	39D21
D-39-4	R6	RIVERINE	0.008003	58.1 NF	NRPW	36.039237	-115.181334 Duck Creek	sk Creek	6.00	
D-39-5	R6	RIVERINE	0.015455	224.4 NRPW	RPW	36.040349	-115.181254 Duck Creek	sk Creek	3.00	
D-39-6	R6	RIVERINE	0.003939	57.2 NF	NRPW	36.040333	-115.181351 Duc	Duck Creek	3.00	
D-39-7	R6	RIVERINE	0.016494	239.5 NRPW	RPW	36.049787	-115.181532 Duck Creek	ck Creek	3.00	
D-39-8	R6	RIVERINE	0.032190	233.7 NF	NRPW	36.056942	-115.181535 Duck Creek	ck Creek	6.00	
D-39-9	RG	RIVERINE	0.003444	50.0 NRPW	۲DW	36.056970	-115.181270 Duck Creek	sk Creek	3.00	

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Exhibit B1. Route Drai	Study A nages. De	Exhibit B1. Study Area Field Data for Areas Route Drainages. DesertXpress Proiect		entially Si	ubject to (	Corps Jurisdie	ction, HUC-8 L	Potentially Subject to Corps Jurisdiction, HUC-8 Las Vegas Wash Watershed, Preferred	atershed, Pre	ferred
Waters_Na Cowardi	Cowardi	•		Linear V	Waters	Latitude	Longitude		width	HBG Data
me	n_Code	HGM_Code	(acres) (ft)		Types	(dd nad83)	(dd nad83)	Local_Waterway	(MWHO)	Field Point
D-39-10	R6	RIVERINE	0.005227	75.9 NRPW	IRPW	36.057223	-115.181218 Duck Creek	Duck Creek	3.00	
D-39-11	R6	RIVERINE	0.015023	81.8 NRPW	IRPW	36.058907	-115.181439 Duck Creek	Duck Creek	8.00	
D-39-12	RG	RIVERINE	0.068685	997.3 NRPW	IRPW	36.058749	-115.181291 Duck Creek	Duck Creek	3.00	
D-39-13	R6	RIVERINE	0.047989	348.4 NRPW	IRPW	36.062890	-115.181902 Duck Creek	Duck Creek	6.00	
D-39-16	R6	RIVERINE	0.003492	50.7 NRPW	IRPW	36.055298	-115.181233 Duck Creek	Duck Creek	3.00	
D-39-17	RG	RIVERINE	0.091598	1330.0 NRPW	IRPW	36.055087	-115.181138 Duck Creek	Duck Creek	3.00	
D-39-21	R6	RIVERINE	0.004112	59.7 NRPW	IRPW	36.041021	-115.181323 Duck Creek	Duck Creek	3.00	
D-39-23	RG	RIVERINE	0.019780	287.2 NRPW	IRPW	36.028090	-115.181236 Duck Creek	Duck Creek	3.00	
D-39-24	R6	RIVERINE	0.043326	629.1 NRPW	IRPW	36.026900	-115.181169 Duck Creek	Duck Creek	3.00	
D-39-25	R6	RIVERINE	0.050165	364.2 NRPW	IRPW	36.053456	-115.181531 Duck Creek	Duck Creek	6.00	
D-39-26	R6	RIVERINE	0.045317	658.0 NRPW	IRPW	36.039370	-115.181237 Duck Creek	Duck Creek	3.00	
D-39-30	R6	RIVERINE	0.003147	45.7 NRPW	IRPW	36.032788	-115.181206 Duck Creek	Duck Creek	3.00	
D-39-32	R6	RIVERINE	0.003479	757.8 NRPW	IRPW	36.052093	-115.185710 Duck Creek	Duck Creek	0.20	
D-39-40	R6	RIVERINE	0.250413	3636.0 NRPW	IRPW	36.033479	-115.181210 Duck Creek	Duck Creek	3.00	
D-39-41	R6	RIVERINE	0.001853	26.9 NRPW	IRPW	36.035427	-115.181271 Duck Creek	Duck Creek	3.00	
D-39-42	R6	RIVERINE	0.005985	86.9 NRPW	IRPW	36.031938	-115.181378 Duck Creek	Duck Creek	3.00	
D-39-43	R6	RIVERINE	0.021670	629.3 NRPW	IRPW	36.032898	-115.182348 Duck Creek	Duck Creek	1.50	39D11
D-39-44	R6	RIVERINE	0.005305	231.1 NRPW	IRPW	36.032949	-115.183060 Duck Creek	Duck Creek	1.00	
D-39-45	R6	RIVERINE	0.009012	261.7 NRPW	IRPW	36.033095	-115.182971 Duck Creek	Duck Creek	1.50	1.50 39D13
D-39-46	R6	RIVERINE	0.014481	630.8 NRPW	IRPW	36.033152	-115.182394 Duck Creek	Duck Creek	1.00	1.00 39D14
D-39-47	RG	RIVERINE	0.015452	673.1 NRPW	IRPW	36.033558	-115.182295 Duck Creek	Duck Creek	1.00	1.00 39D15
D-39-48	R6	RIVERINE	0.014137	615.8 NRPW	IRPW	36.034005	-115.182344 Duck Creek	Duck Creek	1.00	1.00 39D16
D-39-49	RG	RIVERINE	0.015115	658.4 NRPW	IRPW	36.036577	-115.182325 Duck Creek	Duck Creek	1.00	1.00 39D17
D-39-50	R6	RIVERINE	0.041288	599.5 NRPW	IRPW	36.037182	-115.182335 Duck Creek	Duck Creek	3.00	39D19
D-40-1	RG	RIVERINE	0.013354	193.9 NRPW	IRPW	36.085226	-115.181614	-115.181614 Tropicana Wash	3.00	
D-40-2	R6	RIVERINE	0.144752	2101.8 NRPW	IRPW	36.095952	-115.181073	-115.181073 Tropicana Wash	3.00	
D-40-3	RG	RIVERINE	0.008347	121.2 NRPW	IRPW	36.098824	-115.181289	-115.181289 Tropicana Wash	3.00	
D-40-4	R6	RIVERINE	0.001398	20.3 NRPW	IRPW	36.109722	-115.181038	-115.181038 Tropicana Wash	3.00	
D-40-5	R6	RIVERINE	0.001405	20.4 NRPW	IRPW	36.106993	-115.181046	-115.181046 Tropicana Wash	3.00	
D-40-6	R6	RIVERINE	0.006880	99.9 NRPW	IRPW	36.089755	-115.181759	-115.181759 Tropicana Wash	3.00	
D-40-7	R6	RIVERINE	0.082287	298.7 N	NRPW	36.088305	-115.181659	-115.181659 Tropicana Wash	12.00	
D-40-8	R6	RIVERINE	0.002548	37.0 NRPW	IRPW	36.088542	-115.181095	-115.181095 Tropicana Wash	3.00	
D-40-10	R6	RIVERINE	0.027410	99.5 NRPW	IRPW	36.077738	-115.181751	-115.181751 Tropicana Wash	12.00	

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Exhibit B1.	Study A	Exhibit B1. Study Area Field Data for Areas		otentially 5	subject to	Corps Jurisdic	tion, HUC-8 L	Potentially Subject to Corps Jurisdiction, HUC-8 Las Vegas Wash Watershed, Preferred	tershed, Pre	ferred
<b>Route Drai</b>	nages, D€	Route Drainages, DesertXpress Project	roject							
Waters_Na Cowardi	Cowardi		Area	Linear	Waters	Latitude	Longitude		width	HBG Data
me	n_Code	HGM_Code	(acres)	(ft)	Types	(dd nad83)	(dd nad83)	Local_Waterway	(MWHO)	Field Point
D-40-11	R6	RIVERINE	0.029236	424.5	424.5 NRPW	36.080817	-115.181226	-115.181226 Tropicana Wash	3.00	
D-40-12	R6	RIVERINE	0.007211	104.7	104.7 NRPW	36.080341	-115.181194	-115.181194 Tropicana Wash	3.00	
D-40-13	R6	RIVERINE	0.003988	57.9	57.9 NRPW	36.071828	-115.181142	-115.181142 Tropicana Wash	3.00	
D-40-14	R6	RIVERINE	0.010723		155.7 NRPW	36.065368	-115.181097	-115.181097 Tropicana Wash	3.00	
D-40-15	R6	RIVERINE	0.023113	83.9	83.9 NRPW	36.084409	-115.181454	-115.181454 Tropicana Wash	12.00	
D-40-16	R6	RIVERINE	0.007087		102.9 NRPW	36.103114	-115.181188	-115.181188 Tropicana Wash	3.00	
D-40-17	R6	RIVERINE	0.073616	1068.9 NRPW	NRPW	36.088348	-115.183556	-115.183556 Tropicana Wash	3.00	
D-40-18	R6	RIVERINE	0.000792	11.5	11.5 NRPW	36.088658	-115.181895	-115.181895 Tropicana Wash	3.00	
D-40-19	R6	RIVERINE	0.075833	1101.1 NRPW	NRPW	36.087448	-115.184482	-115.184482 Tropicana Wash	3.00	
D-40-20	R6	RIVERINE	0.001391	20.2	20.2 NRPW	36.089775	-115.181209	-115.181209 Tropicana Wash	3.00	
D-40-21	R6	RIVERINE	0.057039	828.2	828.2 NRPW	36.089096	-115.183141	-115.183141 Tropicana Wash	3.00	
D-40-22	R6	RIVERINE	0.013974		202.9 NRPW	36.089696	-115.181921	-115.181921 Tropicana Wash	3.00	
D-40-23	R6	RIVERINE	0.021371	310.3	310.3 NRPW	36.071306	-115.181152	-115.181152 Tropicana Wash	3.00	
D-40-24	R6	RIVERINE	0.029683	215.5	215.5 NRPW	36.064787	-115.181602	-115.181602 Tropicana Wash	6.00	
D-40-25	R6	RIVERINE	0.001233	17.9	17.9 NRPW	36.070768	-115.181154	-115.181154 Tropicana Wash	3.00	
		Totals:	8.090163	62875.5						

### Exhibit B2

### **Field Data**

(See attached CD in PDF format.)

LIST	<b>T OF PLA</b>	INT SPEC	LIST OF PLANT SPECIES ENCOUNTERED ALONG	CRED A	ALONC	78
DRAINAG	ES WITH	HIN THE	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY	S PRO.	JECT S	TUDY
			AREA		No. of the other	
SCIENTIFIC NAME (AS	SCIENTIFIC NAME IE	SYNONYMY (SOUDCE.	COMMON NAME	REGION	REGION 8 (NWI)	STRATUM (H S T)
LISTED IN JSA	AVAILABLE	CALFLORA		CA	NV NV	(1, (2, (11)
DATA SHEETS)	IMN NI	2010)				
Abronia villosa	NL	=A. v. var. aurita =A. v. var. villosa =Bastardiopsis eggersii	DESERT SAND VERBENA	NL	NL	Herb
Acacia gregii	Acacia gregii	NA	CATCLAW ACACIA	FACU	FACU	Shrub
Achnatherum speciosum	NL	=Stipa speciosa	DESERT STIPA	NL	NL	Shrub
Adenophyllum porophylloides	NL	= Dyssodia porophylloides	SAN FELIPE DOGWEED	NL	NL	Shrub
Allenrolfea occidentalis	<i>Allenrolfea</i> occidentalis	NA	IODINE BUSH	FACW+	FACW	Shrub
Ambrosia dumosa	NL	= Fransera dumosa	BURROWEED	NL	NL	Shrub
Ambrosia eriocentra	NL	= Fransera eriosentra	RAGWEED	NL	NL	Shrub
Amsinckia tesselata	NL	= A. conica = A. cuneata = A. mojavenensis = A. purpusii = A. vostellata = A. setosissima	FIDDLE-NECK	NL	NL	Herb

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TUDY	STRATUM (H, S, T)	Herb	Herb	Herb	Herb	Shrub	Shrub	Shrub
JECT S	REGION 8 (NWI) NV	NL	NL	NL	NL	UPL	NL	FACU
S PRO	REGION 0 (NWI) CA	NL	NL	NL	FAC	FACU	NL	FACU
LIST OF PLANT SPECIES ENCOUNTERED ALONG VAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME	FIDDLE-NECK	PURPLE THREE AWN	CALIFORNIA MILKWEED	SCARLET MILKWEED	FOUR-WINGED SALTBUSH	MANY-FRUITED SALTBUSH	MANY-FRUIT SALTBUSH
E	SYNONYMY (SOURCE: CALFLORA 2010)	NA	= $A$ . $p$ . var. fendleriana = $A$ . $p$ . var. longiseta = $A$ . $p$ . var. neallegi = $A$ . $p$ . var. parishii = $A$ . $p$ . var. parishii = $A$ . $p$ . var. mrightii	=A. c. ssp. greenei =A. c. ssp. californica	NA	NA	NA	NA
T OF PLA ES WITH	SCIENTIFIC NAME IF AVAILABLE IN NWI	N	JU	NL	Asclepias curassavica	Atriplex canescens	NL	Atriplex
LIST OF PLA DRAINAGES WITH	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	Amsinskia intermedeon	Aristida purpurea	Asclepias californica	Asclepias curassavica	Atriplex canescens	Atriplex hymenelytra	Atriplex polycarpa

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LIS	<b>FOFPLA</b>	INT SPEC	LIST OF PLANT SPECIES ENCOUNTERED ALONG	CRED A	ALONC	75
AG	ES WITH	HIN THE	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY	S PRO	JECT S	STUDY
			AREA			
SCIENTIFIC NAME (AS	SCIENTIFIC NAME IF	SYNONYMY (SOURCE:	COMMON NAME	REGION 0 (NWI)	REGION 8 (NWI)	STRATUM (H, S, T)
LISTED IN JSA DATA SHEETS)	AVAILABLE IN NWI	CALFLORA 2010)		CA	AN	
	polycarpa					
Avena barbata	NL	=A. hirsuta	SLENDER WILD OAT	NL	NL	Herb
Baccharis brachyphylla	NL	NA	SHORT LEAVED BACCHARIS	NL	NL	Shrub
Baccharis salicifolia	Baccharis glutinosa	=B. glutinosa =B. viminea =Molina salicifolia	MULEFAT	FACW-	FACW	Shrub
Baccharis sarothroides	Baccharis sarothroides	NA	DESERT FALSE-WILLOW	FAC	IN	Shrub
Baileya spp.	NL	NA	DESERT MARIGOLD	NL	NL	Herb
Bouteloua barbata	NL	=B. arenosa =Chrondrosum barbata =C. exile =C. microstachyum =C. polystachyum =C. subscorpiodes	SIX WEEKS GRAMA	NL	NL	Herb
Brassica tournefortii	NL	NA	ASIAN MUSTARD	NL	NL	Herb

LIST OF PLAN DRAINAGES WITHIR	LIST OF PLANT NAGES WITHIN	HY	SPECIES ENCOUNTERED ALONG THE DESERT XPRESS PROJECT STUDY AREA	S PRO	JECT	TUDY
SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	SCIENTIFIC NAME IF AVAILABLE IN NWI	SYNONYMY (SOURCE: CALFLORA 2010)	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
Bromus madritensis	NL	=Anisantha madritensis =A. matritensis =Bromus maritensis	FOXTAIL CHESS	NL	NL	Herb
Bromus rubens	NL		RIPGUT BROME	IN	IN	Herb
Bromus tectorum	NL	=Anisantha tectorum	CHEAT GRASS	NL	NL	Herb
Camissonia boothii	NL	=Oenothera decorticans	BOOTH'S EVENING PRIMROSE	NL	NL	Herb
Camissonia brevipes	NL	=Oenothera brevipes	YELLOW CUPS	NL	NL	Herb
Cercidium floridum	NL	NA	BLUE PALO VERDE	NL	NL	Shrub
Cercidium microphyllum	NL	NA	FOOTHILLS PALO VERDE	NL	NL	Tree
Chaenactis fremontii	NL	NA	FREMONT PINCUSHION	NL	NL	Herb
Chamaesyce albomarginata	NL	=Euphorbia albomarginata	RATTLESNAKE WEED	NL	NL	Herb
Chaenactis	NL	=C c. var.	PEBBLE PINCUSHION	NL	NL	Herb

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DRAINAGES WITH	S WITH		THE DESERT XPRESS PROJECT STUDY AREA	ONI C	IDAL	IUUI
SCIENTIFIC S NAME (AS LISTED IN JSA A DATA SHEETS)	SCIENTIFIC NAME IF AVAILABLE IN NWI	SYNONYMY (SOURCE: CALFLORA 2010)	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
carphoclinia		carphoclinia =C. c. var. peirsonii				
Chenopodium C album	Chenopodium album	NA	WHITE GOOSEFOOT	FAC	FACU	Herb
Chilopsis linearis	Chilopsis linearis	NA	DESERT WILLOW	FACW*	FAC	Tree
Chorizanthe brevicorny	NL	=C. b. var. brevicorny =C. b. var. spathulata	BRITTLE SPINEFLOWER	NL	NL	Herb
Chorizanthe rigida	NL	=Acanthogonum rigidum	SPINEY-HERB	NL	NL	Herb
Chrysothammus paniculatus	NL	=Ericameria paniculatus	MOJAVE RABBITBRUSH	NL	NL	Shrub
Coleogyne ramosisssima	NL	NA	BLACKBUSH	NL	NL	Shrub
Cryptantha pterocarya	NL	=C. p. var. purposii =C. p. var cyclopetera =C. p. var. pterocarya	WINGED NUT FORGET ME NOT	NL	NL	Herb
Cylindropuntia	NL	=Opuntia acanthocarpa	BUCKHORN CHOLLA	NL	NL	Shrub

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DRAINAGES WITHIN THE DESERT XPRESS PROJECT S' AREA	ES WITH	HIN THE	THE DESERT XPRESS PROJECT STUDY AREA			IMAN
SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	SCIENTIFIC NAME IF AVAILABLE IN NWI	SYNONYMY (SOURCE: CALFLORA 2010)	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
acanthocarpa						
Cylindroopuntia arbuscula**	NL	Unknown	No info. available on this species. <i>C. arbuscula</i> may = typo	NL	NL	Shrub?
Cynodon dactylon	Cynodon dactylon	=Capriola dactylon =C. aristiglumis =Panicum dactylon	BERMUDA GRASS	FAC	FAC	Herb
Descurainia sophia	NL	=Sisymbrium Sophia	HERB SOPHIA	NL	NL	Herb
Encelia actoni	NL	=E. virginensis ssp. actoni	ACTON ENCELIA	NL	NL	Shrub
Encelia farinosa	NL	NA	BRITTLE BUSH	NL	NL	Shrub
Encelia frutescens	NL	=Simsia frustescens	BUTTON BRITTLE BUSH	NL	NL	Shrub
Encelia virginensis	NL	= Frutescens var. virginensis	NO COMMON NAME	NL	NL	Shrub
Ephedra nevadensis	NL	NA	NEVADA EPHEDRA	NL	NL	Shrub
Ephedra viridis	NL	NA	MORMON TEA	NL	NL	Shrub
Eriastrum densifolium	NL	NA	SHRUBBY ERIASTRUM	NL	NL	Shrub

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LIST	OF PLA	NNT SPEC	LIST OF PLANT SPECIES ENCOUNTERED ALONG	ERED A	ALONC	75
3	DRAINAGES WITHIN	7	THE DESERT XPRESS PROJECT STUDY AREA	S PRO	JECT S	STUDY
	SCIENTIFIC NAME IF AVAILABLE	SYNONYMY (SOURCE: CALFLORA	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
<b>DALA SHEELS)</b> Ericameria conneri	NL	2010) =Haplopappus cooperi	COOPER'S GOLDENBUSH	NL	NL	Shrub
	NL	=Haplopappus lacrifolia	TURPENTINE BUSH	NL	NL	Shrub
	NL	=E. n. ssp. consimilis =E. n. var. bernardina =E. n. var. hololeuca =E. n. var. hololeuca =E. n. var. leiosperma =E. n. var. oreophila =E. n. var. oreophila =E. n. var. oreophila =E. n. var. hashoensis =Chrysothamnus nauseosus	RUBBER RABBITBRUSH	NL	N	Shrub
Ericameria paniculata	NL	=Chrysothammus paniculatus	MOJAVE RABBITBRUSH	NL	NL	Shrub

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78	STUDY		STRATUM	(H, S, T)			Shrub			Herb		Shrub					Shrub			Herb	
ALONC	JECT S		REGION	8 (NWI)	NV		NL			NL		NL					NL			NL	
CRED A	S PRO.		REGION	(IMN) 0	CA		NL			NL		NL					NL			NL	
LIST OF PLANT SPECIES ENCOUNTERED ALONG	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY	AREA	COMMON NAME				PINE BUSH			FLAT TOPPED	BUCKWHEAT	CALIFORNIA BUCKWHEAT					DESERT TRUMPET			FLUFF GRASS	
INT SPEC	HIN THE		AMANONAS	(SOURCE:	CALFLORA	2010)	=E. ericoides ssp.	pinifolia	=Haplopappus pinifolius	NA		=E. d. var. baratum	= <i>E. d.</i> var.	deflexum	=E. d. var.	nevadense =F d var rectum	=E. glaucum	=E. inflatum var.	mflatum	=Triodia pulchella	=Dasyochloa pulchella
T OF PLA	ES WITH		SCIENTIFIC	NAME IF	AVAILABLE	IN NWI	NL			NL		NL					NL			NL	
LIS	DRAINAG		SCIENTIFIC	NAME (AS	LISTED IN JSA	DATA SHEETS)	Ericameria	pinifolia		Eriogonum	deflexum	Eriogonum	fasciculatum				Eriogonum	inflatum		Erioneuron	pulchellum

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LIST	T OF PLA	INT SPEC	LIST OF PLANT SPECIES ENCOUNTERED ALONG	RED A	LONG	
DRAINAG	ES WITH	IIN THE	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY	S PROJ	ECTS	TUDY
			AKEA			
SCIENTIFIC NAME (AS	SCIENTIFIC NAME IF	SYNONYMY (SOURCE)	COMMON NAME		REGION 8 (NWI)	STRATUM (H. S. T)
LISTED IN JSA DATA SHEETS)	AVAILABLE IN NWI	CALFLORA 2010)		CA	AN	
Eriophyllum ambiguum/E. wallacei [sic]	NL	=E. ambiguum var. ambiguum var. =E. ambiguum var. paleaceum =Antherapeas wallacei =Eriophyllum =E. w. var. wallacei =E. w. var. calvescens =Eriophyllum aureum	ANNUAL WOOLLY SUNFLOWER/WALLACE'S WOOLLY DAISY	N	NL	Herb
Erodium cicutarium	NL	=Erodium cicutarium ssp. cicutarium =E. cicutarium ssp. jacquinianum	COASTAL HERON'S BILL	NL	NL	Herb
Eschscholzia minutiflora	NL	=E. coville =E. minutiflora ssp. twisselmanii =E. minutiflora var. darwinensis	РҮБМҮ РОРРҮ	NL	NL	Herb

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STUDY	N STRATUM ) (H, S, T)	Herb	Shrub	Herb	Herb	Shrub	Shrub	Shrub
ALON	REGION 8 (NWI) NV	NL	NL	NL	IN	Ŋ	NL	NL
ERED .	REGION 0 (NWI) CA	NL	NL	NL	IN	NL	NL	NL
LIST OF PLANT SPECIES ENCOUNTERED ALONG DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME	BROADLEAF GILLIA	MATCHWEED	BARLEY	MOUSE BARLEY	CHEESE BUSH	RHATANY	CREOSOTE BUSH
INT SPEC	SYNONYMY (SOURCE: CALFLORA 2010)	=E. minuscula NA	NA	NA	=H. m. ssp. glaucum =H. m. ssp. leporinum =H. m. ssp. murinum	=H. m. var. patula =H. m. var. pentalepsis =H. m. var. salsola	NA	<ul> <li>=L. divaricata ssp. tridentate</li> <li>=L. divaricata</li> <li>=L. tridentata var. arenaria</li> <li>=L. tridentate var.</li> </ul>
T OF PLA ES WITH	SCIENTIFIC NAME IF AVAILABLE IN NWI	NL	NL	NL	Hordeum leporinum	NL	NL	NL
LIST	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	Gilia latifolia	Gutierrezia sarothrae	Hordeum moines	Hordeum murinum	Hymenoclea salsola	Krameria parviflora	Larrea tridentata

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STUDY	STRATUM (H, S, T)	Herb	Herb	Shrub	Herb	Shrub
JECT S	REGION 8 (NWI) NV	NL	FAC	NO to FACW+ depending on species	FACU	NL
S PRO	REGION 0 (NWI) CA	NL	FACW	FAC	FACU	NL Or FAC
LIST OF PLANT SPECIES ENCOUNTERED ALONG DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME	DESERT ALYSSUM	BROAD LEAFED PEPPER- GRASS	PEPPER-GRASS	POOR-MAN'S PEPPER- GRASS	SCALE BROOM
ANT SPEC	SYNONYMY (SOURCE: CALFLORA 2010)	tridentata =L. fremontii var. fremontii =L. f. var. stinitatum	NA	NA	NA	=Lepidospartum squamatum var. palmeri =Lepidospartum squamatum =Baccharis
T OF PLA	SCIENTIFIC NAME IF AVAILABLE IN NWI	NL	Lepidium latifolium	Lepidium spp.	Lepidium virginicum	Possibly Baccharis sarothroides
LISDRAINAC	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	Lepidium fremontii	Lepidium latifolium	Lepidium spp.	Lepidium virginicum	Lepidospartum squamatum

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	Adults	STRATUM (H, S, T)		Herb	Herb	Herb
ALONG	JECT	REGION 8 (NWI) NV		FACW	FAC+	N
ERED A	S PRO	REGION 0 (NWI) CA		FACW	FAC+	NL
LIST OF PLANT SPECIES ENCOUNTERED ALONG	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME		MEXICAN SPRANGLETOP	VALLEY WILD RYE	ELEGANT LUPINE
NT SPEC	TIN THE	SYNONYMY (SOURCE: CALFLORA 2010)	sarathroides var. pluricephala =Lepidospartim squamatum var. obtectum	NA	=Elymus triticoides =E. condensatus var. triticoides =E. orcuttianus =E. triticoides var. pubescens	=L. c. var. pallidus =L. c. var. orcutti =L. c. var. orcutti =L. c. var. =L. c. var. concinnus =L. c. var. agardhianus =L. c. ssp. optatus =L. pallidus =L. agardhianus
T OF PLA	ES WIT	SCIENTIFIC NAME IF AVAILABLE IN NWI		Leptochloa uninervia	Elymus triticoides	Ŋ
TIS.	DRAINAC	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)		Leptochloa uninervia	Leymus triticoides	Lupinus concinnus

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D ALONG ROJECT STUDY		DN REGION STRATUM T) 8 (NWI) (H, S, T)	NN	NL Shrub	NL Shrub	NL Shrub	NL Herb	NL Herb	NII Harh	TVT	NL	N
ERE SS PF		REGION 0 (NWI)	ĊA	N	NL	NL	NL	NL	NL		NL	FACU-
LIST OF PLANT SPECIES ENCOUNTERED ALONG DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY	AREA	COMMON NAME		ANDERSON THORNBUSH	PEACH THORN	PARISH'S DESERT THORN	SNAKE'S HEAD	DESERT DANDELION	COMMON MALLOW	STICK I FAF	NITON TRUTT	FLEMING MONKEYFLOWER
ANT SPEC		SYNONYMY (SOURCE:	CALFLORA 2010)	=L. a. var. andersonii =L. a. var. deserticola	NA	NONE	= Zollikoferia eluiensis = M. var. cognate	= M. californica var. glabrata	NA	NA		=M. parviflorus
T OF PLA		SCIENTIFIC NAME IF	AVAILABLE IN NWI	NL	NL	NL	NL	NL	NL	NL		
DRAINAG		SCIENTIFIC NAME (AS	LISTED IN JSA DATA SHEETS)	Lycium andersonii	Lycium cooperi	Lycium parishii	Malacothrix coulteri	Malacothrix glabrata	Malva neglecta	Mentzelia spp.	Minnihus Alominarii	insumant community

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CIII.	T OF PLA	NT SPEC	LIST OF PLANT SPECIES ENCOUNTERED ALONG	ERED A	ALONC	
DKAINAC	ES WITH	HIN THE	DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	S PRO	JECT	TUDY
SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	SCIENTIFIC NAME IF AVAILABLE IN NWI	SYNONYMY (SOURCE: CALFLORA 2010)	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
Oenethera deltoides	NL	=0. d. ssp. cognate =0. d. ssp. deltoides =0. d. ssp. howellii =0. d. ssp. piperi =0. d. var. cineracea	BIRDCAGE EVENING PRIMROSE	NL	NL	Herb
Olea europea	NL	NA	OLIVE TREE	NL	NL	Tree
<b>Opuntia basilaris</b>	NL	NA	BEAVERTAIL CACTUS	NL	NL	Shrub
Parkinsonia aculeata	Parkinsonia aculeata	NA	JERUSALEM –THORN OR PALO VERDE	FACW*	IN	Tree
Pectocarya heterophylla [sic] * =P. heterocarpa	NL	=P. penicillata var. heterocarpa	CHUCKWALLA COMBSEED	NL	NL	Herb
Pectocarya platycarpa	NL	=P. gracilis =P. linearis	NUTTED BROAD COMB	NL	NL	Herb
Phacelia distans	NL	<ul> <li>= P. cinera</li> <li>= P. scabrella</li> <li>= P. distans var.</li> </ul>	COMMON PHACELIA	NL	NL	Herb

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DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY
AREA
SYNONYMY (SOURCE: CALFLORA 2010)
austalis
=P. hullii FREMONT'S PHACELIA
NA DESERT INDIAN WHEAT
NA
NA ANNUAL RABBIT-FOOT GRASS
1
=P. glandulosa var. torreyana =P. juliflora var. torreyana = P. ordorata
NA LEMON'S ALKALI GRASS
NA CALIFORNIA CHICORY
NA
NA

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VONYMY OURCE: DURCE:COMMON NAME REGION OURCE: LFLORAREGION O (NWI) CALFLORA 2010)LFLORA SANDBAR WILLOW0BL OBL CANLSANDBAR WILLOW GODDING WILLOW0BL OBLNARUSSIAN THISTLE RUSSIAN THISTLEFACU*/ FACUNatralis natratisRUSSIAN THISTLE RUSSIAN THISTLEFACU*/ FACUIn var. ofic alt var. tragusOBL CHIANLvar. thenicaCHIANLvar. thenicaDESERT SAGENL	SYNONYMY (SOURCE: (SOURCE: DataCOMMON NAME (SOURCE)(SOURCE: (SOURCE)SOURCE: (SOURCE)(SOURCE: (SOURCE)SANDBAR WILLOWNLSANDBAR WILLOWNANANARUSSIAN THISTLEGOODDING WILLOWRUSSIAN THISTLESaustralisRUSSIAN THISTLES. australisRUSSIAN THISTLES. australisRUSSIAN THISTLES. australis <t< th=""><th>IFICSYNONYMY SOURCE: (SOURCE: BLECOMMON NAME (SOURCE: (SOURCE: 2010)COMMON NAME SANDBAR WILLOWiguaNLSANDBAR WILLOWiguaNLSANDBAR WILLOWiguaNLGOODDING WILLOWiguaNLRUSSIAN THISTLEstiferNARUSSIAN THISTLEstiferSanstralisRUSSIAN THISTLEstiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. anstralisS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. anstralisS. anstralis<!--</th--></th></t<>	IFICSYNONYMY SOURCE: (SOURCE: BLECOMMON NAME (SOURCE: (SOURCE: 2010)COMMON NAME SANDBAR WILLOWiguaNLSANDBAR WILLOWiguaNLSANDBAR WILLOWiguaNLGOODDING WILLOWiguaNLRUSSIAN THISTLEstiferNARUSSIAN THISTLEstiferSanstralisRUSSIAN THISTLEstiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. anstralisS. anstralisRUSSIAN THISTLES. stiferS. anstralisRUSSIAN THISTLES. anstralisS. anstralis </th
ar. ar. <i>tragus</i> ar. <i>tragus</i> <i>ica</i> <i>ica</i> <i>iae</i> <i>iae</i> <i>iae</i> <i>iae</i> <i>iae</i> <i>iae</i> <i>iae</i> <i>iae</i>	=S. kali var. tenuifolia =S. kali var. tragus =S. ruthenica = S. c. var. columbariae =S. d. var. dorrii =S. d. var. incana	=S. kali var.       =S. kali var. tragus       =S. kali var. tragus       =S. kali var. tragus       =S. cvar. tragus       =S. cvar. tragus       =S. cvar. tragus       =S. cvar. tragus       NL       =S. cvar. tragus       =S. cvar. tragus       =S. cvar. tragus       =S. dvar. dorrii       NL       =S. d. var. tragus
	=S. c. var. ziegleri =S. d. var. dorrii =S. d. var. incrna	=S. c. var. ziegleri       NL     =S. d. var. dorrii       =S. d. var. income
OURCE: LFLORA 2010) NL NA NA NA NA NA NA NA NA NA NA NA NA NA		NAME IF NAME IF Salix Exigua Salix exigua Salsola pestifer Salsola kali/ Salsola pestifer NL NL
		SCIENTIFIC NAME IF NAME IF NAME IF NUNNI Salix exigua Salix gooddingii Salixola pestifer Salsola kali/ Salsola kali/ Salsola pestifer NL

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TUDY	STRATUM (H, S, T)	Shrub	Herb	Shrub	Herb	Herb	Herb
JECT S	REGION 8 (NWI) NV	NL	FACU-	NL	NL	NL	NL
S PRO	REGION 0 (NWI) CA	NL	FACU	NL	NL	NL	NL
LIST OF PLANT SPECIES ENCOUNTERED ALONG DRAINAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME	DESERT SENNA, SPINY SENNA	TALL TUMBLE MUSTARD	APRICOT MALLOW	DESERT PRINCE'S PLUME	SMALL WIRELETTUCE	DESERT STRAW
INT SPEC	SYNONYMY (SOURCE: CALFLORA 2010)	= Cassia armata	NA	= S. parvifolia	NA	NA	=S. p. var. parishii =S. p. var. pauciflora =S. runcinata var. parishii =S. lygoclesmoides =S. lygoclesmoides =S. neomexicana =Lygodesmia pauciflora =Ptiloria pauciflora
T OF PLA EES WITH	SCIENTIFIC NAME IF AVAILABLE IN NWI	NL	Sisymbrium altissimum	NL	NL	TN	NL
DRAINAG	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	Senna armata	Sisymbrium altissimum	Spharalcea ambigua	Stanleya pinnata	Stephanomeria exigua	Stephanomeria pauciflora

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LIST OF PLA	T OF PLA	EZ	LIST OF PLANT SPECIES ENCOUNTERED ALONG	ERED A	ALONG	
NENTENIA		A	AREA AREAD I NUMBELI DI UDI			Inni
SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	SCIENTIFIC NAME IF AVAILABLE IN NWI	SYNONYMY (SOURCE: CALFLORA 2010)	COMMON NAME	REGION 0 (NWI) CA	REGION 8 (NWI) NV	STRATUM (H, S, T)
Stephanomeria virgata	NL	NA	NL	NL	NL	Herb
Tamarix aphylla	Tamarix aphylla	NA	ATHEL TAMARISK	FACW-	FACW	Tree
Tamarix ramosissima	Tamarix ramosissima	AN	SALTCEDAR	FAC	FACW	Shrub
Thamnosma montana	NL	NA	TURPENTINE BROOM	NL	NL	Shrub
Triticum aestivum	NL	= T. hybernum = T. macha = T. sativum = T. sphaerococcum = T. vulgare	COMMON WHEAT	NL	NL	Herb
Typha angustifolia	Typha angustifolia	NA	NARROW LEAF CATTAIL	OBL	OBL	Herb
Ulmus pumila	NL	NONE	SIBERIAN ELM	NL	NL	Tree
Washingtonia filifera	Washingtonia filifera	NA	CALIFORNIA FAN PALM	FACW	ON	Tree
Yucca brevifolia	NL	=Y. jaegeriana	JOSHUA TREE	NL	NL	Tree
Yucca schidigera	NL	=Y. californica	MOJAVE YUCCA	NL	NL	Shrub

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TUDY	REGION REGION STRATUM 0 (NWI) 8 (NWI) (H, S, T) CA NV (H, S, T)	
NLONG JECT S	REGION ST 8 (NWI) ( NV	
ERED A	REGION 0 (NWI) CA	
LIST OF PLANT SPECIES ENCOUNTERED ALONG NAGES WITHIN THE DESERT XPRESS PROJECT STUDY AREA	COMMON NAME	
	SYNONYMY (SOURCE: CALFLORA 2010)	=Y. macrocarpa =Y. mohavensis
F OF PLA ES WITH	SCIENTIFIC NAME IF AVAILABLE IN NWI	
LIST OF PLAN DRAINAGES WITHI	SCIENTIFIC NAME (AS LISTED IN JSA DATA SHEETS)	

	ve been				U.C.	rida. In ice.	20	
* = J.S.A. probably made a typographical error for this species.	**Using JSA taxonomy ( <i>S. tragus</i> ) we determined that in 1988, when the wetland manual was produced, this species could have been either <i>S. kali</i> (FACU*) or <i>S. pestifer</i> (FACU) (Region O), or FACU for both in Region 8.	NI = Not Indicated.	NL = Not Listed in NWI 1988.	Sources:	Calflora Database. 2010. Calflora Database was developed by the United States Forest Service working in collaboration with U.C. Berkeley. Available at: <u>http://www.calflora.org/</u>	National Wetlands Inventory and US Fish And Wildlife Service. 1988. National List of Plant Species that Occur in Wetlands. Compiled by Porter B. Reed, Jr., National Ecology Research Center, US Fish and Wildlife Service, St. Petersburg, Florida. In cooperation with US Army Corps of Engineers, US Environmental Protection Agency, and US Soil Conservation Service.	E:/DesertXpress/Plant List 7-19-2010/LIST_OF_PLANT_SPECIES_ENCOUNTERED_ALONG_DRAINAGES_WITHIN_THE_DESERT_XPRESS_PROJECT_STUDY_AREA[1].doc	

### Exhibit B2

### DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

**Huffman-Broadway Group** 

#### **Field Data Forms**

## For **DesertXpress**

HUC 12 Watershed Town of Sloan

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 37

**Huffman-Broadway Group** 

#### **Field Data Forms**

# For DesertXpress

HUC 12 Watershed Town of Sloan

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 37

# DesertXpress

# **Field Notebook**

### HBG Watershed ID # 37

Watershed Name: Town of Slean

If found, please return to:

George Ball Huffman-Broadway Group, Inc. 828 Mission Avenue San Rafael, California 94901 415.925.2000 gball@h-bgroup.com

Return Postage Guaranteed

	· · · · · · · · · · · · · · · · · · ·	i.		co-dominant	l codominent	ß
(C) Above OHW	<ol> <li>Desert pavement</li> <li>Rock varmish</li> <li>Clast weathering</li> <li>Salt splitting</li> <li>Carbonate etching</li> <li>Carbonate etching</li> <li>Depositional topography</li> <li>Caliche rubble</li> <li>Soil development</li> <li>Surface color/tone</li> <li>Surface relief</li> <li>Surface rounding</li> </ol>		(F) Above OHW	Annual herbs, xeric ruderals Perennial herbs, non-clonal Perennial herbs, clonal and non-clonal co-dominant Mature pioneer trees, no young trees Mature pioneer trees w/upland species Late-successional species	<ul> <li>7) Xeroriparian species</li> <li>8) Annual herbs, xeric ruderals</li> <li>9) Perennial herbs, non-clonal</li> <li>10) Perennial herbs, clonal and non-clonal codominent</li> <li>11) Mature pioneer trees, no young trees</li> <li>12) Mature pioneer trees, veric understory</li> <li>13) Mature pioneer trees w/upland species</li> <li>14) Late-successional species</li> <li>15) Upland species</li> </ul>	<ul><li>16) Annual herbs, xeric ruderals</li><li>17) Mature pioneer trees w/upland species</li><li>18) Upland species</li></ul>
				023		
(B) At OHW	Valley flat Active floodplain Benches: low, mid, most prominent Highest surface of channel bars Top of point bars Break in bank slope Upper limit of sand-sized particles Change in particle size distribution Staining of rocks Exposed root hairs below intact soil layer Silt deposits Silt deposits Litter (organic debris, larger than twigs) Drift (organic debris, larger than twigs)	Potential Vegetation OHWM Indicators	(E) At OHW	<ol> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> <li>Pioneer tree seedlings</li> <li>Pioneer tree saplings</li> </ol>	<ul> <li>5) Sparse, low vegetation Annual herbs, hydromesic</li> <li>6) Ruderals</li> <li>7) Perennial herbs, hydromesic clonals</li> <li>8) Pioneer tree seedlings</li> <li>9) Pioneer tree saplings</li> <li>10) Xeroriparian species</li> <li>11) Annual herbs, xeric ruderals</li> </ul>	<ul><li>12) Sparse, low vegetation</li><li>13) Xeroriparian species</li><li>14) Annual herbs, xeric ruderals</li></ul>
V OHW	1) V( 2) A( 3) B( 3) T( 3) T( 3) T( 5) T( 5) T( 5) T( 1) T( 3) C( 1) T( 1) T(		(D) Below OHW	Herbaceous marsh species Pioneer tree seedlings Sparse, low vegetation Annual herbs, hydromesic ruderals Perennial herbs, hydromesic clonals	Pioneer tree seedlings Sparse, low vegetation Pioneer tree saplings Xeroriparian species	Sparse, low vegetation Xeroriparian species Annual herbs, xeric ruderals
(A) Below OHW	s to ripplec ars ars rrs ehind obs wmstrea s norpholo and leve ations balls					10) Spar 11) Xero 12) Annu
S	dune dune arks arks arks bars pars pars pars pars durb ee bad rr bod rr bod rr the the the the the the the the the the			20,4,3,2,7	66	
	<ol> <li>In-stream dunes</li> <li>Crested ripples</li> <li>Crested ripples</li> <li>Flaser bedding</li> <li>Harrow marks</li> <li>Gravel sheets to rippled sands</li> <li>Gravel sheets to rippled sands</li> <li>Muddy point bars</li> <li>Sand tongues</li> <li>Nuddy point bars</li> <li>Long gravel bars</li> <li>Long gravel bars</li> <li>Long gravel bars</li> <li>Cobble bars behind obstruction</li> <li>Stepped-bed morphology in gr</li> <li>Streaming lineations</li> <li>Streaming lineations</li> <li>Muck Points</li> </ol>			Hydroriparian indicators	Mesoriparian indicators	Xeroriparian indicators

And man and a state of the stat

Polastikation     Descriptions     Helicabeliani fil - 41/37 - Tany or SLOAM     HUC 128       Time     GPS     Samuelia     Magn     Machine (N)     Descriptions     Aloun       Time     GPS     Samuelia     Magn     Machine (N)     Descriptions     Aloun       Additional     Unit     Finish     Magn     Machine (N)     Descriptions     Aloun       (1) V/S     Samuelia     Samuelia     Magn     Machine (N)     Descriptions     Aloun       (1) V/S     Samuelia     Samuelia     Magn     Magn     Machine (N)     Descriptions       (2) V/S     Article (N)     Descriptions     Machine (N)     Descriptions     Aloun       (2) V/S     Article (N)     Descriptions     Machine (N)     Descriptions     Aloun       (2) V/S     Article (N)     Descriptions     Machine (N)     Descriptions     Aloun       (2) V/S     Article (N)     Descriptions     Machine (N)     Descriptions     Aloun       (2) V/S     Article (N)     Descriptions     Machine (N)     Descriptions     Aloun       (2) V/S     Article (N)     Machine (N)     Descriptions     Aloun     Descriptions     Colorini rescriptions     Colorini rescriptions       (1) V/S     S     Article (N)	BG (	HWM F	ield Dat	HBG OHWM Field Data Sheet (Arid West)	(Arid W	(est)							
Time GPS     Below OHVM     Actine (A) DO(1) (or Photo Deta)       Time GPS     Samule Bies     Near Bies     Near Bies     Define (A) DO(1) (or Photo Deta)     Photo DO(M)     ALOHVM     ALOHVM       Ratter (A) DO(1)     Define (A) DO(1) (or Photo Deta)     Define (A) DO(1) (or Photo	GB Team	#1		Project Nam	ne: Deser	tXpress				HBG Sub-Basin # (1 – 41) $\mathcal{S}$	T-TOWN OF SLOAN	HUC 12#	
The left sample set $M_{\text{point}}$ but $M_{point$								Drainag	e Data				Comments
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Trime gPsDrainage DataTime gPsSample sheetMap sheetOHW or recordActive (A) boom (D) (N)Up (U) (or priorPhoto Reion Active (A) SheetDenoid or muth recordDenoid coldDenoid (N) $411$ 5 $511$ $52$ $51$ $A$ $A$ $A$ $A$ $A$ $411$ 5 $511$ $52$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ 5 $511$ $A$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $511$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $S11$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $S$ $A$ $A$ $A$ $A$ $A$ $A$ $111$ $B$ $A$ $A$ $B$ $A$ $A$ $A$ $111$ $B$ $A$ $A$ $A$ $A$ <	tXpress	HBG Sub-Basin # (1-41) 37-TOWN OF SLOAN	N HUC.12#	
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up or Down-stope from eased? Flat No Slope . Check to see patterns Comment over pass area with moticide privinge 1007 with a 54. 4×2 Scar) mile 143.3 Comment Number 2 Mts 31 M 4 1. 441 -

F-I.5-90

#### **ICF Jones & Stokes**

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#### Wetland Determination Data Forms – Arid West Region

#### For DesertXpress

HUC 12 Watershed Town of Sloan

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 37

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

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-	ETERMINATION				2/26/08
roject/Site: DESEPT XPRESS	City/Cc	ounty: <u>CLARK</u>		Sampling Da	te: <u>2/26/08</u> int: <u>88-1 Wah</u> d
					88-1E
hvestigator(s): KELLY SHOOK, BRYANN	LORSE, JOHN Section	n, Township, Rang	e:,,		Slope (%): 3-7
nvestigator(s): KELLY SHOOK, BRYANT andform (hillslope, terrace, etc.): VALLEY FLOC	DR Local	relief (concave, co	nvex, none); <u>INC</u>	45027	DatumHAD 83
andform (hillslope, terrace, etc.): <u>VAUEY FLOU</u> Subregion (LRR):	tai: 1 - 1 (5."	227340	Long: 1 5 5 7	ssification: NA	29NE 11
Soil Map Unit Name:			NWI CI		
the site typical	for this time of year r	es No	(If no, explain	In Remarks.)	s No
	VO significantly distort				- )
i bian il. Il anno il a	N CZ PSTIPANY (NODENIO	(LUQ)		nswers in Remarks	
SUMMARY OF FINDINGS – Attach site	map showing sam	pling point lo	cations, trans	ects, importar	it features, etc.
Hydrophytic Vegetation Present? Yes	No V	Is the Sampled A		No	
Hydric Soll Present? Yes	No No	within a Wetland			
Wettand Hydrology Hosen			Photo	+++++++++++++++++++++++++++++++++++++	e upland soilpit. 'in channel "
Remarks: Adj, lend use: Open, underlight land to the ea.	2 + 1. VB - Land	chall but T-15	4	47 facir 48 facir	to East along cha
Open, underliged land to the ear	se + while, trades	I'M BY I N	`		<u>ب</u>
LV Blud. (on the east).					
EGETATION	Absolute Don	ninant Indicator	Dominance Tes		d
Tree Stratum (Use scientific names.)	% Cover Spr	ecies? <u>Status</u>	Number of Domi That Are OBL, F	hant Species	(A)
1					0
2	· 		Total Number of Species Across	Dominant All Strata:	Д (В)
3			Percent of Domi		d I
4	al Cover:		That Are OBL, F	ACW, or FAC:	(A/B)
Sapling/Shrub Stratum		NU	Prevalence Ind		
1 Larrea Tridentation		J NL. UPE			Multiply by:
2. Hymenoclea salsola		JARACIE	OBL species	x1:	=
3			FACW species	x 2	=
4				x 3	
5To	tal Cover: <u>5</u>		FACU species		=
Herb Stratum		1 HPE	UPL species Column Totals:	_ (0	×13
1. rsalsola tragus		NNLUPE			h
2/ Aristida purpurea		NNLUPE	Prevalence	e Index = B/A = _	
3. <u>Ambresia dunosa</u> A Bromus tectorum		NNUVE		egetation Indicato	ors:
4. 0101100		1 FACU		e Test is >50% e Index is ≤3.0 <sup>1</sup>	
- so - c hespiten		<u>(FAC4)</u>	Morpholog	ical Adaptations <sup>1</sup> (f	Provide supporting
7. Cos per Nulz			data in	Remarks of on a se	sparate street)
			Problemat	c Hydrophytic Veg	etation' (Explain)
T	otal Cover: <u>5</u>			وافصرت أستحر الأحرج والارز	and bydrology must
Woody Vine Stratum			<sup>1</sup> Indicators of h be present.	yond soli and wella	and hydrology must
1					
2T	otal Cover:		Hydrophytic Vegetation		
% Bare Ground in Herb Stratum <u>95</u> Remarks: Veg. is same in both	% Cover of Blotic Crus	1_Ø	Present?	Yes	NO //
	inland and di	ralhale.	"		
Remarks: Veg. is same in both	up contact where out	0			
U.	F-1.5-	92			·
					_

OIL Profile Description: (Describe to the depth needed to document the indicator or cor	Sampling Point: 88-11
Profile Description: (Describe to the department of a start of the second start of the	nfirm the absence of mulcatorely
Redox Features/1	A Remarks
Profile Description: (Describe to the depth needed to document at the document at the depth needed to document at the document	Remarks
	Gravel
	Gravelly- Loam
5-12	
13-20	
	Loaing sand
1-2 10YR 5/4+	
	<i>x y</i>
3-20 // /.	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lini	ing, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
<sup>1</sup> Type: C=Concentration, D=Depletion, NM=Reduced matrix Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	
	1 cm Muck (A9) (LRR C)
Histosol (A1) Chinand Mairly (S6)	2 cm Muck (A10) (LRR B)
Histic Epipeuoli (A2)	Reduced Vertic (F18)
Black Histic (A3)	Red Parent Material (TF2)
Hydrogen Sunde (M)	Other (Explain in Remarks)
Stratified Layers (AS) (Chico)	
Depleted Below Dark Surface (A11) Depleted Dark Surface (A11)	
Thick Dark Surface (A12)	<sup>3</sup> Indicators of hydrophytic vegetation and
Thick Dark Surface (A12) Vernal Pools (F9)	wetland hydrology must be present.
Sandy Gleyed Matrix (S4)	
Restrictive Layer (if present):	
Туре:	Hydric Soil Present? Yes No
Depth (inches):	
HYDROLOGY	Secondary Indicators (2 or more require
Wetland Hydrology Indicators:	Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is sufficient)	Sediment Deposits (B2) (Riverine)
Sat Clust (DT)	Drift Deposits (B3) (Riverine)
	Drainage Patterns (B10)
Biolic Clust (D12)	
High Water Table (A2)  High Water Table (A2)  Aguatic Invertebrates (B13)	Drv-Season Water Table (C2)
High Water Table (A2)     Biblic Crush (B12)       Saturation (A3)     Aquatic Invertebrates (B13)       Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
High Water Table (A2)       Biblic Clust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Oxidized Rhizospheres along Livit	Dry-Season Water Table (C2) ing Roots (C3) Thin Muck Surface (C7)
High Water Table (A2)       Biblic Clust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livit         Presence of Reduced Iron (C4)       Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)
High Water Table (A2)       Biblic Clust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livit         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)     Soils (C6) Saturation Visible on Aeriai Image
High Water Table (A2)       Biblic Clust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livi         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)     Soils (C6)     Saturation Visible on Aeriai Image     Shallow Aquitard (D3)
High Water Table (A2)       Biblic Crush (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livi         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)     Soils (C6) Saturation Visible on Aeriai Image
High Water Table (A2)       Biblic Crush (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livi         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)     Soils (C6)     Saturation Visible on Aeriai Image     Shallow Aquitard (D3)
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High Water Table (A2)       Biblic Clust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livi         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Water-Stained Leaves (B9)	Dry-Season Water Table (C2)     Thin Muck Surface (C7)     Crayfish Burrows (C8)     Soils (C6)     Saturation Visible on Aerial Image     Shallow Aquitard (D3)     FAC-Neutral Test (D5)
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High Water Table (A2)       Biblic Clush (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livi         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       V         Field Observations:       No       Depth (inches):         Surface Water Present?       Yes       No       Depth (inches):         Water Table Present?       Yes       No       Depth (inches):	Dry-Season Water Table (C2)      ing Roots (C3) Thin Muck Surface (C7)         Crayfish Burrows (C8)      Soils (C6) Saturation Visible on Aerial Imagel     Shallow Aquitard (D3)     FAC-Neutral Test (D5)      Wetland Hydrology Present? Yes No
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<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1) (Nonriverine)</li> <li>Sediment Deposits (B2) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> <li>Field Observations:</li> <li>Surface Water Present?</li> <li>Yes No</li> <li>V Depth (inches):</li> <li>Saturation Present?</li> <li>Yes</li> <li>No</li> <li>Depth (inches):</li> <li>Cincludes capillary fringe)</li> <li>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective</li> </ul>	Dry-Season Water Table (C2)      ing Roots (C3) Thin Muck Surface (C7)         Crayfish Burrows (C8)      Soils (C6) Saturation Visible on Aerial Imagel     Shallow Aquitard (D3)     FAC-Neutral Test (D5)      Wetland Hydrology Present? Yes No
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1) (Nonriverine)</li> <li>Sediment Deposits (B2) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> <li>Field Observations:</li> <li>Surface Water Present?</li> <li>Yes No</li> <li>V Depth (inches):</li> <li>Saturation Present?</li> <li>Yes</li> <li>No</li> <li>Depth (inches):</li> <li>Cincludes capillary fringe)</li> <li>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective</li> </ul>	Dry-Season Water Table (C2)      ing Roots (C3) Thin Muck Surface (C7)         Crayfish Burrows (C8)      Soils (C6) Saturation Visible on Aerial Imagel     Shallow Aquitard (D3)     FAC-Neutral Test (D5)      Wetland Hydrology Present? Yes No
<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1) (Nonriverine)</li> <li>Sediment Deposits (B2) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> <li>Field Observations:</li> <li>Surface Water Present?</li> <li>Yes No</li> <li>V Depth (inches):</li> <li>Saturation Present?</li> <li>Yes</li> <li>No</li> <li>Depth (inches):</li> <li>Cincludes capillary fringe)</li> <li>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective</li> </ul>	Dry-Season Water Table (C2)      ing Roots (C3) Thin Muck Surface (C7)         Crayfish Burrows (C8)      Soils (C6) Saturation Visible on Aerial Imagel     Shallow Aquitard (D3)     FAC-Neutral Test (D5)      Wetland Hydrology Present? Yes No
High Water Table (A2)      Biblic Crush (B12)        Saturation (A3)      Aquatic Invertebrates (B13)        Water Marks (B1) (Nonriverine)      Hydrogen Sulfide Odor (C1)        Sediment Deposits (B2) (Nonriverine)      Oxidized Rhizospheres along Livi        Drift Deposits (B3) (Nonriverine)      Presence of Reduced Iron (C4)        Surface Soil Cracks (B6)      Recent Iron Reduction in Plowed        Induction Visible on Aerial Imagery (B7)      Other (Explain in Remarks)        Water-Stained Leaves (B9)	Dry-Season Water Table (C2)      ing Roots (C3) Thin Muck Surface (C7)         Crayfish Burrows (C8)      Soils (C6) Saturation Visible on Aerial Imagel     Shallow Aquitard (D3)     FAC-Neutral Test (D5)      Wetland Hydrology Present? Yes No

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

	Sampling Date: 2/29/08
Project/Site: <u>Desert X Press</u> Applicant/Owner: <u>Circle Point</u> Investigator(s): <u>Kellu Shook, John Holson, Bryan</u> Mossection, Township, Local relief (concav	State: IV Sampling Point: 88-2W
Applicant/Owner: Circle Point	0.0.0 1 5
Investigator(s): Kulu Shook, John Ho (Son, Bright Second rolled (concave)	e. convex. none): NONe Slope (%): 10-15
Investigator(s): <u>Kelly Shook, John Holson, Bryan M</u> DSection, Township, Landform (hillslope, terrace, etc.): <u>Hillslope</u> Local relief (concav Subregion (LRR): <u>D</u>	Datum: 35, 292,096 Datum: NAD 02
Subregion (LRR):	NWI classification: ひん こみど ()
Soil Map Unit Name:	(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of your the Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? A	re "Normal Circumstances" present? Yes No
	needed, explain any answers in Remarks.)
Are Vegetation 100, Soil 100, or Hydrology 100 high any proceeding point	t locations, transects, important features, etc.
SUMMARY OF FINDINGS – Attach site map showing sampling poin	
Hydrophytic Vegetation Present? Yes No Is the Samp	led Area
Hydrophylic Vegetation resent?     Yes     No       Hydric Soil Present?     Yes     No       Wetland Hydrology Present?     Yes     No	tland? Yes No V
	Photos
Remarks: See remarks on reverse proje.	175 of the soil pit 174 facing N & channel bank 173 " JS @ channel bank
	173 " IS @ channel Bert 172 " EQ culvert 171 " We channel upstream
VEGETATION Absolute Dominant Indicat	or Dominance Test worksheet:
Tree Stratum (Use scientific names.) <u>% Cover Species? Statu</u>	Number of Dominant Species $\phi$ (A) That Are OBL, FACW, or FAC:
1	
2	Total Number of Dominant Species Across All Strata: (B)
3	Borcoot of Dominant Species
4 Total Cover:	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
<u>Sapling/Shrub Stratum</u> <u>1. Hymenoclea</u> Salsola <u>3</u> <u>YNL-UP</u>	Total % Cover of: Iviuitipiy by,
2	OBL species x 1 =
4	FACW species         x 2 =           FAC species         x 3 =
5	FACU species x4 =
Total Cover:	UPL species $1 \times 5 = 55$
Herb Stratum 2 Y UP	Column Totals: (A) (B)
2 Schiemers barbatus	Prevalence Index = B/A =
3. [ Boutelona barbara var chimit ]	
4. 19 (F D. Halls (FAR	(+) Dominance Test Is >50%
as one Nuch	Prevalence Index is <3.01
6	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1	
Total Cover:	Hydrophytic Vegetation
% Bare Ground in Herb Stratum <u>96</u> % Cover of Biotic Crust <u>9</u>	Present? Yes No V
Remarks:	
ELEON	

OIL	Sampling Point: <u>88-2-W</u>
Profile Description: (Describe to the depth needed to document the indicator or co	onfirm the absence of indicators.)
Redox Features	oc <sup>2</sup> Remarks
nches) Color (moist) % Color (moist) % Type	Sand
-12 10YR 5/4	
>12 pick ax refusal - cali che langur	
	·
ype: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lir	ning, RC=Root Channel, M=Matrix.
ype: C=Concentration, D=Depleton, NM=Reason method ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histosol (A1) Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	Reduced Vertic (F18)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Lavers (A5) (LRR C) Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D) Redox Dark Surface (F6)	
Depieted Below Dark Sunace (ATT)	
_ 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)	
estrictive Layer (if present):	
Туре:	Hydric Soil Present? Yes No
Depth (inches):	Hydric Soil Present? Yes No
Depth (inches): emarks: SDil Pit excalled in channel,	Hydric Soil Present? Yes No
Depth (inches): emarks: SDil Pit excalled in channel, DROLOGY	
Depth (Inches): amarks: SDII PIT excalled in channel, 'DROLOGY 'etland Hydrology Indicators:	Secondary Indicators (2 or more required)
Depth (Inches): amarks: SDII PIT excalled in Channel, DROLOGY etland Hydrology Indicators: imary Indicators (any one indicator is sufficient)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches):	Secondary Indicators (2 or more required) — Water Marks (B1) (Riverine) — Sediment Deposits (B2) (Riverine) V Drift Deposits (B3) (Riverine)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) V Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) V Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) V Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Roots (C3) Thin Muck Surface (C7)
Depth (inches):	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) V Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches):	Secondary Indicators (2 or more required)
Depth (inches):	Secondary Indicators (2 or more required)
Depth (Inches):	Secondary Indicators (2 or more required)
Depth (inches):	Secondary Indicators (2 or more required)
Depth (inches):	Secondary Indicators (2 or more required)
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)         Ing Roots (C3)         Thin Muck Surface (C7)         Crayfish Burrows (C8)         Soils (C6)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)
Depth (inches):	Secondary Indicators (2 or more required)
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)         Ing Roots (C3)         Thin Muck Surface (C7)         Crayfish Burrows (C8)         Soils (C6)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)
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)         Ing Roots (C3)         Thin Muck Surface (C7)         Crayfish Burrows (C8)         Soils (C6)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)
Depth (inches):	Secondary Indicators (2 or more required)
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Depth (Inches):	Secondary Indicators (2 or more required)
Depth (Inches):	Secondary Indicators (2 or more required)
Depth (inches):	Secondary Indicators (2 or more required)
Depth (Inches):	Secondary Indicators (2 or more required)

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Nora + V Dess	C	ty/County:a	NE IV	Sampling Date: 29-1 14
oject/site: Desert X Press	,		State:N V	Sampling Point: 01-110
vestigator(s): Bryan Morse, Kelly Shoot	, John Holson S	ection, Township, Ra	nge:	
vestigator(s): <u>Bruan Marse, Kelly Shoot</u> andform (hillslope, terrace, etc.): <u>Gentle</u>	slopei	ocal relief (concave,	convex, none): NONE	
andform (hillslope, terrace, etc.).		115,210269	- Longily 35,90%	756 Datum: NAD 83 cation: NA 20N
the site types on the site type	pical for this time of yea	r? Yes No _	(if no, explain in I	present? Yes No
	v /v ⊂ _signmeanny -	131012021		
			eeded, explain any answ	ers in Remarking
re Vegetation <u>N</u> っ, Soil <u>N</u> 。, or Hydrolog UMMARY OF FINDINGS – Attach s	ite map showing	sampling point	locations, transect	s, important features, et
	No No	Is the Sample		No
Hydric Soil Present? Yes	No	within a Wetia		
		1	Ful Photos	= 166 facing W 165 1 N 164 11 5 @ CBC
Remarks: Adj. land use is I-15-to East:	of open underter	and to NJS,	x vQ 1	
3				165 Il soil pit i
/EGETATION	Absoiute	Dominant Indicator	Dominance Test wo	
Tree Stratum (Use scientific names.)	<u>% Cover</u>	Species? Status	That Are OBL, FACV	V, or FAC: (A)
×		·	<ul> <li>Total Number of Dor</li> </ul>	nicant /
2			_ Species Across All S	strata: (B)
3			Percent of Dominant	Species
4	Total Cover: Ø	-	That Are OBL, FAC	
Sapling/Shrub Stratum	3	Y NL UPE	Prevalence Index v	
		Y MUSPE	Total % Cover o	x 1 =
- Hungelog salsola	2	Y ML-WPE	- 1	x 2 =
4. Ericameria laricitolia		N NL-UPL	FAC species	x 3 =
5	a		FACU species	x4 = 11 $x5 = \frac{55}{5}$
	Total Cover: 9	-	UPL species	11x5=5
Herb Stratum 1. Schigmus barbatus		- YNL UPE		11(A) <u>55</u>
2 Bromus tectorium		_ YNL-OTL	Prevalence In	dex = B/A =
2			Hydrophytic Vege	tation Indicators:
			Dominance Te	st is >50%
5			Dravalance int	lex is ≤3.0'
6				Adaptations <sup>1</sup> (Provide supportin narks or on a separate sheet)
7 8			Problematic H	ydrophytic Vegetation <sup>1</sup> (Explain)
δ,	Total Cover: _2_	_		
Woody Vine Stratum			<sup>1</sup> Indicators of hydri be present.	c soil and wetland hydrology mu
1				/
2	Total Cover:		Hydrophytic Vegetation	
8 Bare Ground in Herb Stratum 99	, , , , , , , , , , , , , , , , , , ,	Onunt	Present?	Yes No
A second in Parts Stratum 1.7			1 0	A. F. Laliana

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DIL	I I I I I I I I I I I I I I I I I I I	or confirm the absence of indicators.)
IL ofile Description: (Describe to the depth ne	eded to document the indicator	
enth Matrix	Redox Features olor (moist) % Type <sup>1</sup>	Remarks
		Sand w/ gravel/cobble
-20 7.5 YR 5/4		
المستعمر والمستعمر المراجع والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر والمستعمر		
······································		~
·		
		·
ype: C=Concentration, D=Depletion, RM=Red	used Matrix <sup>2</sup> Location: PL=P(	pre Lining, RC=Root Channel, M=Matrix.
ype: C=Concentration, D=Depletion, RM-Red /dric Soil Indicators: (Applicable to all LRR	s, unless otherwise noted.)	
	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Black Histic (A3)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Levers (A5) (LBR 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)		
estrictive Layer (if present):		
Туре:	-	Hydric Soil Present? Yes No
Depth (inches):	-	
Remarks: Soil pit in	channel,	
	channel,	
DROLOGY	channel,	Secondary Indicators (2 or more required)
/DROLOGY /etland Hydrology Indicators:		Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
DROLOGY /etland Hydrology Indicators:	ξ)	Water Marks (B1) (Riverine)
DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien	t) Salt Crust (B11)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
DROLOGY fetland Hydrology Indicators: rimary Indicators (any one indicator is sufficien _ Surface Water (A1)	t) Salt Crust (B11) Biotic Crust (B12)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
<b>DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien Surface Water (A1) High Water Table (A2)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
<b>DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien Surface Water (A1) High Water Table (A2) Saturation (A3)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
<b>DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Living Roots (C3) Thin Muck Surface (C7)
DROLOGY /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien _ Surface Water (A1) _ High Water Table (A2) _ Saturation (A3) _ Water Marks (B1) (Nonriverine) _ Sediment Deposits (B2) (Nonriverine)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Living Roots (C3) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8)
<b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P	
Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficien 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)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron	
<b>DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (any one indicator is sufficien _ 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)	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P	
DROLOGY etiand Hydrology Indicators: <u>imary Indicators (any one indicator is sufficien</u> 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) Feld Observations:	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Living Roots (C3) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) iowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutrai Test (D5)
DROLOGY etiand Hydrology Indicators: imary Indicators (any one indicator is sufficien 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 Aeriat Imagery (B7) Water-Stained Leaves (B9) feld Observations:	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) ng Living Roots (C3) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) iowed Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutrai Test (D5)
/DROLOGY         /etland Hydrology Indicators:         rimary Indicators (any one indicator is sufficien         _ Surface Water (A1)         _ High Water Table (A2)         _ Saturation (A3)         _ Water Marks (B1) (Nonriverine)         _ Sediment Deposits (B2) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Surface Soit Cracks (B6)         _ Inundation Visible on Aerial Imagery (B7)         _ Water-Stained Leaves (B9)         ield Observations:         urface Water Present?       Yes No	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Sowed Soils (C6) Saturation Visible on Aerial Imagery (C9) FAC-Neutral Test (D5)
<b>'DROLOGY</b> /etland Hydrology Indicators:         rimary Indicators (any one indicator is sufficient)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)         Drift Deposits (B3) (Nonriverine)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B7)         Water-Stained Leaves (B9)         Held Observations:         urface Water Present?       Yes No         Vater Table Present?       Yes No	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alor Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
<b>/DROLOGY</b> /etland Hydrology Indicators:         rimary Indicators (any one indicator is sufficien)         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)         ield Observations:         urface Water Present?       Yes No         vater Table Present?       Yes No         aturation Present?       Yes No	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alo Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
/DROLOGY         /etland Hydrology Indicators:         rimary Indicators (any one indicator is sufficien)         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)         Teld Observations:         Surface Water Present?       Yes No         Saturation Present?       Yes No	t) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alo Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches):	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (any one indicator is sufficien 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 No Saturation Present? Yes No Saturat		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY Vetland Hydrology Indicators: Primary Indicators (any one indicator is sufficien 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 No Saturation Present? Yes No Saturat		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
//DROLOGY         //etiand Hydrology Indicators:         rimary Indicators (any one indicator is sufficient)		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY         Vetland Hydrology Indicators:         Immary Indicators (any one indicator is sufficient)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)         Drift Deposits (B3) (Nonriverine)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B7)         Water-Stained Leaves (B9)         'teld Observations:         Surface Water Present?       Yes No         Saturation Present?		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
<b>DROLOGY</b> /etland Hydrology Indicators:         rimary Indicators (any one indicator is sufficient)         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)         Drift Deposits (B3) (Nonriverine)         Surface Soil Cracks (B6)         Inundation Visible on Aeriat Imagery (B7)         Water-Stained Leaves (B9)         ield Observations:         urface Water Present?       Yes No         aturation Present?       Yes No         ncludes capillary fringe)       No         vescribe Recorded Data (stream gauge, monitor)         temarks:       81 CBC wadwr I=15, Shallow, Braided Eph.	t)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alou Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Blueline drainage (ha	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
YDROLOGY         Vetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)         Drift Deposits (B3) (Nonriverine)         Surface Soil Cracks (B6)         Inundation Visible on Aerial Imagery (B7)         Water-Stained Leaves (B9)         *Ield Observations:         Surface Water Present?       Yes No         Saturation Present?	t)  Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres alou Presence of Reduced Iron Recent Iron Reduction in P Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Blueline drainage (ha	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) (C4) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No

	See associated,
WETLAND DETERMINATION DATA FORM -	Arid West Region [atata form created for 'in channel' 89-114.
Project/Site: Desent Varess City/County: Clark	Sampling Date: 2/29/08
Project/Site: Desert XPress	State: Sampling Point: 89-1W UPL
applicant/Owner: <u>Circle Point</u> Investigator(s): <u>Kelly Shook, Bryon Morse, John Holso</u> <sup>M</sup> Section, Township, Ran	ge:
Investigator(s): <u>Kelly Shook, Bryan Manse, John Holso</u> fSection, Township, Ran Landform (hillslope, terrace, etc.): <u>Gerocte hillslope</u> Local relief (concave, co	Siope (%): 10-15
Landform (hillislope, terrace, etc.): <u>Gertette hillislope</u> Local relief (concave, co Subregion (LRR): <u>Lattice</u> Lottice - US, 209 845	tong: N -35706792 Datum: 14083
Subregion (LRR):	NWI classification: 1/4 ZONE ()
Soil Map Unit Name:	(If po, explain in Remarks.)
Soil Map Unit Name: No N	Normal Circumstances" present? Yes No
Are Vegetation NO, Soil NO, or Hydrology <u>NO</u> significantly disturbed in the	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	cations, transects, important reatility, set
	٨٢٥٩
Hydrophydo y cgord don t tall	
Hydric Soil Present?     Yes     No     P       Wetland Hydrology Present?     Yes     No     Ves	
Remarks: See associated data form created Tor ST-IV	) in channel. Photo 162: Upland soil pit
Upland soil pit.	
VEGETATION Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) %Cover Species? Status	Number of Dominant Species (A)
1	
2	Total Number of Dominant (B)
3	
4 Total Cover:	That Are OBL, FACW, or FAC: (A/B)
Sepling/Shrub Stratum	Prevalence Index worksheet:
1. Larrea tridentata 10 1 MUDIE	Total % Cover of: Multiply by:
2. Ambrosia dumosa 3 10001=	OBL species x 1 =
3	FACW species x 2 =
4	FAC species x 3 =
5	FACU species x4 = UPL species x5 =
Herb Stratum	UPL species $18 \times 5 = -70$
1. Erodium cicutatium	Column Totals: <u>IR</u> (A) <u>70</u> (B)
	Prevalence index = B/A =
2 Phacelia Premantic	Hydrophytic Vegetation Indicators:
4 Schismus barbatus	Dominance Test is >50%
5	Prevalence Index is $\leq 3.0^{1}$
6 7	<ul> <li>Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</li> </ul>
	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8	
Woody Vine Stratum	<sup>1</sup> indicators of hydric soil and wetland hydrology must
1	be present.
2	Hydrophytic Vegetation
	Present? Yes No
% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust 2	
Remarks:	
F-1.5-98	

Anternation with the

S	DI	L
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#### Sampling Point: 89-1WUPL

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Profile Description: (Describe to the dep	th needed to document the indicator or co	onfirm the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	c <sup>2</sup> Texture Remarks
(inches) Color (moist) %		Sand + gravel
1-20 10YR 514		Samar grind
······································		
		ning, RC=Root Channel, M=Matrix.
Type: C=Concentration, D=Depletion, RM Tydric Soil Indicators: (Applicable to all		Indicators for Problematic Hydric Soils <sup>3</sup> :
	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
Histosol (A1)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Black Histic (A3) 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)	wettand hydrology must be present.
Sandy Gleyed Matrix (S4)		Webchie Hydelegy Marte P
Restrictive Layer (if present):		
Туре:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks: Soil pit in upland		
YDROLOGY		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		
Primary Indicators (any one indicator is suf	ficient)	Water Marks (B1) (Riverine)
Surface Water (A1)	Sait Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2)	Blotic Crust (B12)	Drift Deposits (B3) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2) (NonriverIne)	) Oxidized Rhizospheres along Livi	ng Roots (C3) Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Craytish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Plowed	Soils (C6) Saturation Visible on Aerial Imagery (C9
Inundation Visible on Aeriai Imagery (I	37) Other (Explain in Remarks)	Shallow Aquitard (D3)
	1. de la calendar esta en entre en entre entre en entre e	FAC-Neutral Test (D5)
Field Observations:		
Curface Water Present? Yes	No Depth (inches):	
	No Depth (inches):	/
	No Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes		1
our de la contra de		
optarenter		l clions), if available:
Optional	nonitoring well, aerial photos, previous inspec	t tions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous inspec	l ctions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous inspec	l ctions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous inspec	L ctions), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, n	nonitoring well, aerial photos, previous inspec	L ctions), if available:

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WETLAND DET	ERMINATION [	DATA FORM -	Arid West Region
Norat X Prace	Citv/0	County: Clas	Sampling Date:         2/29/08
Project/Site: <u>Lesero N ress</u>	0.1,1		State: NV Sampling Point: 90-1W
Applicant/Owner: <u>Circle Point</u> investigator(s): <u>John Holson, Bryan Monse</u>	Kelly Shook Secti	on, Township, Rar	nge:
Investigator(s): <u>30-00000000000000000000000000000000000</u>	موج Loca	al relief (concave, c	convex, none): <u>MONE</u> Slope (%): <u>1-5</u> Long: 35,949,896 Datum: <u>NAD 83</u>
		182945	LORG: 35,949,896 Datum: NAD 85
Soil Map Unit Name:			
Are climatic / hydrologic conditions on the site typical for	this time of year?	Yes No	(if no, explain in Remarks.)
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u>	2_ significantly distu	rbed? Are	Normal Circumstances" present? Yes No
No Vacatation NO Soil NO or Hydrology NG	_ naturally problem	iatic? (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ap showing sar	npling point lo	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	Is the Sampled within a Wetlan	Area
Wetland Hydrology Present? Yes Remarks:	No		Photo 144 facing wat wash upstream
Remeins.			143 " US along I-15 142 " N" " E at culverts 140 " Bo'll p't.
VEGETATION			Dominance Test worksheet:
Tree Stratum (Use scientific names.)	<u>% Cover</u> Sp	minant Indicator pecies? <u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:
1 2			Total Number of Dominant U
3			Species Across All Strata:(B)
4	over:		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	15 (	1 NL WPL	Prevalence Index worksheet:
1. Baccharis brachuphulla	<u> </u>	/ NU-UPE	Total % Cover of: Multiply by:
2. Ambrosia eriblentia		1 FACU	OBL species x1 =
3. <u>Acacia greggii</u>			FACW species x 2 =
5			FAC species x 3 = FACU species/ x 4 =
	Cover: <u>18</u>		UPL species $19$ $x5 = 95$
Herb Stratum 1. Schismus barbatus	<u> </u>	/ NL UPE_	Column Totals: <u>20</u> (A) <u>77</u> (B)
2. Brassica townetortii		/ NL-HPT_	Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators;
4			Dominance Test is >50%
5			Prevalence Index is ≤3.0 <sup>1</sup>
6			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total	Cover: <u>2</u>		
Woody Vine Stratum 1		·	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2 Total (	Cover:		Hydrophytic
	Cover of Biotic Crust	1_Ø	Vegetation Present? Yes No
Remarks:			·

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#### Sampling Point: 90-1 W

Profile Description	: (Describe to	the depth nee	ded to docur	nent the in	ndicator	or confirm	the absence of indicators.)	
	Matrix	•	Redo	<u>x Features</u>				
Depth (inches) <u>Co</u>	lor (moist)	<u>% Co</u>	lor (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
$\Lambda - 2$							Gravel	
0	YR 6/4						Sand	
2-20 10	16 -14							
				_ ,				
<u> </u>								
						_		
······						······		
						<u> </u>		
							· · · · · · · · · · · · · · · · · · ·	
<sup>1</sup> Type: C=Concenti		tion RM=Redu	ced Matrix.	<sup>2</sup> Location	PL=Por	e Lining, R	C=Root Channel, M=Matrix.	
Hydric Soil Indicat	ors: (Applica	ble to all LRRs	, unless othe	rwise note	ed.)		Indicators for Problematic Hydric Sons :	
			Sandy Red	ox (S5)			1 cm Muck (A9) (LRR C)	
Histosol (A1)	. (42)	. –	Stripped M				2 cm Muck (A10) (LRR B)	
Histic Epipedor Black Histic (A:		-	_ Loamy Mud	ky Mineral	(F1)		Reduced Vertic (F18)	
Hydrogen Sulfi			Loamy Gle	yed Matrix	(F2)		Red Parent Material (TF2)	
Stratified Layer		<u> </u>	Depieted N		-		Other (Explain in Remarks)	
1 cm Muck (A9			Redox Dari	k Surface (	F6)			
Depleted Below	v Dark Surface	(A11)	_ Depleted D					
Thick Dark Sur			Redox Dep	ressions (i	-8)		A second to be the second the ord	
Sandy Mucky N		_	Vernal Poc				<sup>3</sup> indicators of hydrophytic vegetation and	
Sandy Gleyed		_					wetland hydrology must be present.	. <u></u>
Restrictive Layer								
Туре:								/
							Hydric Soil Present? Yes No	
	pit e	une under	the ch	THE PA MAG	L.			
Remarks: Soil	PITE	X CA VA TER		67 L. 19 L. 19 V.				
	•							
							· · · · · · · · · · · · · · · · · · ·	
HYDROLOGY								
	uladiostora						Secondary Indicators (2 or more require	<u>d)</u>
Wetland Hydrolog		ton in aufficient	1				Water Marks (B1) (Riverine)	
Primary Indicators		<u>nor is sumcient</u>	Call Cau	+ (011)			Sediment Deposits (B2) (Riverine)	
Surface Water	(A1)		Salt Crus				Drift Deposits (B3) (Riverine)	

<ul> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1) (Nonriverine)</li> <li>Sediment Deposits (B2) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> </ul>	<ul> <li> Biotic Crust (B12)</li> <li> Aquatic Invertebrates (B13)</li> <li> Hydrogen Sulfide Odor (C1)</li> <li> Oxidized Rhizospheres along Living</li> <li> Presence of Reduced Iron (C4)</li> <li> Recent Iron Reduction in Plowed Sc</li> <li> Other (Explain in Remarks)</li> </ul>	Crayfish Burrows (C8)
Field Observations:         Surface Water Present?       Yes No         Water Table Present?       Yes No         Saturation Present?       Yes No         (includes capillary fringe)       No         Describe Recorded Data (stream gauge, monit	Depth (inches):	Wetland Hydrology Present? Yes No

Remarks: THb. to Duck Creek. 4-12'CBCs under 15. Flows enter CBCs from south. OHM = 35' WX2'h 1:2 bank slope F-I.5-101

#### WETLAND DETERMINATION DATA FORM – Arid West Region

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WETLAND DETERMINATION	2/29/08
signt/site: Desert Xpress City/	County: <u>Clark</u> Sampling Date: <u>2/29/08</u> State: <u>NV</u> Sampling Point: <u>90-2</u> W
in the circle point	State: _/V / Sampling Found
plicant/Owner: <u>Circle Point</u> restigator(s): <u>Kelly Shook, Bryan Moirse, John Holson</u> Sect	on, Township, Range:Slope (%):Slope
restigator(s): <u>Nelle Studier de billstope</u> Loca	i relief (concave, convex, none): <u>NOVIC</u> SIDPE (%).
ndform (hillistope, terrace, etc.).	19316日 [Comg: 35,94796] Datum: [199 62
bregion (LRR):	19310日 Long NWI classification: NA といいに
e climatic / hydrologic conditions on the site typical for this time of year?	(es No (If no, explain in Remarks.)
e climatic / hydrologic conditions on the site typical for the same and	
e Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> significantly distu	atic? (If needed, explain any answers in Remarks.)
e Vegetation <u>No</u> , Soll <u>No</u> , or Hydrology <u>No</u> naturally problem	mpling point locations, transects, important features, etc
UMMARY OF FINDINGS – Attach site map showing sa	npling point locations, transects, important features, etc
	Le the Sompled Area
Yes No Yes	within a Wetland? Yes No
Hydric Soil Present?     Yes No       Wetland Hydrology Present?     Yes No	
Remarks:	149 Facing E at culvert 149 Facing E at culvert 148 11 N at channel bank
	147 " Ballong In upstream
	145 " soilpit
EGETATION Absolute D	ominant Indicator Dominance Test worksheet:
Free Stratum (Use scientific names.) <u>% Cover</u> S	pecies? <u>Status</u> Number of Dominant Species (A) That Are OBL, FACW, or FAC:
3	
4	That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum	NL Prevalence Index worksheet:
	Total % Cover of: Multiply by:
2 Scharalcea ambiana	V A/L 12/ OBL species x1 =
3. Baccharis brachughylle 2-	FACW species x2 =
4	FAC species x 3 =
5 Total Cover:	FACU species x 4 =
	NL- UPL species $\frac{15}{15}$ $x_5 = \frac{75}{75}$
1. Bromus tectorum 2_	$\frac{Y}{N} \frac{191}{1000000000000000000000000000000000$
( ) i constantilla	Prevalence Index = B/A =
- Reitelaure hachata var baracita	Hydrophytic Vegetation Indicators:
E Frankling ( Unitary www	Dominance Test is >50%
5. Eriphenron pulchellum	Prevalence Index is ≤3.0'
6.	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
7	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8 Total Cover:	
Woody Vine Stratum	<sup>1</sup> Indicators of hydrlc soil and wetland hydrology mus
1	be present.
	Hydrophytic
Total Cover:	Vegetation Present? Yes No
% Bare Ground in Herb Stratum % Cover of Biotic Cr	

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Sampling Point: <u>90-2 W</u>

Profile Description: (Describe to the depth needed to document the indication	ator or confirm the absence of indicators.)
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Ty	
D-2	Gravel
2-20 104R 5/4	Loamy sand w/ gravel
	0 0
No No No No No No No	
	=Pore Lining, RC=Root Channel, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL: Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
	1 cm Muck (A9) (LRR C)
Histosol (A1) Sandy Redox (S5) Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Black Histic (A3)	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)	
Sandy Mucky Mineral (S1) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	wetland hydrology must be present.
Restrictive Layer (if present):	
Туре:	Hydric Soil Present? Yes No
Depth (inches):	Hydric Soil Present? Yes No
Remarks: Soil pit dug in channel.	
HYDROLOGY	
	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	Water Marks (81) (Riverine)
Primary Indicators (any one indicator is sufficient)	Sediment Deposits (B2) (Riverine)
Surface Water (A1) Sait Crust (B11)	Drift Deposits (B2) (Riverine)
High Water Table (A2) Biotic Crust (B12)	
Saturation (A3) Aquatic Invertebrates (B1	·
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C	
	ong Living Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Drift Deposits (83) (Nonriverine) Presence of Reduced Iror	
Surface Soil Cracks (B6) Recent Iron Reduction in	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remark	s)Shallow Aquitard (D3)
Water-Stained Leaves (89)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No <u>V</u> Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
(includes conflicts frings)	•
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previou	
	Lastit L. Nick Ant
Remarks: 4' CBC under I-15; channel is blue lin	e on topo; trib. to Duck Creek.
Aladustad	that parallels I-15: DHM 30'WX15'h
OHM: 6'WX3'h Southern surle	that parallels - 10 - Utter 30 WARS MI
1: ) here is dance )	
F-1.5-103	

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WETLAND DETERMINAT	ION DATA	A FORM - I	Arid West Regio	n	2/291	108
Dject/Site: Deset-XAress	City/County	: <u>Clar</u>	<u>Le Country</u>	Sampling Da	ite: <u>F 17</u>	541
plicant/Owner: <u>Circle Point</u>			State:/V	Sampling Po		
plicant/Owner: <u>Circle Point</u> vestigator(s): <u>Bryan Morse</u> , <u>Kelly Shnok</u> , John Holson	_ Section, To	wnship, Rang	]e:	,,,,,,,,,	Slopp (%);	1-5
plicant/Owner. <u>Stran Morse</u> , <u>Kelly Shnok</u> , John Holson vestigator(s): <u>Bryan Morse</u> , <u>Kelly Shnok</u> , John Holson ndform (hillslope, terrace, etc.): <u>Hill Stope</u> ubregion (LRR): <u>b</u>	_ Local reile	f (concave, co	nvex, none):		Stope (70).	793
ndform (hillslope, terrace, etc.). <u>Trin or p</u>	115,184	34	LOUR 22, UN 20	<u>) %7</u>	Dalum, <u>194 w.</u> 77	
Ibregion (LRR): <u>L&gt;</u>		_/	NWI class	ification:	ھے	<u> </u>
bil Map Unit Name:	year? Yes	<u></u> No	(If no, explain in	Remarks.)	A No	
e climatic / hydrologic conditions on the she type $\underline{MD}$ significant e Vegetation $\underline{MD}$ , Soil $\underline{MD}$ , or Hydrology $\underline{MD}$ significant	tly disturbed?	Are "N	Iormal Circumstances	" present? Ye	s_ <u>r</u> NU.	
re Vegetation <u>MO_</u> , Soil <u>MO</u> , or Hydrology <u>MO</u> naturally previous to the second sec	problematic?	(lf ne€	eded, explain any ans	wers in Remark	s.)	
e Vegetation <u>MO</u> , Soil <u>FID</u> , of Hydrology	na samplii	na point lo	cations, transec	ts, importar	nt features	, etc.
re Vegetation <u>ho</u> , Soil <u>ho</u> , or Hydrology <u>ho</u> naturally p UMMARY OF FINDINGS – Attach site map showin						
Yes No 1	- Is f	the Sampled	Area			
Hydric Soil Present?	wit	thin a Wetlan	d? Yes_	No		
Watiand Hydrology Present? Yes V No				4 soil pit	المرامد ما	المحال
Remarks: Adj. Land use on east is I-15 + on west i	is Minder	ic, desert		4 soil pit	at channel along I-15 it aslificand at calvert.	1125-
Haj, land list on east it +			15	RI II Wa	at calvert.	-13
						_
/EGETATION	uta Domina	nt indicator	Dominance Test w	orksheet:		
Absolution Absolution and Absolution Absolut	ver <u>Specie</u>	s? Status	Number of Domina	nt Species	$\phi$	(A)
<u>Tree Stratum</u> (Use scientific names.) <u>% Co</u>			That Are OBL, FAC			, ,
2			Total Number of Do Species Across Ali	ominant . Strata:	<u></u>	(B)
3					s./	
4			Percent of Domina That Are OBL, FAC	CW, or FAC:	<u> </u>	(A/B)
Saplino/Shrub Stratum	 	NL	Prevalence Index			
1. Humanaclea salsola 5	— <u> </u>	W SOL	Total % Cover		Multiply by:	
2. Ambrosia evincentra 5	1	NV ATT	OBL species	×1	=	
3			FACW species	x2	=	
4			FAC species	x3	=	
5		11	FACU species	<u> </u>	= 70	
	V	NE	UPL species	14 (A)	70	(B)
Pautolava harbata Vali Darbaia -	<del>\</del>	NLOPE				
		NU-UPE	Prevalence	Index = B/A =		
2 Schiemiss harkanns			Hydrophytic Veg	etation indicat	015.	
3.			Dominance T			
5			- hologic	-VAdaptations <sup>1</sup> (	(Provide supp	orting
6 7			⊤i datain Re	emarks or on a s	Separate oneo	~
			- Problematic	Hydrophytic Ve	getation" (Exp	nan i)
Total Covert	<u> </u>		<sup>1</sup> Indicators of hyd	the coll and wet	iand hydrology	y must
Woody Vine Stratum 1			<ul> <li>Indicators of fixe</li> <li>be present.</li> </ul>			
			Hydrophytic		/	
2 Total Cover:	o		Vegetation	Yes		
% Bare Ground in Herb Stratum % Cover of Bi		1.	Present?	Voe	No Y	_

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SOIL

Sampling Point: <u>90-3</u>W

Depth Matrix	Redox Features	
(inches) Color (moist) %	Color (moist) % Type1 Lo	c <sup>2</sup> <u>Texture</u> <u>Remarks</u>
0-20 10 YR 5/4		Sand
	·	
Manual Manua		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Rec		ng, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Solls <sup>3</sup> :
Hydric Soil Indicators: (Applicable to all LRF		-
	Sandy Redox (S5)	1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
	Stripped Matrix (S6)	Reduced Vertic (F18)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Reddeed venic (FB) Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C) 1 cm M⊔ck (A9) (LRR D)	Depleted Matrix (F3) Redox Dark Surface (F6)	
1 cm Muck (A9) (LRK D) Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	<sup>a</sup> Indicators of hydrophytic vegetation and
Sandy Metry Ministry (C1)		wetiand hydrology must be present.
Restrictive Layer (if present):		
Type:		Hydric Soil Present? Yes No
Type, Depth (Inches): Remarks:		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Depth (inches): Remarks: YDROLOGY		Hydric Soil Present?       Yes No         Secondary indicators (2 or more regulired)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:		Secondary indicators (2 or more required)
Depth (Inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient	)	Secondary indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient 	) Salt Crust (B11)	Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches):	) Salt Crust (B11) Blotic Crust (B12)	Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3)	) Salt Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13)	Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Dralnage Patterns (B10)
Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	) 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) Dry-Season Water Table (C2)
Depth (inches):	) 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) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7)
Depth (inches): temarks: YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	) 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) Dry-Season Water Table (C2) Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches):	) 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 Plowed Soc	Secondary indicators (2 or more required)
Depth (inches):	) 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)         Dry-Season Water Table (C2)         Roots (C3)       Thin Muck Surface (C7)         Crayfish Burrows (C8)         saturation Visible on Aerial Imagery (C4)         Shallow Aquitard (D3)
Depth (inches):	) 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 Plowed Soc	Secondary indicators (2 or more required)
Depth (inches):	) 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 Plowed Sc 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)         Roots (C3)       Thin Muck Surface (C7)         Crayfish Burrows (C8)         saturation Visible on Aerial Imagery (C4)         Shallow Aquitard (D3)
Depth (inches):	) 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 Plowed Sc 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)         Roots (C3)       Thin Muck Surface (C7)         Crayfish Burrows (C8)         saturation Visible on Aerial Imagery (C4)         Shallow Aquitard (D3)
Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient	) 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 Plowed Sc Other (Explain in Remarks) Depth (inches):	Secondary indicators (2 or more required)
Depth (inches):         Remarks:         YDROLOGY         Wetland Hydrology Indicators:         Primary indicators (any one indicator is sufficient	) 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 Plowed Sc Other (Explain in Remarks) 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)         Roots (C3)       Thin Muck Surface (C7)         Crayfish Burrows (C8)         saturation Visible on Aerial Imagery (C4)         Shallow Aquitard (D3)
Depth (inches):		Secondary indicators (2 or more required)
Depth (inches):	) 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 Plowed Sc Other (Explain in Remarks) Depth (inches): Depth (inches): V Depth (inches): V	Secondary indicators (2 or more required)

- CARLER CARLES - CAR

WETLAND DETERMINATIO	ON DATA FORM -	Arid West Region		5
Project/Site: Descrit X Press	City/County: Clark	- Country	Sampling Date: <u>229/08</u> Sampling Point: <u>90-4</u> W	<u>ð</u>
Applicant/Owner: <u>Circle Point</u>		State:	Sampling Point: <u>40-44</u>	}
	$o$ $M_{}$ Terreble Don			
	Least relief (concave, c	onver note: [][///	Siope (%): <u>1-4</u>	4
Landform (hillslope, terrace, etc.): <u>HIISIOPE - ALMUE</u> Subregion (LRR):	15.196801	Long: 35. 74035	0 Datum: NAD 9	3
	<u> </u>	NWI classifi	cation: N/A ZONE	<u> </u>
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes / No			
Are climatic / hydrologic conditions on the site typical for this time of year	dicturbed? Are "	Normal Circumstances"	present? Yes 📈 No _	
Are Vegetation <u>ho</u> , Soil <u>ho</u> , or Hydrology <u>ho</u> significantly		eded, explain any answe		
Are Vegetation <u>ND</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> naturally pro				to
SUMMARY OF FINDINGS - Attach site map showing	sampling point lo	cations, transects	s, important features, et	
Hydrophytic Vegetation Present? Yes No	Is the Sampled	Area	azyatula haraka	
Hydrophytic Vegetation Present?     Hes No       Hydric Soil Present?     Yes No       Wetland Hydrology Present?     Yes No	within a Wetlan	d? Yes 📉	No <u>X</u>	
Wetland Hydrology Present? Yes V No		Phota	2	
Remarks:	a rout to N.S. VI			
Remarks: Adj. land. use is I-15 to the east + underel. d		158	" Batallacent and	use.
Adj. land use is I-15 to the east + underel. d X = WELCOND NOT PRESENT,	Varies int	156	" soil pit	
VEGETATION				
Absolute		Dominance Test wor	<b>1</b>	
Tree Stratum (Use scientific names.) <u>% Cover</u>	Species? Status	Number of Dominant S That Are OBL, FACW,	Species  O (A)	
1				
2	·	Total Number of Domi Species Across All Str	nant 5 (B)	
3			,	
4	- <u>NL</u>	Percent of Dominant 5 That Are OBL, FACW,	or FAC: (A/	'В)
Sapling/Shrub Stratum	Y HPE	Prevalence Index wo	rksheet:	
1. Ambrosia eriocentra 4	Y HI-HPE	Total % Cover of:	Multiply by:	
2. <u>Hymeriodea</u> salsola <u>4</u> 3. <u>Encelia</u> frutescens <u>2</u>	Y NLWPE		x 1 =	
3. Encelia trutescens			x 2 =	
5.		FAC species		
Total Cover: 10	-	FACU species	x4 =	ĺ
Herb Stratum	Y wor	UPL species Column Totals:		R)
1. Boutelona barbata var. barbata 1	VNEUPE			-,
2. Schiemus barbatus		Prevalence Inde	ex = B/A =	
3		Hydrophytic Vegetat		
4		Dominance Test		
5		Prevalence Index	(is ≤3.0 <sup>1</sup>	1
67		Morphological Ad	laptations <sup>1</sup> (Provide supporting ks or on a separate sheet)	
8			ophytic Vegetation <sup>1</sup> (Explain)	
B Total Cover: 2	_			ļ
Woody Vine Stratum           1.	_ ,	<sup>1</sup> Indicators of hydric s be present.	oil and wetland hydrology must	t
2	······································	Hydrophytic		
Total Cover:	-	1/ totion	'es No	
% Bare Ground in Herb Stratum <u>98</u> % Cover of Biotic (	Urusi <u> </u>			
Remarks:		· ·		•

							Sampling F	Point: $\underline{90-4w}$
SOIL	ription: (Describe to	the death as	aded to document t	he indicator	or confirm	the absenc	e of indicators.)	
		the depth he	Redox Feat	lures			_	
Depth	<u>Matrix</u> Color (moist)	% <u>C</u>	olor (moist)%	, Type <sup>1</sup>	Loc <sup>2</sup>	Texture		arks
(inches)	10YR 5/3					Sandy	_ (som	
<u>D- </u>						Loand	1 Saluch	
1-20	104R514				,	Ĺ	J	
·						,	<u> </u>	
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	······································				<u> </u>			
				<b></b>				
<sup>1</sup> Type: C=C	oncentration, D=Deple	ion, RM=Red	uced Matrix. <sup>2</sup> Loci	ation: PL=Po	re Lining, I	<u>≺C≃Root C⊓a</u> Indicato	annel, M=Matrix. rs for Problematic H	vdric Soils <sup>3</sup> :
Hydric Soil	Indicators: (Applicat	le to all LRR	s, umess omervise	noted.)			Muck (A9) (LRR C)	
Histosol			Sandy Redox (S:	)			Muck (A10) (LRR B)	
	pipedon (A2)	-	Stripped Matrix (	56)		Z un Red	uced Vertic (F18)	
Black Hi	istic (A3)	-	Loamy Mucky Mi	heral (F1)		Red	Parent Material (TF2)	I
Hydroge	en Sulfide (A4)	-	Loamy Gleyed M Depleted Matrix (				er (Explain in Remarks	
Stratified	d Layers (A5) (LRR C)	-	Depleted Matrix ( Redox Dark Surf	ace (F6)				
1 cm Mu	uck (A9) (LRR D)	-	Depleted Dark S					
Deplete	d Below Dark Surface	(ATT) -	Redox Depressio					
Thick Di	ark Surface (A12)		Vernal Pools (F9	)			ors of hydrophytic vege	
	Mucky Mineral (S1) Gleyed Matrix (S4)					wetla	nd hydrology must be	present.
Sanuy C	Layer (if present):							
		,						
	nches):					Hydric S	oil Present? Yes _	No /
	iches).		- 					
Remarks:								
							· · · · · · · · · · · · · · · · · · ·	
HYDROLC					. <u> </u>	Se	condary Indicators (2	or more required)
Wetland Hy	drology Indicators:						Water Marks (B1) (R	
Primary Ind	icators (any one indica	tor is sufficien				v	- /	B2) (Riverine) mille
	e Water (A1)		Salt Crust (B11				Drift Deposits (B3) (	
High W	/ater Table (A2)		Biotic Crust (B		·		Drainage Patterns (I	
Saturat	ion (A3)		Aquatic Inverte				Dry-Season Water T	
Water N	Marks (B1) ( <b>Nonriveri</b> r	ne)	Hydrogen Sulfi		o Livina Pr	onts (C3)	Thin Muck Surface (	
Sedime	ent Deposits (B2) (Non	riverine)	Oxidized Rhizo	spheres alon	y Living IN SAL		_ Crayfish Burrows (C	
Drift De	eposits (B3) (Nonriveri	ne)	Presence of R		94) wood Solic		_ Saturation Visible or	Aerial Imagery (C9)
	e Soil Cracks (B6)		Recent Iron Re				_ Shallow Aquitard (D	

0HM: 5'W

bank slove

영국 영상에서 이 것 같은 것이 가지 않는 것

	Shallow Aquitard (D3)
<del></del>	FAC-Neutral Test (D5)

Surface Soil Cracks (B6) Inundation Visible on Aar Water-Stained Leaves (B	iał Imagery (B7)	Other (Explain in Remarks)	Shallow Aquitard (D3) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Water Table Present? Saturation Present?	Yes No _ Yes No _ Yes No _	Depth (inches):           Depth (inches):           Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stre		ing well, aeriai photos, previous inspe , Channel is blue lin	e on topof trib. to Duck Creek

F-I.5-107

### Exhibit B2

### DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

### **Huffman-Broadway Group**

### **Field Data Forms**

### For DesertXpress

### HUC 12 Watershed Town of Arden

### Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 38

## DesertXpress

# **Field Notebook**

### HBG Watershed ID # 38

### Watershed Name: TOWN OF AFREN

If found, please return to:

George Ball Huffman-Broadway Group, Inc. 828 Mission Avenue San Rafael, California 94901 415.925.2000 gball@h-bgroup.com

Return Postage Guaranteed

				-dominant	dominent	P
(C) Above OHW	<ol> <li>Desert pavement</li> <li>Rock varnish</li> <li>Rock varnish</li> <li>Clast weathering</li> <li>Salt splitting</li> <li>Salt splitting</li> <li>Carbonate etching</li> <li>Depositional topography</li> <li>Caliche rubble</li> <li>Depositional topography</li> <li>Caliche rubble</li> <li>Soil development</li> <li>Surface color/tone</li> <li>Surface rounding</li> <li>Surface rounding</li> </ol>		(F) Above OHW	<ol> <li>Annual herbs, xeric ruderals</li> <li>Perennial herbs, non-clonal</li> <li>Perennial herbs, clonal and non-clonal co-dominant</li> <li>Mature pioneer trees, no young trees</li> <li>Mature pioneer trees w/upland species</li> <li>Late-successional species</li> </ol>	<ul> <li>7) Xeroriparian species</li> <li>8) Annual herbs, xeric ruderals</li> <li>9) Perennial herbs, non-clonal</li> <li>10) Perennial herbs, clonal and non-clonal codominent</li> <li>11) Mature pioneer trees, no young trees</li> <li>12) Mature pioneer trees, xeric understory</li> <li>13) Mature pioneer trees w/upland species</li> <li>14) Late-successional species</li> <li>15) Upland species</li> </ul>	<ul><li>16) Annual herbs, xeric ruderals</li><li>17) Mature pioneer trees w/upland species</li><li>18) Upland species</li></ul>
Potential Geomorphic OHWM Indicators (B) At OHW	Valley flat Active floodplain Benches: low, mid, most prominent Highest surface of channel bars Top of point bars Break in bank slope Upper limit of sand-sized particles Change in particle size distribution Staining of rocks Exposed root hairs below intact soil layer Silt deposits Silt deposits Litter (organic debris, larger than twigs)	Potential Vegetation OHWM Indicators	(E) At OHW	<ol> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> <li>Pioneer tree seedlings</li> <li>Pioneer tree saplings</li> </ol>	<ul> <li>5) Sparse, Iow vegetation Annual herbs, hydromesic</li> <li>6) Ruderals</li> <li>7) Perennial herbs, hydromesic clonals</li> <li>8) Pioneer tree seedlings</li> <li>9) Pioneer tree saplings</li> <li>10) Xeroriparian species</li> <li>11) Annual herbs, xeric ruderals</li> </ul>	<ul><li>12) Sparse, low vegetation</li><li>13) Xeroriparian species</li><li>14) Annual herbs, xeric ruderals</li></ul>
(A) Below OHW	1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1       1		(D) Below OHW	<ol> <li>Herbaceous marsh species</li> <li>Pioneer tree seedlings</li> <li>Sparse, low vegetation</li> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> </ol>	<ul> <li>Fioneer tree seedlings</li> <li>Sparse, low vegetation</li> <li>Pioneer tree saplings</li> <li>Xeroriparian species</li> </ul>	<ol> <li>Sparse, low vegetation</li> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> </ol>
	<ol> <li>In-stream dunes</li> <li>Crested ripples</li> <li>Scrested ripples</li> <li>Harrow marks</li> <li>Gravel sheets to ripple</li> <li>Meander bars</li> <li>Sand tongues</li> <li>Nuddy point bars</li> <li>Long gravel bars</li> <li>Long gravel bars</li> <li>Cobble bars behind c</li> <li>Stepped-bed morphc</li> <li>Streaming lineations</li> <li>Streaming lineations</li> <li>Streaming lineations</li> <li>Streaming lineations</li> <li>Knick Points</li> </ol>			Hydroriparian indicators	Mesoriparian indicators	Xeroriparian indicators

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WIM Field Data Sheet (Arid West)         Time less Simple       Implementation         Time less Simple       Implementation         Distribution       Implementation       Implementation         Distribution       Implementation       Action of NUMM         Action of NUMM       Action of NUMM         Distribution       Implementation         Distributio													
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	HBG C	HWM FI	ield Dat	ta Sheet	(Arid W	est)						-	
Time of the final serve that the fin	HGB Team	#		Project Nan	ne: Deser	tXpress				HBG Sub-Basin # (1 – 41)	n M	HUC 12 #	
The constrained active to build 						Statistics:		Drainag	e Data				Comments
$   0^{4}   5 = 30^{4}   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0 $	Date M / D / Y)	Time (24-Hour)	GPS Unit #	Sample Point #	Map Sheet Ref #	OHW Width	Active (A) or Inactive (I) Channel	Up (U) / or Down (D) Slope from Road	Photo (Y/N)	Relow OHWM	At OHWM	Above OHWM	Use note pages at back of notebook for comments. Put comment number in block below.
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		`	V	100						5,10,11,	2,10,11,	5,10,11,1	
$   U^{H}  \lesssim   S^{0} V^{U}  =   U   V   V   V   V   V   V   V   V   V$		chor	0	ines.		1.0	4	2	o		v		
$  v^{11}  \leq 5^{0}  v^{1}  =  v^{1}$				Ş		-	4			A: 5,10,11,12,13,16	3	5,10,11,1	
$   0^{1/3}   5   \frac{2}{3}   \frac{2}{3}   \frac{2}{3}   \frac{1}{3}   \frac{1}{3}$	01.1.1	hhol	5	No.		0.1	×.	2	5-		Ń	~	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0		N	27			÷			10'11	2,10,11	5,10,11,1	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2.1.		5	Sales and		5'0	Ø	С	-c		S	~	
$ VVV > 3^{2}VV = 0.5 VV = 0.$		24.2		h.c.			<			A: 5,10,11,12,16,16	2,10, 11,	5, 6, 11,	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.1.1	101	1	NG2		5'0	\$	2	)		s, I	-	
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1031 5 330° ×55 R C Z E E E E E E E E E E E E E E E E E E	1				W. W.	5.0				A:	ä	ö	PIT Flerk
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NOX 790 K U V D E E E E 200 K U V D E E E 200 K U Z D	0.		4	7					daria	A:	ä	ö	e Dur
	1.1.2	1201	~	North		01		>	)-	ä	ü	Ŀ.	A B

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eld	HBG OHWM Field Data Sheet (Arid West)	et (Arid W	(est)					the first		
	Project N	Project Name: DesertXpress	rtXpress				HBG Sub-Basin # (1 – 41)	33	HUC 12 #	
					Drainage Data	e Data				Comments
GPS Unit #	# Point #	Map Sheet Ref #	OHW Width	Active (A) I or Inactive (I) Channel	Up (U) / or Down (D) Slope from Road	Photo (Y/N)	Below OHWM	At OHWM	Above OHWM	Use note pages at back of notebook for comments. Put comment number in block below.
					1		A:	ä	ö	
5 9201	2062	0	1.0	¥	0	3-	ö	ü	F:	Set A
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Reverence: u = urainage; m = manmage; mu = major urainage; K = Kiver G:\DesertXpress\Desert Xpress Drainage Field Data Sheet (Final).doc

### **ICF Jones & Stokes**

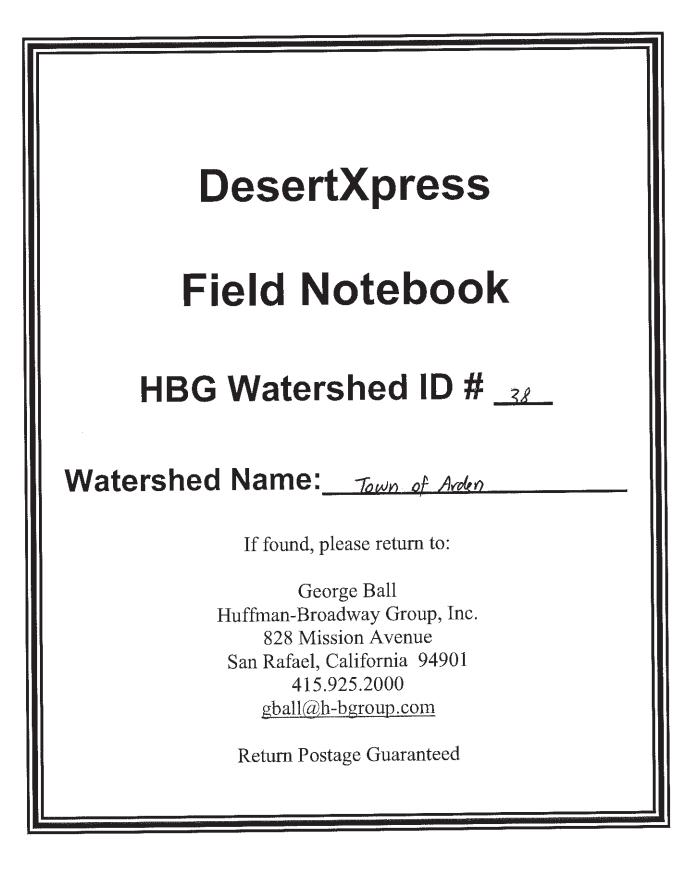
### Wetland Determination Data Forms – Arid West Region

### For DesertXpress

HUC 12 Watershed Town of Arden

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 38



pplicant/owner: <u>Circle Point</u>		Journy.	eas/ <u>Clark</u> Sampling Date: <u>2/28/01</u> State: <u>NV</u> Sampling Point: <u>95-/</u> W
.pplicant/Owner;			
ivestigator(s): Kelly Shook Drigan (10152)	Section Music Section	on, Township, Re	ange:
andform (hillslope, terrace, etc.): Valley Ploo	V LOCA		tong: <u>35,91,1702</u> Datum: <u>NAD %</u>
Subregion (LRR):	4 <u>at</u> 5,	11.2-11	
oil Map Unit Name:			NWI classification: 10/14 ZONE
re climatic / hydrologic conditions on the site typical	for this time of year?	'es <u>V</u> NO _	"Normal Circumstances" present? Yes No
re Vegetation Yes, Soil <u>Yes</u> , or Hydrology		'bed? Are	eeded, explain any answers in Remarks.)
re Vegetation <u><math>n \circ</math></u> , Soil <u><math>n \circ</math></u> , or Hydrology	<u>naturally problem</u>	•	
UMMARY OF FINDINGS – Attach site	map showing san	npling point l	locations, transects, important features, etc
The second second	No		
Hydrophytic Vegetation Present?	NO NA	Is the Sampled	d Area
Hydrophytic Vegetation Present (3,3), (11es	No		
Remarks: Flood control facility- 12'W	XEL CBC CONVE	4 5 Flows th	om South to Photo
Remarks: F160d control facility - 12.W N under St. Pose PKWy ramp @ I-15 Concrete aprom extends southword fro ined channel for 300 then changes t	interchange of	they change	s to boulder 134 " N along drainage
ined channel for 300' then changes t	s carthen lined	. Ultimately	flows to
	<u> </u>		Duck Geak
EGETATION	Absolute Dor	minant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)	<u>% Cover</u> Spi	ecles? <u>Status</u>	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			
4	Cover:		Percent of Dominant Species (A/B)
Sapling/Shrub Stratum			
			Prevalence Index worksheet:
2			Total % Cover of:         Multiply by:           OBL species         x 1 =
3			FACW species x 2 =
4			FAC species x3 =
5	Cover:		FACU species x 4 =
Her <u>b Stratum</u>			UPL species x 5 =
1			- Column Totals: (A) (B)
2			Prevalence Index = B/A =
3			Hydrophytic Vegetation Indicators:
4			Dominance Test is >50%
5			Prevalence Index is ≤3.0 <sup>1</sup>
6,			Morphological Adaptations <sup>1</sup> (Provide supporting
7.	<u> </u>		data in Remarks or on a separate sneet)
8 Tota	Cover: 0		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	(		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1			be present.
2			- Hydrophytic
Toto	Cover: <u>P</u>	R	Vegetation
	Cover of Biotic Crust	38.24	Present? Yes No
% Bare Ground in Herb Stratum %	····		
	· · · · · · · · · · · · · · · · · · ·		

STATESTER CONTRACTOR AND A CONTRACTOR CONTRACTOR AND A CONTRACTOR A

SO	l	L
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21.5

Profile Description: (Describe to the depth needed to document the indicator or continue absence of indicator	,
---------------------------------------------------------------------------------------------------------------	---

DIL rofile Description: (Describe to the dep	Redax Redax	Features							
Depth <u>Matrix</u> inches) Color (moist) %	Color (moist)	<u>%</u>	<u>Type</u> <sup>1</sup>			Kenjak	3		
ype: C=Concentration, D=Depletion, RM ydric Soil Indicators: (Applicable to all Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D)	LRRs, unless other Sandy Redo Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark	wise note ox (S5) atrix (S6) ky Minera ved Matrix atrix (F3) c Surface (	əd.) I (F1) (F2) (F6)	e Lining, F	1 cm Muck 2 cm Muck Reduced \ Red Parer	M=Matrix. Problematic Hydr (A9) (LRR C) (A10) (LRR B) /ertic (F18) nt Material (TF2) plain in Remarks)	ic Soils <sup>3</sup> :		
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Da Redox Depr Vernal Pool	ressions (			<sup>3</sup> Indicators of h wetland hyd	nydrophytic vegetal drology must be pri	iion and esent.		
Restrictive Layer (if present):	-					NA			
Туре:							No		

#### HYDROLOGY

HYDROLOGY	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is sufficient)         Surface Water (A1)       Salt Crust (B11)         High Water Table (A2)       Biotic Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Livin         Drift Deposits (B3) (Nonriverine)       Presence of Reduced iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed I         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)	<ul> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Thin Muck Surface (C7)</li> <li>Crayfish Burrows (C8)</li> </ul>
Water-Stained Leaves (B9)       /         Field Observations:       /         Surface Water Present?       Yes Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Gapuides capillary fringe)       No Depth (inches):	Wetland Hydrology Present? Yes No /
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Remarks: CCRFCD Facility that ultimately	Flows to Duck Creek,
F-I.5-117	

WETLAND DETERMINATION DATA FORM -	Aria West Region
ject/Site: Desert Kpress City/County: Un'inc.; Dicant/Owner: <u>Circle Point</u>	/Clark Sampling Date: 2/24/08
ject/site: Desert Kprass Ory outring	State: Sampling Point: S - 2 10
estigator(s): Bryan Morse, Killy Stock, John Holson Section, Township, Range	je:
estigator(s): Bryan Morse; Kally Viook, Jonivilla Section, romant	nvex, none): <u>NOME</u>
Home (billione terrace etc.); HILLSIGIO	N 3 - 3: 1757. Datum: NAO 85_
bregion (LRR): D	Hong:     35.     Hol 10 General Action:       NWI classification:     NUA     ZONE II
II Man Upit Name:	(if no, evolain in Remarks.)
	lormal Circumstances" present? Yes No
Verstelling Yes soil yes or Hydrology 110 significantly seems	eded, explain any answers in Remarks.)
e Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u> naturally problematic? (If nee	transate important features, etc.
e Vegetation <u>NO</u> , Soil <u></u> , or Hydrology <u></u> naturally problemated to the second se	cations, transects, important tourney,
	A-1-0
ydrophytic Vegetation - Tesenta	d? Yes <u>No</u>
Hydric Soil Present? Yes No ALA within a Watan	the appropriate photo
Vettand Hydrology Present	inter change. No 139 Facing S at Detention
Driveys flows northward under St. Rose PEWY Off Vender constr	to Duck Creek. 138 " Notcel Vert.
Hydric Soil Present? Yes No NA Willing	
EGETATION Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)	Number of Dominant Species (A) That Are OBL, FACW, or FAC:
1	Total Number of Dominant (B)
2	Species Across All Strata,
	Percent of Dominant Species (A/B)
4 Total Cover:	
Sapling/Shrub Stratum	Prevalence Index worksheet:
1	Total % Cover of:Muitiply by:
2	OBL species         x 1 =           FACW species         x 2 =
3	FACW species x 3 =
4	FACU species x 4 =
5 Toțal Cover:	11PL species X5 =
Herb Stratum	Column Totals: (A) (B)
1	Prevalence Index = B/A =
2	
2	Hydrophytic Vegetation Indicators: Dominance Test is >50%
4	Prevalence index is ≤3.0 <sup>1</sup>
5 6	"
6 7	- I data in Remarks of bit a separate street,
	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8 Total Cover:	and the set and united hydrology must
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soll and wetland hydrology must be present.
1	
2	Hydrophytic Vegetation Present? Yes No
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Present? Yes No Vo
Ar Deep Cround in Herb Stratum	
% Bare Glouid III Hold Color	
Remarks: NO VER PIESENT.	
Remarks: NO Veg PHESEMAT.	

SOIL					Sampling Point: <u>95-2</u>
Profile Description: (Describe	to the depth ne	eeded to document the indicator (	or confirm th	ne absence	of indicators.)
Depth Matrix		Redox Features			
(inches) Color (moist)	<u>%</u> C	Color (moist) % Type'	Loc <sup>2</sup>	lexture	Remarks
			<u> </u>		
••••••••••••••••••••••••••••••••••••••			····		
	<u></u>				
			<u></u>		
	lation QM-Rod	uced Matrix. <sup>2</sup> Location: PL=Pore	e Lining RC=	Root Chan	nel. M≕Matrix.
Hydric Soll Indicators: (Applic	able to all LRR	s, unless otherwise noted.)	C ENTING: 110	Indicators	for Problematic Hydric Soils <sup>3</sup> :
	able to an Elvie	Sandy Redox (S5)		1 cm N	Muck (A9) (LRR C)
Histosol (A1) Histic Epipedon (A2)	· -	Stripped Matrix (S6)			Auck (A10) (LRR B)
Black Histic (A3)	-	Loamy Mucky Mineral (F1)			ed Vertic (F18)
Hydrogen Sulfide (A4)	-	Loamy Gleyed Matrix (F2)			arent Material (TF2)
Stratified Layers (A5) (LRR 0	c) _	Depleted Matrix (F3)		Other	(Explain in Remarks)
1 cm Muck (A9) (LRR D)	-	Redox Dark Surface (F6)			
Depleted Below Dark Surface	e (A11) _	Depleted Dark Surface (F7)			
Thick Dark Surface (A12)	-	Redox Depressions (F8) Vernal Pools (F9)		<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	-				hydrology must be present.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):					110
					r Ik
Type: Depth (inches):				Hvdric Soil	Present? Yes No
N/A,					
YDROLOGY			<u></u>		
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	Secor	ndary Indicators (2 or more required)
Wetland Hydrology Indicators:				-	/ater Marks (B1) (Riverine)
Primary Indicators (any one indicators	ator is sumpleme			_	ediment Deposits (B2) (Riverine)
Surface Water (A1)		Salt Crust (B11) Biotic Crust (B12)		-	rift Deposits (B3) (Riverine)
High Water Table (A2)			,		rainage Patterns (B10)
Saturation (A3)	>	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)			ry-Season Water Table (C2)
Water Marks (B1) (Nonriveri		Oxidized Rhizospheres along L	living Roots i		
Sediment Deposits (B2) (Nor		Presence of Reduced Iron (C4)			rayfish Burrows (C8)
Drift Deposits (B3) (Nonriver	1110)	Recent Iron Reduction in Plowe			aturation Visible on Aerial Imagery (C9)
Surface Soil Cracks (B6)		Other (Explain in Remarks)		. —	hallow Aquitard (D3)
Inundation Visible on Aerial I	nagery (br)				AC-Neutral Test (D5)
Water-Stained Leaves (B9)		. <u>,</u>			
ield Observations:	N <sup>N</sup>	Depth (Inches):			
					NIF
		Depth (inches):		Hydrolog	y Present? Yes No
Includes capillary fringe)		Depth (inches):	~~		y, tosontri i ed i ilo
includes capillary fringe) Describe Recorded Data (stream	gauge, monitori	ng well, aerial photos, previous insp	pections), if a	vailable:	
Remarks:					
NA.					

#### WETLAND DETERMINATION DATA FORM – Arid West Region

senaaadaasadaabaddabad - - - Maanaadaanaa ah

	-County Sampling Date: 2/28/08
	State: Sampling Point: G_/_ W
Applicant/Owner: <u>Circle Point</u>	
Applicant/Owner: <u>CIFCE FOINT</u> , Investigator(s): <u>Kelly Shook, Bryan Morse, John Holson</u> Section, Township, Rar	convex, none): <u>104 CAVE</u> Sicpe (%):
	Long: 12 3 (0, 00/ 97 9 Datum: NAD 83
Subregion (LRR):	NWI classification: HA ZONE !!
Soil Map Unit Name:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _/ No	Normal Circumstances" present? Yes <u>No</u> No
Are Vegetation 1 10, Soli 10, or right logy 212 of the second second	eded, explain any answers in Remarks.)
Are Venetation (11), Soll (10, of Rydology natorely produced for	
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	bocations, transects, important reatines, etc.
Hydrophytic Vegetation Present? Yes No is the Sampled	Area
Hydric Soil Present? Yes <u>No </u> within a Wetlan	
Versional Underlagy Brosept? Yes V No	S vio the Photos
Remarks: 2-10'CBCS Under I-15. Flows enfer CBCS from N/ 4	banky swale 112 " N along IIS. whet / swale 112 " S " unit (ACS)
Remarks: 2-10'CBCS UNder 1-15. Flows ender LECS John NT + Parthen-lined channel parallel & west of ISIS (no defined bedt chava cheristics) & from the west along natural braided cha (no defined bed ( bank) (blue line on topo)- Terrain is concaved mous west cit. fl-15: moust an orcurs	th of CBCs Lon 110 " soil site.
(no defined bed frank) (blue line on topo) - Terroin 15 concever moul west side of 1-15)+ ponaine occurs.	Char CBCS Lon 1110 " soit site.
VEGETATION	Dominance Test worksheet:
Absolute         Dominant         Indicator           Tree Stratum         (Use scientific names.)         % Cover         Species?         Status	Number of Dominant Species
1.	That Are OBL, FACW, or FAC:
2	Total Number of Dominant 4 (9)
3	Species Across All Strata: (B)
4 Total Cover:	Percent of Dominant Species (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1. Encetin Trate Steris 7 VIII wat	Total % Cover of: Multiply by:
2. Tymenacion paroin 7 uniter	OBL species x1 =
3. Sphaeralcea ambigua NINE DIE	FACW species x 2 =
4	FAC species $5 \times 3 = 15$
5	FACU species $x4 = $ $1PL$ species $82 \cdot x5 = 410$
Herb Stratum	UPL species $82 \times 5 = 410$ Column Totals: $90$ (A) $431$ (B)
1. Bromus tectorum 20 1 ME THE 2. Boutelous bachata 25 YNL ME	L d
5 N FAC	
5 NNVUPE	Hydrophytic Vegetation Indicators: Dominance Test is >50%
5. Pucinella lemonin 2 N FACW	Prevalence index is $\leq 3.0^1$
6. Atistiza Durbaren	Morphological Adaptations <sup>1</sup> (Provide supporting
7. Leptochlog Uninerva IN FACW	data in Remarks or on a separate sneet)
8 Total Cover: <u>65</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	be present.
2	Hydrophytic
	Vegetation Present? Yes No
Remarks:	

Profile Description: (Describe to the depth needed to document the indicator or cold Depth	c <sup>2</sup> TextureRemarks
<u>(inches)</u> <u>Color (moist)</u> <u>%</u> <u>Color (moist)</u> <u>%</u> <u>Type</u> <sup>1</sup> <u>Loc</u> <u>0</u> -4 <u>10</u> <u>%</u> <u>5</u> /4 <u></u>	c <sup>2</sup> TextureRemarks
0-4 10 YR 5/4	
	Loan transition is hot
<u>620 7.5 YR 6/4</u>	
	Loam obvious.
· · · · · · · · · · · · · · · · · · ·	
	·····
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Linir	ng, RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all 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) Reduced Vertic (F18)
Black Histic (A3) Learny Mucky Mineral (F1) Hydrogen Sulfide (A4) Learny Gleyed Matrix (F2)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)         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) Sandy Gleyed Matrix (S4)	wetland hydrology must be present.
Restrictive Layer (if present):	
Type:	/
Depth (inches):	Hydric Soil Present? Yes No
Soil pit dug in channel.	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine)
Surface Water (A1)Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2)	_ / Drift Deposits (B3) (Riverine)
Saturation (A3) Aquatic Invertebrates (B13)	Drainage Patterns (B10) Dry-Season Water Table (C2)
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Roots (C3) Thin Muck Surface (C7)
	Crayfish Burrows (C8)
Drift Deposits (B3) (Nonriverine)     Presence of Reduced Iron (C4)     Surface Soil Cracks (B6)     Recent Iron Reduction in Plowed Soil	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	/
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): W	Vetland Hydrology Present? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspectior	ns), if available:
Remarks: Soil (dined) is cracking + peeling, signs of pondin. Showing polygons + curls detached from under	e-remnant biotic crusts collying sediments.

WETLAND DETE	RMINATION DATA FORM -	- Arid West Region
oject/Sile: Desert X. press	City/County: Clart	L COUNTY Sampling Date: 2/28/08 State: NV Sampling Point: 96-2W
pplicant/Owner: <u>Circle Point</u>		
pplicant/Owner: <u>Circle Bint</u> nvestigator(s): John Holson, Kelly Shook, Br	Jay Mor Section, Township, Rai	nge:
andform (hillslope, terrace, etc.): Valley Floor	Local relief (concave, o	convex, none): <u>NON</u> Slope (%):       [-5]         -Long⊥       35, 978277       Datum: <u>NNO</u> 83         NWI classification: <u>NIA</u> ZoPE (1)
ubregion (i BR): >		-Long 2 55, 110-11 Datam 1900 U
oil Map Unit Name:	his time of year? Yes No	(if no, explain in Remarks.)
re Vegetation <u>No</u> , Soil <u>NO</u> , or Hydrology <u>MO</u>	significantly disturbed?	
re Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>NO</u>	naturally problematic? (If ne	eeded, explain any answers in Remarks.)
re Vegetation <u>F(G</u> , Soil <u>F(G</u> , of Hydrology <u></u>		ocations, transects, important features, etc.
		ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampleo	
Hydric Soil Present? Yes	No within a Wetla	
Hydropriyab Vegetalion (1000)       Hydric Soil Present?       Yes       Wetland Hydrology Present?       Yes	No	T-15 (NEWARD Photos
Remarks: Duck Creek. Blue line on D	DHM 75 WX44	1:2 bant stope. 118 11 JS along I-15
flow from west to east. Natural the Land use to east is I-15 I to M1, S, +W	is undevel desert.	116 " Wat Deck Creak upstre 117 " Eat culvert (CBCS)
Land use to east 15 I-15 of 10 mi, 5) in		115 " Eat culvert (CBCS)
/EGETATION		Dominance Test worksheet:
	Absolute Dominant Indicator % Cover Species? Status	Number of Dominant Species
Tree Stratum (Use scientific names.)		That Are OBL, FACW, or FAC: (A)
1		Total Number of Dominant L
2		Species Across All Strata; (B)
3		Percent of Dominant Species
4 Total Co	ver:	That Are OBL, FACW, or FAC: (A/B)
	11.	Prevalence Index worksheet:
1 Ambrosia eriocentra		Total % Cover of: Multiply by:
2. Ericampria Inticitalia		OBL species x1 =
3. Acacia avenaii	3 Y FALV	FACW species x2 =
4		EAC species x 3 =
5	36	FACU species $3 \times 4 = 12$
	over: <u>15</u>	UPL species $13 \times 5 = 65$
Herb Stratum 1. E-Vadium cicutarium	1 YNLHPE	Column Totals: $1a$ (A) $7/$ (B)
1 V.(O())/03		Prevalence Index = B/A = <u>4, 8</u>
2		
3		Hydrophytic Vegetation Indicators:
4 5		Dominance Test is >50% Prevalence Index is ≤3.01
6		Morphological Adaptations <sup>1</sup> (Provide supporting
7		data in Remarks of on a separate sheet
8		<ul> <li>Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</li> </ul>
0 Total C	over:	
Woody Vine Stratum		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1		be present.
2		Hydrophytic
	over:	Vegetation Present? Yes No
% Bare Ground in Herb Stratum 9 % C	over of Biotic Crust	
Remarks:		

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SOIL

Sampling Point: 96-2W

	In needed to document the indicator of	confirm the absence of indicators.)
Depth <u>Matrix</u>	Redox Features	
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Texture Remarks
0-20 7.5 YR.5/6		Sand w/ giravel loobble
		<u> </u>
	Barrier	
· · · · · · · · · · · · · · · · · · ·		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=	Reduced Matrix. <sup>2</sup> Location: PL=Pore L	ining, RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all		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)	Łoamy Gleyed Matrix (F2)	Red Parent Material (TF2) Other (Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6) Depleted Dark Surface (F7)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Redox Depressions (F8)	
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Macky Ministrat (CT) Sandy Gleyed Matrix (S4)	<u> </u>	wetland hydrology must be present.
Restrictive Layer (if present):		
Туре:		/
Depth (inches):	·	Hydric Soil Present? Yes No
Remarks: Soil pit dug in c	hannel	
Soll pre rough in e		
,		
HYDROLOGY		
		Secondary Indicators (2 or more reguired)
Wetland Hydrology Indicators:		
Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffic	:ienţ)	Water Marks (B1) (Riverine)
Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is suffic</u> Surface Water (A1)	<u>sient)</u> Salt Crust (B11)	Water Marks (B1) (Riverine)
Wetland Hydrology Indicators: <u>Primary Indicators (any one Indicator is suffic</u> Surface Water (A1) High Water Table (A2)	<u>sient)</u> Salt Crust (B11) Biotic Crust (B12)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffic Surface Water (A1) High Water Table (A2) Saturation (A3)	sient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hydrology Indicators: Primary Indicators (any one indicator is suffic Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	cient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Primary Indicators (any one indicator is suffice         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)	tient) Salt Crust (B11) Blotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livit	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice         Surface Water (A1)         High Water Table (A2)         Saturation (A3)         Water Marks (B1) (Nonriverine)         Sediment Deposits (B2) (Nonriverine)         Drift Deposits (B3) (Nonriverine)	sient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4)	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Thin Muck Surface (C7)</li> <li>Crayfish Burrows (C8)</li> </ul>
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice         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)	sient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed 3	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice         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	sient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed 3	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Thin Muck Surface (C7)</li> <li>Crayfish Burrows (C8)</li> <li>Soils (C6)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Shallow Aquitard (D3)</li> </ul>
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffic         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)	sient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed 3	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (any one Indicator is suffic 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:	<u>sient</u> ) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed 3 ) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Works (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice	ient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent fron Reduction in Plowed 5 ) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Works (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice         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         Water Table Present?       Yes N	dient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffic	ient) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livin Presence of Reduced Iron (C4) Recent fron Reduction in Plowed 5 ) Other (Explain in Remarks)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Works (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice	Sait Crust (B11)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) World Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffic	Sait Crust (B11)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) World Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice	Sait Crust (B11)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) World Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffic	Sait Crust (B11)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) World Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is suffice	Sait Crust (B11)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) World Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Soils (C6) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No

#### WETLAND DETERMINATION DATA FORM -- Arid West Region City/County: Las Vegas/Clask\_\_\_\_ Sampling Date: 2/27/08 State: NV\_\_\_\_ Sampling Point: 97-1 W\_\_\_\_ Project/Site: Desert Korcss Applicant/Owner: Circle Point \_\_\_ Sampling Point: \_\_\_\_\_\_ Investigator(s): Kell & Shosk, Bryan Marse, John Holson Section, Township, Range: Landform (hillslope, terrace, etc.): Valley Floor Local relief (concave, convex, none): None Slope (%):\_ 1-5 Lat. 115.181352 Tone: N 36.027574 Datum: NAD 83 Subregion (LRR): NWI classification: NA Soil Map Unit Name: NA No (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_ Are "Normal Circumstances" present? Yes Are Vegetation Vession, or Hydrology significantly disturbed? Are Vegetation NO, 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. Yes \_\_\_\_\_ No \_\_\_\_\_ N/A is the Sampled Area . Hydrophytic Vegetation Present? Hydric Soil Present? Yes No within a Wetland? No 🖌 Yes Wetland Hydrology Present? Remarks: Topo indicates a blue line. No swales or drainages use observed in the Photo field on the land parcels immed west of I-15 Rows. Parcel has been recently bladed = 2 facing sw at adjacent land use. graded. Natural drainage may have been diverted away from this area. A 24" CMP under I-15 conveys road runoff via swale Corwide x1" high, 1:4 for "NW" " " " slope) that paralleb I-15 on the west. Flows travel witimatoly to Dusk Circk. 77 " " " Indiators on parcel. 83 " Eat culvert. indiators on parcel. 83 " Eatong private property block Dominant Indicator Dominance Test worksheet: Wall of passible previous drainage path. NO VEGETATION Absolute Dominant Indicator <u>% Cover</u> Species? Status Tree Stratum (Use scientific names.) That Are OBL, FACW, or FAC: 2. Total Number of Dominant Species Across All Strata: (B) 3. \_\_\_\_\_Ø (A/B) Total Cover: \_\_\_\_\_ Sapling/Shrub Stratum BC0 Total Cover: 1. Faltin % Cover of Biotic Grust 2. \_\_\_\_\_ NY 3. Total Cover: 🛛 🖉 Herb Stratum 1. DOW Photo Vantage 2.\_\_\_\_ \_\_\_ Dominance Test is >50% 5. \_\_\_\_\_ Prevalence Index is ≤3.0<sup>1</sup> Morphological Adaptations<sup>1</sup> (Provide supporting 7. \_\_\_\_\_ \_\_\_\_ \_\_\_\_ data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation<sup>1</sup> (Explain) Total Cover: \_\_\_\_ Woody Vine Stratum <sup>1</sup>Indicators of hydric soil and wetland hydrology must 1. be present. Hydrophytic Total Cover: \_\_\_\_\_ Vegetation No Present? Yes % Bare Ground in Herb Stratum / DO\_ % Cover of Biotic Crust Remarks: No veg present F-I.5-124

#### SOIL

Sampling Point: <u>97-1 W</u>

Depth       Matrix       Redox Features         (inches)       Color (moist)       %       Type!       Loc <sup>2</sup>	Texture       Remarks
Image: Second Status       Image: Second Status         Imade Status<	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
	1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)       Stripped Matrix (S6)         Black Histic (A3)       Loamy Mucky Mineral (F1)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)         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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)         Restrictive Layer (if present):       Type:         Type:	2 cm Muck (A10) (LRR B)
Black Histic (A3)       Loamy Mucky Mineral (F1)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)         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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)         Restrictive Layer (if present):       Type:         Type:	
Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)         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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Restrictive Layer (if present):         Type:	Reduced Vertic (F18)
Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)         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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Restrictive Layer (if present):         Type:	
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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)         Restrictive Layer (if present):       Type:         Depth (inches):       Depth (inches):         Remarks:       No soil pit excavated r         MODELOGY       Salt Crust (B11)         Wetfand Hydrology Indicators:       Salt Crust (B11)         Primary Indicators (any one indicator is sufficient)       Salt Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Roo         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (District (B12)         Surface Soil Cracks (B6)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Red Parent Material (TF2)
Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       Redox Depressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Restrictive Layer (if present):         Type:	Other (Explain in Remarks)
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) Vernal Pools (F9) Sandy Gleyed Matrix (S4) Restrictive Layer (if present): Type: Depth (inches): Remarks: No soil pit excavated, AtyDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Drift Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4) Surface Soil Cracks (B6) Drift Deposits (B3) Water-Stained Leaves (B9) Field Observations:	
Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)         Restrictive Layer (if present):         Type:         Depth (inches):         Remarks:         No soil pit excavated r         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)         Surface Water (A1)       Salt Crust (B11)         High Water Table (A2)       Biotic Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Dividized Rhizospheres along Living Root (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Root (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (Divide Color (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (Divide Color (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (Divide Color (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (Divide Color (C4)         Water-Stained Leaves (B9)       Field Observations:	
Restrictive Layer (if present):         Type:         Depth (inches):         Remarks:         No         Soil (pit excavated,         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	<sup>3</sup> Indicators of hydrophytic vegetation and
Type:	wetland hydrology must be present.
Depth (inches):	
Remarks:       No soil pit excavated,         iYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	NIA
Remarks:       No soil pit excavated.         iYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	Hydric Soil Present? Yes No
Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	
Primary Indicators (any one indicator is sufficient)         Surface Water (A1)       Salt Crust (B11)         High Water Table (A2)       Biotic Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Root         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (Inundation Visible on Aerial Imagery (B7)         Water-Stained Leaves (B9)       Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Surface Water (A1)       Salt Crust (B11)         High Water Table (A2)       Biotic Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Rod         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	
High Water Table (A2)       Biotic Crust (B12)         Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Rod         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Water Marks (B1) (Riverine)
Saturation (A3)       Aquatic Invertebrates (B13)         Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Rod         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Sediment Deposits (B2) (Riverine)
Water Marks (B1) (Nonriverine)       Hydrogen Sulfide Odor (C1)         Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Rod         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Drift Deposits (B3) (Riverine)
Sediment Deposits (B2) (Nonriverine)       Oxidized Rhizospheres along Living Rod         Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Drainage Patterns (B10)
Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)       Presence of Reduced Iron (C4)         Surface Soil Cracks (B6)       Recent Iron Reduction in Plowed Soils (         Inundation Visible on Aerial Imagery (B7)       Other (Explain in Remarks)         Water-Stained Leaves (B9)       Field Observations:	is (C3) Thin Muck Surface (C7)
Surface Soil Cracks (B6) Recent Iron Reduction in Plowed Soils ( Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Water-Stained Leaves (B9) Field Observations:	Crayfish Burrows (C8)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Water-Stained Leaves (B9) Field Observations:	
Water-Stained Leaves (B9) Field Observations:	Saturation Visible on Aerial Imagery (C9)
Field Observations:	
de la companya de la	Shallow Aquitard (D3)
Turte de Minter Dessentit Vos No 14 (Booth (Boboc))	
Surface Water Present? Yes No Depth (inches):	Shallow Aquitard (D3)
Water Table Present? Yes <u>No</u> Depth (inches):	Shallow Aquitard (D3)
	Shallow Aquitard (D3) FAC-Neutral Test (D5)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections),	Shallow Aquitard (D3)
pescribe recorded Data (stream gauge, mornioning wen, aenai photos, previous inspections),	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No
	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No
Remarks: See remarks on reverse.	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No
Dee randored on rooms be	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No
	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No
	Shallow Aquitard (D3) FAC-Neutral Test (D5) nd Hydrology Present? Yes No

WETLAND DETERMINATION DATA FORM – Arid West Region

	1 alphale - 2/02/00
Project/Site: Desert Xoress City/County: Las	<u>lea, as / Clark</u> Sampling Date: <u>2/27/08</u> State: <u>NV</u> Sampling Point: <u>97-2W</u>
. pplicant/Owner: Circle Point	State: Sampling Point: 200
Investigator(s): John Holson, Bruan Marse, Kelly Starksection, Township, R	ange:
Landform (hillstope, terrace, etc.): <u>Latter Flone</u> Local relief (concave	, convex, none): <u>//D//</u> Siope (%): <u>10</u>
Subregion (LRR): $\Delta$ = $15.1741L$	
	NWI classification: <u>N/A ZONE</u> //
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
Are vegetation <u>- 70</u> , our <u>- e</u> , or reacting)	e "Normal Circumstances" present? Yes V No
Are vegetation <u>Fig.</u> , Soit <u>Via</u> , or Hydrology <u>Fig.</u> haterenity prostructure	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 Sample       Hydric Soil Present?     Yes No     within a Wetlet	and? Yes No V
I Molland Hudrology Procent? Yes NU Y	
Remarks: Blue line on topo. 3-12'CBCs wass under I-15. F Charpel 15 from west to east (OHM 20'W ×4'h) + enters the CB Conveyance to Duck Creck. Flow also enters the CBCs via swale to run off on west side of I-15. (and parallel to)	-Tow along natural Photo 87-Upland Soil Prot. 68-facing W elong which 68-facing W elong which 68- " S "swate purellel 86- " E at CBCS. 84- in chemnel soil pit.
VEGETATION	Dominance Test worksheet:
Absolute         Dominant         Indicator           Tree Stratum         (Use scientific names.)         % Cover         Species?         Status	
1	_ That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	Species Across All Strata: (B)
4 Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
Saplino/Shrub Stratum	Prevalence Index worksheet:
1. Acadia appartie 5 Y FACU	Total % Cover of: Multiply by:
2. Ericameria Taricitatia INNI-UPE	OBL species x1 =
3	FACW species x 2 =
4	FAC species $x_3 = 3$
5 Total Cover:	FACU species x 4 = 4
Herb Stratum	UPL species $2 \times 5 = 10$
1. Cynodon dactular 10 Y FAC	- Column Totals: <u>4</u> (A) <u>17</u> (B)
2. Bromus tertorium INNI-OPE	Prevalence Index = B/A = 4,25
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
8	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
0 Total Cover:	
<u>Woody Vine Stratum</u> 1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2:	- Hydrophytic
Total Cover:       Ø         % Bare Ground In Herb Stratum       8 1       % Cover of Biotic Crust       1	Vegetation Present? Yes No
Remarks:	
ראומוזאק, וואסייקאר, איז	
F-I.5-126	

SOIL Profile Description: (Describe to the depth needed to document the indic	Sampling Point: $97-2$
Depth _0-1 Gravel Matrix Redox Features	····· ,
	/pe <sup>1</sup> Loc <sup>2</sup> Texture Remarks
51-19 7.5 YR 6/4	Loamysand Alpruot Convine
	Loath no orachic matur
<u>19+ 7,5 YR 7147 no mottles</u>	
D-I Gravel	
1-8 7.5 YR 614	Loany Sand
>8 pick ax refusal-caliche laner	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL	=Pore Lining, RC=Root Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all 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	
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 (F2	7) .
Thick Dark Surface (A12) Redox Depressions (F8)	<b>a a a a a a a a a a</b>
Sandy Mucky Mineral (S1) Vernal Pools (F9)	<sup>3</sup> indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	wetland hydrology must be present.
Restrictive Layer (if present):	
Туре:	
Depth (inches):	Hydric Soll Present? Yes No _/
Remarks:	
Remarks:	
	Secondary Indicators (2 or more required)
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient)	
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Oralnage Patterns (B10)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Urift Deposits (Riverine) Uri
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) University of the sediment Deposits (B3) (Riverine) Drainage Patterns (B10) University of the sediment Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) In (C4) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drainage Patterns (B10) Unift Dry-Season Water Table (C2) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (Cas) Shallow Aquitard (D3)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Urift Deposits (Riverine) Urift Deposits (Riverine) Urift Deposits (Riverine) Urift Deposits (Riverine) Urift Deposite (Riverine) U
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dralnage Patterns (B10) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) FAC-Neutral Test (D5)
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine)  Sediment Deposits (B2) (Riverine)  Drift Deposits (B3) (Riverine)  Drainage Patterns (B10) Dry-Season Water Table (C2)  Iong Living Roots (C3) Thin Muck Surface (C7)  n (C4) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Dry-Season Water Table (C2) C1) Dry-Season Water Table (C2) C1) C1) C1 Dry-Season Water Table (C2) C1) C1 Dry-Season Water Table (C2) Dry-Season Water Table (C2) C1 Dry-Season Water Table (C2) C1 Dry-Season Water Table (C2) Dry-Season Water Table (C3) Dry-Season Water Table (C3) EXEMPTION (D3) EXEMPTION (D3) EXEMPTION (D3) EXEMPTION (D5) C1 Dry-Season Water Table (D5) C1 Dry-
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Urift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dralnage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) rh (C4) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5)
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Dry-Season Water Table (C2) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) r (C4) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) r (C4) Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) Cayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) Shallow Aquitard (D3) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No
HYDROLOGY         Wetiand Hydrology Indicators:         Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iong Living Roots (C3) Thin Muck Surface (C7) C1) C1 C1 Crayfish Burrows (C8) Plowed Soils (C6) Saturation Visible on Aerial imagery (C s) FAC-Neutral Test (D5) Wetland Hydrology Present? Yes No s inspections), if available:

and a second second

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/site: Desert X. Piess City/County: Les Ve	zas/Clark Sampling Date: ZZ7/08
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Applicant/Owner: <u>Circle Point</u>	
Investigator(s): KS, BM, JHO SOM Section, Township, Ra	nge:
Landform (hillslope, terrace, etc.): Valley - Flow Local relief (concave,	convex, none): <u>NONE</u> Stope (%): <u>1-5 /6</u>
Subregion (LRR): し し しまい ールちいをのちらう	Long: NAD 83
Soil Map Unit Name:	NWI classification: N/A 2010E (/
Are climatic / hydrologic conditions on the site typical for this time of year? Yes _/ No _	(If no, explain in Remarks.)
	Normal Circumstances" present? Yes No
	reded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	
Hydrophytic Vegetation Present? Yes No is the Sampled Hydric Soil Present? Yes No within a Wetlan	
Wetland Hydrology Present? Yes No	· · · · · · · · · · · · · · · · · · ·
Remarks: Blue line shown on topo, however no defined t	sed + bank observed in field; harrow
Swale. Uplent yea. No soil pits excerted. 36" CM Plows from . "ditch that 1/s I-15 on west side. Land	P Under I-15 (subsurface) conveys
Plows from . ditter that 1/s I-15 on west side. Land	use: I-15 on the cast; undered parally
on immed west.	Prior Prior Prior Prior
VEGETATION	92 " W of natural swale.
Absolute Dominant Indicator	Dominance Test worksheet: $q_1 + e_at CMP$ ,
Tree Stratum       (Use scientific names.)       % Cover Species? Status         1.	Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2.	Total Number of Dominant
3	Species Across All Strata: (B)
4	Percent of Dominant Species
Sapling/Shrub Stratum	That Are QBL, FACW, or FAC: (A/B)
1. Larrea tridentata <u>5 YNL-teft</u>	Prevalence Index worksheet:
2. Ambrosia- dumosa- 10 YNI-thet	Total % Cover of: Multiply by:
3. Ephedro-vividis 2 NNLAPE	OBL species x 1 =
4.	FACW species x 2 =
5	FAC species x 3 =
Total Cover: 17	FACU species x 4 =
Herb Stratum	UPL species $19$ x 5 = $75$
1. Aristida purpuren 1 y Mitter	Column Totals:(A)(B)
2. Bromus tectorium _ / TNI-ttpt	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4,	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
7	data in Remarks or on a separate sheet)
8.	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover: <u>7</u>	
	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	be present.
2 Total Cover:	Hydrophytic
	Vegetation
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Present? Yes No K
Remarks:	
	· · · · · · · · · · · · · · · · · · ·
US Army Corps of Engineers Key: CMP = Cornal fat281 metal p = para Hel	rpc Arid West – Version 11-1-2006
- paratiei	- CLEDK-

1 (D. State to the donth no	eeded to document the indicator or	confirm the abse	nce of Indicators.)
L ofile Description: (Describe to the depth n			
epth <u>Matrix</u>	Color (moist) % Type1	Loc <sup>2</sup> Texture	Remarks
iches) Color (moist) 70			
······································			
ype: C=Concentration, D=Depletion, RM=Re	duced Matrix. <sup>2</sup> Location: PL=Pore	Lining, RC=Root C	tors for Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indicators: (Applicable to all LRI	Rs, unless otherwise noted.)		
	Sandy Redox (So)	1	cm Muck (A9) (LRR C)
_ Histosol (A1) _ Histic Epipedon (A2)	Stripped Matrix (S6)	2	cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)	R	educed Vertic (F18) ed Parent Material (TF2)
_ Black Histo (A3) _ Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	— <sup>н</sup>	eo Parent Material (112)
_ Hydrogen Salide (A4) _ Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	0	ther (Explain in Remarks)
_ 1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
_ 1 cm Muck (A9) (ERR D) _ Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
_ Thick Dark Surface (A12)	Redox Depressions (F8)	3	ators of hydrophytic vegetation and
_ Thick Dark Sulface (<12) _ Sandy Mucky Mineral (S1)	Vernal Pools (F9)	Indic	ators of hydrology must be present.
Sandy Micky Milleral (01) Sandy Gleyed Matrix (S4)		We	stiand hydrotogy must be property
testrictive Layer (if present):			. 1/A
		Į	NIA
Туре:	<u> </u>		- Gall Dropont? Yes NO
· · · ·		Hydri	soil Present? Yes No
Depth (inches):		Hydri	
Depth (inches):		Hydri	
Depth (inches): Remarks: NO Soil pit exce		Hydri	
Depth (inches): Remarks: No soil pit exc YDROLOGY		Hydri	Secondary Indicators (2 or more required)
Depth (inches): Remarks: No_Soil pit exc YDROLOGY Wetland Hydrology Indicators:	avated,	Hydri	
Depth (inches): Remarks: No_Soil pit exc YDROLOGY Wetland Hydrology Indicators:	ent)	Hydri	<u>Secondary Indicators (2 or more required)</u> Water Marks (B1) (Riverine)
Depth (inches): Remarks: NO_SOIL PIT EXC YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficie	ent)	Hydri	<u>Secondary Indicators (2 or more required)</u> Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): Remarks: Nopit_eX@ YDROLOGY Netland Hydrology Indicators: Primary Indicators (any one indicator is sufficie Surface Water (A1)	ent) Salt Crust (B11) Biotic Crust (B12)	Hydri	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) to Drift Deposits (B3) (Riverine)
Depth (inches): Remarks: Nopit_eX@ YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Hydri	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) to Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches): Remarks: Nopit_eX@ YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3)	ent) Salt Crust (B11) Aquatic Invertebrates (B13) Defended of the content of t		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)
Depth (inches): Remarks: No pit exce YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along	Living Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) t Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Depth (inches): Remarks: Nopit_exce YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4)	Living Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) t Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches): Remarks: NO Soil pit CXC YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4)	Living Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) to Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (0)
Depth (inches): Remarks: Nopit_exce YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Ploy	Living Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) torifi Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (inches): Remarks: Nopit_CXC YDROLOGY Netland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Ploy	Living Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) torift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
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Depth (inches):	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Plov Other (Explain in Remarks)	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches): Remarks: Nopit_CXC YDROLOGY Netland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations:	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C4 Recent Iron Reduction in Plov Other (Explain in Remarks)	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches): Remarks: NO_SOIL pit CXG YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one Indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes N	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Plov Other (Explain in Remarks) Depth (inches):	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
Depth (inches): Remarks: NO_SOIL pit CXCC YDROLOGY Netland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes N Water Table Present? Yes N	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Plov Other (Explain in Remarks) Depth (inches):	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Depth (inches):	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Plov Other (Explain in Remarks) [0 Depth (inches): lo Depth (inches):	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) drology Present? Yes No
Depth (inches): Remarks: NO_SOIL pit CXCC YDROLOGY Netland Hydrology Indicators: Primary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes N Water Table Present? Yes N	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Presence of Reduced Iron (C- Recent Iron Reduction in Plov Other (Explain in Remarks) [0 Depth (inches): lo Depth (inches):	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) drology Present? Yes No
Depth (inches):	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) drology Present? Yes No
Depth (inches):	ent) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Aquatic Invertebrates (B13	Living Roots (C3) 4) wed Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) drology Present? Yes No

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### WETLAND DETERMINATION DATA FORM - Arid West Region

and a second second

Vegas / Clark_ Sampling Date: 2/27/08
State: <u>AIV</u> Sampling Point: <u>97-9 W</u>
nge:
солуех, поле); <u>МъИе</u> Siope (%);
$+ \operatorname{tomp} (\mathcal{O} \setminus \mathcal{O}_{\mathcal{O}}, \mathcal{O} \setminus \mathcal{O}_{\mathcal{O}}) \to \mathcal{O}_{\mathcal{O}} \to \mathcal{O}_{\mathcal{O}}$
NWI classification: <u>N/A 20NE (</u> /
'Normal Circumstances" present? Yes Vo
eded, explain any answers in Remarks.)
ocations, transects, important features, etc.
( Aron
Area ad? Yes No
much //s I-15 on W. side + drain 5 eas
privents diainage that Flows white to project study area because appears where a schief of 300 wide study area and
stream of 300', side study are and
H. Bank SI: per is 1:2. Shetving Inditainage H. Bank SI: per is 1:2. Shetving Inditainage SIICK Creck.
Dominance Test worksheet:
Number of Dominant Species
That Are OBL, FACW, or FAC: (A)
Total Number of Dominant
Species Across All Strata: (B)
Percent of Dominant Species
That Are OBL, FACW, or FAC: (A/B)
Prevalence Index worksheet:
Total % Cover of: Multiply by:
OBL species x1 =
FACW species x 2 =
FAC species x 3 =
FACU species x4 =
UPL species x 5 =
Column Totais: (A) (B)
Prevalence index = B/A =
Hydrophytic Vegetation Indicators:
Dominance Test is >50%
Prevalence Index is ≤3.0 <sup>1</sup>
Morphological Adaptations <sup>1</sup> (Provide supporting
data in Remarks or on a separate sheet)
Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> indicators of hydric soil and wetland hydrology must
be present.
Hydrophytic
Vegetation
Present? Yes No A
Photo: 99 facing W along wash.
97 11 5 11 11 11

		Sampling Point: 47-4
OIL	h needed to document the indicator or cont	firm the absence of Indicators.)
Depth <u>Matrix</u>	Color (moist) %	Texture Remarks
(inches) Color (moist) %		
1-2 Cobblestrock	T - Ha ( lit h ministra	n trant
3-20 Loamy sard.	FISTIL GIGT WARD	
······································		
	2 View Ol-Daro Linis	RC=Root Chapnel, M=Matrix.
Type: C=Concentration, D=Depletion, RM=	=Reduced Matrix. <sup>2</sup> Location: PL=Pore Linin	Indicators for Problematic Hydric Soils <sup>3</sup> :
Type: C=Concentration, D=Depiction, val Tydric Soil Indicators: (Applicable to all	LRRS, unless other mode note =.)	1 cm Muck (A9) (LRR C)
Histosol (A1)	Sandy Redox (Sp)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)	Stripped Matrix (S6)	Reduced Vertic (F18)
Black Histic (A3)	Loamy Mucky Mineral (F1)	Red Parent Material (TF2)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C)	Depleted Maria (F3) Redox Dark Surface (F6)	
1 cm Muck (A9) (LRR D)	Depleted Dark Surface (F7)	
Depleted Below Dark Surface (A11)	Redox Depressions (F8)	
Thick Dark Surface (A12)	Vernal Pools (F9)	3 Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		wetland hydrology must be present.
Sandy Gleyed Matrix (S4)		
Restrictive Layer (if present):		
Туре:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks: Soil pit dug in		
HYDROLOGY		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is suf	ficient)	Sediment Deposits (B2) (Riverine)
Surface Water (A1)	Salt Crust (B11)	Drift Deposits (B3) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Drainage Patterns (B10)
Saturation (A3)	Aquatic Invertebrates (813)	Dry-Season Water Table (C2)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	
Sediment Deposits (B2) (Nonriverine	) Oxidized Rhizospheres along Livin	Crayfish Burrows (CB)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced (of (C4)	
Surface Soil Cracks (B6)	Recent from Reduction in Plowed S	Soils (C6) Statistical visible birthana of P (
Inundation Visible on Aerial Imagery (	B7) Other (Explain in Remarks)	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)		
Field Observations:	No Depth (inches):	
	No Depth (inches):	
Water Table Present? Yes	_ NO Depth (inchec):	Wetland Hydrology Present? Yes No
Saturation Present? Yes	No Depth (inches):	
(includes capillary fringe)	monitoring well, aerial photos, previous inspec	tions), if available:
Describe Recorded Data (stream gadge,		
Remarks: Blue line on top	o, Sucremarks on reve	ASK .
1	· · · · · · · · · · · · · · · · · · ·	

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WETLAND DETERMINATION DATA FORM -	- Arid West Region
Project/Site: Desert X press City/County: LV/ C	lank
Applicant/Owner: Point	State: <u>AV</u> Sampling Point: <u>97-5</u> W
Applicantorment Control Region Townshin Ran	19e:
No lla effective local relief (concave, o	Solpe (%).
Landtorm (hillstope, terrace, etc.): 191124 (002	tong: 1 36,009685 Datum: NAP 83
	NWI classification: N/A 20NE 11
Soil Map Unit Name: No	
Are climatic / hydrologic conditions on the site typical furthing time of year 1, by Are Are Vegetation Yes, soil Yes, or Hydrology 188 significantly disturbed? Are "	Normal Circumstances" present? Yes No
	eded, explain any answers in Remarks.)
Are Venetation (10, Soil <u>500</u> , of Hydrology <u>100</u> , reduining processing and	
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	
Hydrophytic Vegetation Present? Yes No Is the Sampled	Area
	nd? Yes No
Wetland Hydrology Present? Yes No 1/	igniticant disturbance has
modified natural drainage. Terrain in study other	- They been recently bladed +
Wetland Hydrology Present? Yes No 1/ Remarks: Shown on topo as a blue line, however s modified natural drainage. Terrain in study or la graded toolls excervited down beet to form what appea (300'W × 6'H) immed SW of I-15/Silverado Blud Int-A.	Trih to Dud Crepk Photos: 103 facine W Cardina
	Too Wesh . 102 " Sat SRB?
VEGETATION	Dominance Test worksheet: 100 " Early -I-/
Absolute         Dominant         Indicator           Tree Stratum         (Use scientific names.)         % Cover         Species?         Status	Number of Dominant Species
	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant
3	Species Across All Strata:(B)
4	Percent of Dominant Species
Total Cover:	
Sapling/Shrub Stratum	Prevalence Index worksheet:
2	Total % Cover of;Multiply by:
3	OBL species x1 =
4	FACW species x 2 = FAC species x 3 =
5	FACU species x4 =
Total Cover:	UPL species x5 =
<u>Herb Stratum</u>	Column Totals: (A) (B)
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
. 7	data in Remarks of on a separate sneeth
8 Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	be present.
2	Hydrophytic
Total Cover:	Vegetation Present? Yes <u>No </u>
% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust 12	
Remarks:	
No veq.	
F-I.5-132	
	Arid West – Version 11-1-2006

Statistic Society and the second s Second sec

	th needed to document the indicator or confi	
Depth Matrix	Redox Features	_
(inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture Remarks
·····		, <u>,</u>
	<u></u>	<b></b>
	Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining,	
ydric Soil Indicators: (Applicable to all L	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1)	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
_ Histic Epipedon (A2)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
_ Black Histic (A3) _ Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2)	Reduced Vertic (F18) 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)	<u> </u>
_ Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	
Thick Dark Surface (A12)	Redox Depressions (F8)	
_ Sandy Mucky Mineral (S1)	Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
_ Sandy Gleyed Matrix (S4)	<u></u>	wetland hydrology must be present.
estrictive Layer (if present):		
Туре:		N/A.
Type: Depth (inches):		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
emarks: NO 50,1 p1t eX	atated.	Hydric Soil Present? Yes No
Depth (inches):	cartated,	N/A , Hydric Soil Present? Yes No
Depth (inches): emarks: NO SS(1 pitt CK	atated.	Hydric Soil Present? Yes No
Depth (inches): emarks: NO Sól pitt ex	catated.	}
Depth (inches): marks: NO Só, 1 p'It ex DROLOGY	ataled.	Hydric Soil Present? Yes No Secondary Indicators (2 or more required)
Depth (inches): emarks: NO Só (I p'TH CX , , DROLOGY etland Hydrology Indicators:	atatel.	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): emarks: NO Só (I p'IT CX , DROLOGY etland Hydrology Indicators: mary Indicators (any one Indicator is suffici-	atatel.	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): emarks: NO Sól pitt CX DROLOGY etland Hydrology Indicators: mary Indicators (any one Indicator is suffici- 	α 4α / 90 ι ent)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): emarks: NO Sól pitt CX DROLOGY etland Hydrology Indicators: mary Indicators (any one Indicator is suffici- Surface Water (A1) High Water Table (A2)	ent) 	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): emarks: NO Sól pitt CX DROLOGY etland Hydrology Indicators: mary Indicators (any one Indicator is suffici- Surface Water (A1) High Water Table (A2)	ent) Sait Crust (B11) Slotic 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) Dry-Season Water Table (C2)
Depth (inches): emarks: NO SO PTC CX DROLOGY etland Hydrology Indicators: imary Indicators (any one Indicator is suffici- Surface Water (A1) High Water Table (A2) Saturation (A3)	ent) Sait Crust (B11) Slotic Crust (B12) Aquatic Invertebrates (B13)	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)
Depth (inches): emarks: // Soid pitt ex // DROLOGY etland Hydrology Indicators: // mary Indicators (any one Indicator is suffici- // Surface Water (A1) // High Water Table (A2) // Saturation (A3) // Water Marks (B1) (Nonriverine)	ent) Sait Crust (B11) Slotic 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) Dry-Season Water Table (C2)
Depth (inches): emarks:	ent) 	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) bots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches): emarks:	ent) 	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) bots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches): emarks: 	ent) 	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) ots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C
Depth (inches): emarks:	ent) Sait Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils 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) ots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (inches): emarks: MO Só (I p'II CX PROLOGY etland Hydrology Indicators: imary Indicators (any one indicator is suffici- 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) eld Observations:	ent) 	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) ots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (inches):	ent) Sait Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils 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) ots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (inches):	ent) 	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) ots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3)
Depth (inches):	ent) 	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) bots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) Liand Hydrology Present? Yes No/
Depth (inches):	ent) 	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) bots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) Liand Hydrology Present? Yes No/
Depth (inches):	ent) 	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) bots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) (C6) Saturation Visible on Aerial Imagery (C Shallow Aquitard (D3) FAC-Neutral Test (D5) Liand Hydrology Present? Yes No/

2 X 2 4 4 4

Project/Site: Desert XPress	City/	County: $\underline{ \vee /}$	State: ALV	Sampling Date: <u>228/08</u> Sampling Point: <u>97-6</u> W
Applicant/Owner: <u>Civcle Faint</u>			0,0,0,0, <u></u>	
Applicant/Owner: <u>Civce i airus</u> Investigator(s): <u>KS, BM</u> , <u>THOIS</u> Landform (hillslope, terrace, etc.): <u>Valley</u>	oh Sect	ion, Township, Ranı	ge:	- Siope (%): 1-5
Landform (hillslope, terrace, etc.): Valley	- sl-l-b)/ loo	nt rollaf (concave, ci	DIVEX, (10116)	7219 Datum: NAD 83
Subregion (LRR):	Lat: <u>W ~ 11 0</u>	5, 9,001		ication: NA ZENE
Soil Map Unit Name:				
Soil Map Unit Name:	typical for this time of year?		(# rio, explain in	present? Yes Vo
Are Vegetation $\underline{YeS}$ , Soil $\underline{YeS}$ , or Hydro	ogy <u>NU</u> significantly distu		eded, explain any answ	
Are Vegetation 10, Soll ND, or Hydro	ogy <u>IJD</u> naturally problem			
SUMMARY OF FINDINGS – Attach	site map showing sa	mpling point lo	cations, transect	s, important router oo, oro
	s No	Is the Sampled	Агеа	/
	s No	within a Wetlan	·	No
Wetland Hydrology Present? Ye	s No		dui an Emi	the west + From Sou
Wetland Hydrology Present? Ye Remarks: (p-10'CBC5 under ? dreinege that 1/5 I-15. No 4 N back hes been lined u	I-15 flows when the	Via natural	+ yalede rece	they in the study a
drainage that 1/5 I-15. No	V boulders. Not. d	inainage OffMa	25th 4'H, bank sl	Putrilla und 1 dit
+ N bank hes been lined u // during almos I-15 Off = 50'	WX 1/H, bank slope 1	:4. Check (C	REFCO WEBSITE.	108 Factures N @ por 108 Factures N @ por 107 N " D 11 =
VEGETATION TFID. to D	mck Cher.		Dominance Test wo	
	Absolute Do	ominant Indicator pecies? Status	Dominance test wo	Sobcies 105 1 E & CBC
Tree Stratum (Use scientific names.)			That Are OBL, FACV	Species 105 11 E & CBC Species 104 Natidualizada 9 V, or FAC:
1			Total Number of Don	ninant ,
3.			Species Across All S	trata:(B)
4.	[	<u> </u>	Percent of Dominant	Species (A/B)
	Total Cover:		That Are OBL, FAC	
Sapling/Shrub Stratum			Prevalence Index w	
2			Total % Cover of	if: <u>Multiply by:</u>
3.			OBL species	x 1 = x 2 =
4				x3=
5			FACU species	×4=
Harfs Stratum	Total Cover:			/ x5= >
Herb Stratum 1. Schismus barbatus	/ <i>°/o</i>	IN APE		/ (A) <u>5</u> (B)
2		······································	Prevaience in	dex = B/A =
3.			Hydrophytic Vege	ation Indicators:
4		·······	Dominance Te	st ís >50%
5			Broyalence Ind	ex is ≤3.0 <sup>1</sup>
6 7			Morphological	Adaptations <sup>1</sup> (Provide supporting narks or on a separate sheet)
7				drophytic Vegetation <sup>1</sup> (Explain)
0	Total Cover:			· · · · · · · · ·
Woody Vine Stratum			<sup>1</sup> Indicators of hydri	c soll and wetland hydrology must
1			be present.	
2	Total Cover:		Hydrophytic	
#d		st	Vegetation Present?	Yes No
% Bare Ground in Herb Stratum 49		· · · · · · · · · · · · · · · · · · ·		
Remarks: Kantesz vez key				
1 N. APPEN VUITON	•			

Solution of a sing formation of the Control of the Co

1	Matrix	pth needed to document the indicator or o Redox Features		
Uepth (inches)	Color (moist) %	Color (moist) % Type1 L	oc <sup>2</sup> Texture	Remarks
0-20	7.5YR 5/4	Loany sand + colable_		
1 Jean	-10/10/1			
			<u></u> <u></u>	
0-Z0	7.5 YR5/4	11 11 11 11		
				· · · · · · · · · · · · · · · · · · ·
[	<u></u>			
*		21	-ing DC-Dest Chappel	M-Motrix
Type: C=C	oncentration, D=Depletion, RM	M=Reduced Matrix. <sup>2</sup> Location: PL=Pore Li	ning, RO-Root Channer	r Problematic Hydric Soils <sup>3</sup>
Hydric Soll	indicators: (Applicable to a	II LRRs, unless otherwise noted.)		-
Histosol		Sandy Redox (S5)		x (A9) (LRR C)
	oipedon (A2)	Stripped Matrix (S6)		:k (A10) (LRR B)
Black Hi		Loamy Mucky Mineral (F1)		Vertic (F18)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)		ent Material (TF2)
	Layers (A5) (LRR C)	Depleted Matrix (F3)	Other (Ex	plain in Remarks)
	ck (A9) (LRR D)	Redox Dark Surface (F6)		
	Below Dark Surface (A11)	Depleted Dark Surface (F7)		
	rk Surface (A12)	Redox Depressions (F8)	3 adjustors of	hydrophytic vegetation and
	lucky Mineral (S1)	Vemai Pools (F9)		drology must be present.
	leyed Matrix (S4)		wettand hy	dibiogy mast be present.
Restrictive I	ayer (if present):	•		
	•			
	. <u></u>			
Туре:	:hes):		Hydric Soli Pr	resent? Yes <u>No</u>
Type: Depth (ind Remarks:	shes):		Hydric Soii Pr	resent? Yes No
Type: Depth (inc	shes):			
Type: Depth (ind Remarks:	shes):		Seconda	ry Indicators (2 or more requ
Type: Depth (ind Remarks: HYDROLO Wetland Hyd	GY Gyindicators:		Seconda	
Type: Depth (ind Remarks: HYDROLO Wetland Hyd Primary Indic	GY GY Irology Indicators: ators (any one indicator is sui	fficient)	<u>Seconda</u>	ry Indicators (2 or more requ
Type: Depth (ind Remarks: HYDROLO Wetland Hyd Primary Indic Surface	GY frology Indicators: ators (any one indicator is suf Water (A1)	fficient)	Secondr	ary Indicators (2 or more requ er Marks (B1) (Riverine) iment Deposits (B2) (Riverin
Type: Depth (ind Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa	Shes): GY Irology Indicators: ators (any one indicator is suf Water (A1) ter Table (A2)	fficient) Salt Crust (B11) Biotic Crust (B12)	<u>Seconda</u> Wat Sed Drift	ary Indicators (2 or more requ er Marks (B1) (Riverine)
Type: Depth (ind Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatio	GY frology indicators: ators (any one indicator is suf Water (A1) ter Table (A2) m (A3)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	<u>Seconda</u> Wat Sed Drift	ry Indicators (2 or more requ er Marks (B1) (Riverine) iment Deposits (B2) (Riverin Deposits (B3) (Riverine) inage Patterns (B10)
Type: Depth (ind Remarks: HYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M	GY frology indicators: ators (any one indicator is suf Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriverine)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Seconda Wat Sed Drait Drait Drai	ry Indicators (2 or more requ er Marks (B1) (Riverine) iment Deposits (B2) (Riverin Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2)
Type: Depth (ind Remarks: TYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sediment	GY frology indicators: <u>ators (any one indicator is suf</u> Water (A1) ter Table (A2) in (A3) arks (B1) (Nonriverine) t Deposits (B2) (Nonriverine)	fficient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) ) Oxidized Rhizospheres along Livit	Seconds Wat Sed Drift Drai Drai Dry- ng Roots (C3) Thir	av Indicators (2 or more requ er Marks (B1) (Riverine) iment Deposits (B2) (Riverin Deposits (B3) (Riverine) inage Patterns (B10) -Season Water Table (C2) n Muck Surface (C7)
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### Exhibit B2

### DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

Huffman-Broadway Group Field Data Forms For DesertXpress

HUC 12 Watershed Duck Creek

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 39

## DesertXpress

## **Field Notebook**

### HBG Watershed ID # 39

### Watershed Name: Duck Creek

If found, please return to:

George Ball Huffman-Broadway Group, Inc. 828 Mission Avenue San Rafael, California 94901 415.925.2000 gball@h-bgroup.com

Return Postage Guaranteed

		. ]			ant	ant	
(C) Above OHW	<ol> <li>Desert pavement</li> <li>Rock varnish</li> <li>Clast weathering</li> <li>Salt splitting</li> <li>Salt splitting</li> <li>Carbonate etching</li> <li>Carbonate etching</li> <li>Depositional topography</li> <li>Caliche rubble</li> <li>Soil development</li> <li>Surface color/tone</li> <li>Drainage development</li> <li>Surface rounding</li> </ol>			(F) Above OHW	Annual herbs, xeric ruderals Perennial herbs, non-clonal Perennial herbs, clonal and non-clonal co-dominant Mature pioneer trees, no young trees Mature pioneer trees w/upland species Late-successional species	<ul> <li>Xeroriparian species</li> <li>Annual herbs, xeric ruderals</li> <li>Perennial herbs, non-clonal</li> <li>Perennial herbs, clonal and non-clonal codominent</li> <li>Mature pioneer trees, no young trees</li> <li>Mature pioneer trees, vupland species</li> <li>Late-successional species</li> <li>Upland species</li> </ul>	<ul> <li>6) Annual herbs, xeric ruderals</li> <li>7) Mature pioneer trees w/upland species</li> <li>8) Upland species</li> </ul>
					027333	7 8 11 12 13 15 15 15 15 15 15 15 15 15 15	16) 17) 18)
Valley flat	Active floodplain Benches: low, mid, most prominent Highest surface of channel bars Top of point bars Break in bank slope Upper limit of sand-sized particles Change in particle size distribution Staining of rocks Exposed root hairs below intact soil layer Silt deposits Litter (organic debris, small twigs and leaves) Drift (organic debris, larger than twigs)		Potential Vegetation OHWM Indicators	(E) At OHW	<ol> <li>Annual herbs, hydromesic ruderals</li> <li>Perennial herbs, hydromesic clonals</li> <li>Pioneer tree seedlings</li> <li>Pioneer tree saplings</li> </ol>	<ul> <li>5) Sparse, low vegetation Annual herbs, hydromesic</li> <li>6) Ruderals</li> <li>7) Perennial herbs, hydromesic clonals</li> <li>8) Pioneer tree seedlings</li> <li>9) Pioneer tree saplings</li> <li>10) Xeroriparian species</li> <li>11) Annual herbs, xeric ruderals</li> </ul>	<ul><li>12) Sparse, low vegetation</li><li>13) Xeroriparian species</li><li>14) Annual herbs, xeric ruderals</li></ul>
	ations 3,2,3,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,			(D) Below OHW	Herbaceous marsh species Pioneer tree seedlings Sparse, low vegetation Annual herbs, hydromesic ruderals Perennial herbs, hydromesic clonals	Pioneer tree seedlings Sparse, low vegetation Pioneer tree saplings Xeroriparian species	Sparse, low vegetation Xeroriparian species Annual herbs, xeric ruderals
(A) Below UHW	ppled sa 1 obstruc tream o hology i levees is acks				erbaceo ioneer tr parse, Ic nnual he erennial	ioneer i Sparse, I Sioneer i Keroripa	Sparse, (eroripa \nnual h
(A) B	ines less ng ts to rip ts to rip ts ts bars bars bars tr ts tr ts and ts and ts and to ts to tr ts to tr ts to tr ts to tr ts to tr ts to to ts to tr ts to tr ts to to ts ts to tr ts to to ts ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr to ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to tr ts to ts to ts to ts to ts to ts to ts to ts to ts to ts to ts to ts to ts to ts to ts ts to ts to ts to ts to ts to ts to ts to ts ts to ts ts ts ts ts ts ts ts ts ts ts ts ts	id balls			5) , A S F H	6 S A S A	10) S (11) S (12)
	<ol> <li>In-stream dunes</li> <li>Crested ripples</li> <li>Crested ripples</li> <li>Flaser bedding</li> <li>Harrow marks</li> <li>Gravel sheets to rippled sands</li> <li>Geravel sheets to rippled sands</li> <li>Meander bars</li> <li>Nuddy point bars</li> <li>Long gravel bars</li> <li>Lossication holes downstream of obstructions</li> <li>Stepped-bed morphology in gravel</li> <li>Streaming lineations</li> <li>Dessication/mud cracks</li> </ol>	<ul><li>17) Armored mud balls</li><li>18) Knick Points</li></ul>			Hydroriparian indicators	Mesoriparian indicators	Xeroriparian indicators

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HGB Team #			HGB Team # // ~// ~// Project Name: DesertXDr	e: Deser	DesertXpress				HBG Sub-Basin # (1 – 41) 3	39 - DUCK CREEK	HUC 12 #	
	NO H	H and					Drainag	ainage Data				Comments
Date (M / D / Y)	Time (24-Hour)	GPS Unit #	Sample Point #	Map Sheet Ref #	OHW Width	Active (A) or Inactive (I) Channel	Up (U) / or Down (D) Slope from Road	Photo (Y/N)	Below OHWM	At OHWM	Above OHWM	Use note pages at back of notebook for comments. Put comment number in block below.
5113	1209	ŝ	Pan Par		٦́.	¥	Δ	2	A: 5,9,10,12,13 D: 7,10	B: 1, 12, 13 E: 5, 12	C: 10, 11, 12 F: 5, 15, 18	Not on PRETERED TOUTE OBSERVATION PO: NT
5112	14 NO.	~	20mbs		, r. j.	Ø	₽.	2	A:5,9, 10,12,13 D: 7,10	B: 2,12,13 E: 5,12	C: 10,11,12 F: 5,15,18	Bern Blocking Way to track Noton Route
01.10	ACNA	5	1602		5	\$	A	5-	A: 5,9,10,12,15 D: 2,10	نن <u>ن</u> م	<b>C:</b> 10,11,12 F: ≤,15,13	•
01.1.6	acyo	2	29.0 K		51	*	4	2	5	B: 2,12,15 E: 5,12	С: 10,11,12 F: 5,15,18	
01.1.3	N3X	\$	20.60		SIL	Ø	Д	5	A: 5,9,10,12,13 D: 7,10	B: 2,12,13 E: 5,12	с: 10,11,18 F: 5,15,018	
amb	enno.	~	MA 62		0.1	4	A	5	A: S19,10,12,13 D: 7,10	B: 1,12,13 E: 5,12	с: 10, 11, 18 F: 5, 15, 18	
01.1.6	INVO	2	9162	provide a second	Q1)	Â	A	>-	A: 5,9,10,12,12 D: 7,10	B: 2, 12,13 E: 5,12	C: 12, 11, 12 F: 5, 15, 12	
Reference:		1; M = Manmade	D = Drainage; M = Manmade; MD = Major Drainage; R = River	rainage; R = R	iver				F-I 5-140			

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F-I.5-140

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Reference: u = urainage; m = manmage; mu = majur urainage; n = nvei E:\DesertXpress\Desert Xpress Drainage Field Data Sheet (Final).doc

o Jan	HIMM E	teld Dat	HBG OHWM Eicld Data Shoot (Arid West)	(Arid W	(act)							
HGB Team #	+ 117 #	11.	Project Nam	Project Name: DesertXpress	tXpress				HBG Sub-Basin # (1 – 41)	br.	HUC 12 #	
	VP.	Ł					Drainag	ge Data				Comments
Date (M / D / Y)	Date Time (M / D / Y) (24-Hour)	GPS Unit #	Sample Point #	Map Sheet Ref #	OHW Width	Active (A) or Inactive (I) Channel	Up (U) / or Down (D) Slope from Road	Photo (Y/N)	Below OHWM	At OHWM	Above OHWM	Use note pages at back of notebook for comments. Put comment number in block below.
· 01/1 3	2939	۲Ċ.	3910		Q'L	A	c	5-	A: 5,9,10,12,13 D: 7,10	B: 2,12,13 E: 5,12	С: 10,11,12 F: 5,15,18	
91.1.6	10 OK	~	9.05 4.		0.1	À	2	7	A: 5, 9, 10, 2, 13 D: 7, 10	B: 2,12,13 E: 5,12	с: 10,11, РС F: 5,15,18	
ai''y	5001	~	10 b2		0.1	A	2	2	A: 5, 9, 10, 12, 13 D: 7, 10	B: 2,12,13 E: 5,12	C: 12,11,12 F: 5,15,18	
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d'. VIV	5101	5	NAIS		g.L	Å	0	0	A: 5,9,10,12,13 D: 7,10	B: 2,12,13 E: 5,12	С: 10, н, 12 F: 5,15,18	OUTS: DE OF ROUTE
al'l'U	1012	N	500		E O	Å	n	2-	A: 5,9,10,12,13 D: 7,10	В: 1,12,13 Е: 5,12	С: 12,11,12 F: 5,15,18	ent fiero Verifico
Niv	KOOI	5	20102		6.0 N.	. 🗡	N	Ч	A: 5,9,10,12,13 D: 7,10	B: 1, 17, 13 E: 5, 12	с: 10 , н. л.С F: 5, 15 , 14	RTH FELD
Reference:	D = Drainage;	M = Manmade;	D = Drainage; M = Manmade; MD = Major Drainage; R = River	ainage; R = Riv	er				F-1.5-141	*		

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### **ICF Jones & Stokes**

### Wetland Determination Data Forms – Arid West Region

### For DesertXpress

HUC 12 Watershed Duck Creek

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 39

## WETLAND DETERMINATION DATA FORM - Arid West Region

- Norat Varace City County LOS	Vanas/ Mark _ Samaling Date: 2/27/08
Project/Sile: Desert Xpress City/County: Las	State: MV Sampling Point: 97-16/
Applicant/Owner: <u>CIPULE POINC</u> Investigator(s): Kell & Shoak, Bryan Marse John Holson Section, Township,	Benner
Landform (hillslope, terrace, etc.): Valley Floor Local relief (concav	Signe (%): 1-5
Landform (hillslope, terrace, etc.): <u>Valley Floav</u> Local feller (concav	Convex, none). <u>Propress</u> Side (70).
Subregion (LRR):	Long: (a <u>Service 1, 5 / 1</u> Datum, <u>MARE 1, 5</u>
	NWI classification: 1.3 1 2-011E (1
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
	re "Normal Circumstances" present? Yes No
Are Vegetation <u>NO</u> , Soil, or Hydrology naturally problematic? (If	needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point	t locations, transects, important features, etc.
Hydrophytic Vegetation Present?     YesNoN/A     Is the Sample       Hydric Soil Present?     YesNoN/A     within a Wet	
Hydric Soil Present? Yes No N/M within a Wet	land? Yes No_i
Wetland Hydrology Present? Yes No	e surgeved in the Dustry
Wetland Hydrology Present? Yes <u>No</u> Remarks: Topo indicates a blue line. No swales or drainages and field an the land parcels immed west of I-15 Pow, Parcel has been graded. Natural drainage may have been diverted away from this A 24" CMP under I-15 Conveyts road rumoff VI a swaller Born sloped that parallely I-15 on the wast. Flavs travel ultimately to	A reactly bladdedt 82 faciling SW at adjacent landise. area
VEGETATION NO DHWM indicators	S ON MUVOL, 83 " Galana private property block
Absolute         Dominant         Indicato           Tree Stratum         (Use scientific names.)         % Cover         Species?         Status	- Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant     Species Across All Strata:     (B)
3.	
4 Total Cover:	(A/B)
Sapling/Shrub Stratum	- W Total-Gover:
1	- ratum %-Cover-of-Bietle-Grust
2	
3	- Har - Har -
4	
5	
Herb Stratum	
1	- B Photo Vantage points (B)
2,	- Site 97-1W _ 9
3	
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
7	data in Remarks or on a separate sheet)
8 Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	
1	<sup>1</sup> Indicators of hydric soil and welland hydrology must be present.
2,	Hydrophytic
Total Cover:	Vegetation
% Bare Ground in Herb Stratum /00 % Cover of Biotic Crust /	Present? Yes No
Remarks: No VCa present.	
(NO Y Land Grand Grand Contractor -	

SOIL

Sampling Point: 97-1 W

Profile Descrip	otion: (Describe t	o the depth	needed to doci	iment the i	ndicator o	r confirm	the absence of	of indicators.)
Depth	Matrix			ox Features	<u>s</u>	1 = = ?	Texturo	Remarks
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		Remarks
ō					<u></u>		· · · · · ·	
	4							
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and an								
ir. 0.0			advand Matrix	2) opation	DI Dora	Lining RC	C=Root Channe	M=Matrix
	centration, D=Depli licators: (Applica					LITING, NC	Indicators f	or Problematic Hydric Soils <sup>3</sup> :
		Die to an Li						Jok (A9) (LRR C)
Histosol (A			Sandy Red					
Histic Epipe			Stripped N		(5.4)			Jck (A10) (LRR B) d Vedie (E18)
Black Histic				cky Mineral				d Verlic (F18) rest Material (TE2)
Hydrogen S		3	Loamy Gle		(F2)			ent Material (TF2)
	ayers (A5) (LRR C	)	Depleted N				Other (E	xplain in Remarks)
	(A9) (LRR D)		Redox Dar					
Contraction of the second cardinal decision of the second card	elow Dark Surface	(A11)		Dark Surface				
	Surface (A12)			pressions (F	-8)		3, , ,	
Sandy Muc			Vernal Poo	ols (F9)				f hydrophytic vegetation and
Sandy Gley							wetland h	ydrology must be present.
<b>Restrictive Lay</b>	er (if present):							NIA.
Туре:						i		NIM
Depth (inche	s):		7.5				Hydric Soil P	resent? Yes No
						L		
No	soil pit exe	avated.	r .					
	¥							
YDROLOGY	,							
	logy Indicators:		and the second second				Second	ary Indicators (2 or more required)
1796	1. The second						1	
Primary Indicato	rs (any one indical	tor is sufficie						ter Marks (B1) (Riverine)
Surface Wa	ter (A1)		Salt Crus	t (811)		10		liment Deposits (B2) (Riverine)
High Water	Table (A2)		Biotic Cru	st (B12)			Drif	t Deposits (B3) (Riverine)
Saturation (	A3)		Aquatic Ir	verlébrates	(B13)		Dra	inage Patterns (B10)
	s (B1) (Nonriverin	e)	Hydrogen	Sulfide Odd	or (C1)		Dry	-Season Water Table (C2)
and a second sec	eposits (B2) (Nonr		Oxidized	Rhizosnhere	es along Liv	/ina Roots		n Muck Surface (C7)
			Presence					yfish Burrows (C8)
	ts (B3) (Nonriveri	ie)				Sole /CG		uration Visible on Aerial Imagery (C9)
	Cracks (B6)		Recent Inc					
	/isible on Aerial Im	agery (B7)	Other (Ex	piain in Ren	narks)			Illow Aquitard (D3)
Water-Stain	ed Leaves (B9)						FAC	C-Neutral Test (D5)
Field Observati	оль:		đ		a - 2020 - 2006		1171 A	
Surface Water P	resent? Yes	s No	Depth (in	ches):				
			Depth (in			1		
Vater Table Pre						10/04/00	d Hudeoloou I	Present? Yes No _/
Saturation Prese		S NO	Depth (in	unes):		vvettan	ia nyai biogy r	
includes capillar Describe Record	y tringe) led Data (stream g	auge, monito	oring well, aerial	photos, prev	vious inspe	clions), if	available:	
	and for each 3				nan an banalar 1			
Remarks:							- 3 3 M M	
5	See Hema	ALS SY	e reverse	nse, ≈				
No alemando	ng the Congress	A SPACIFICATION OF THE SPACE OF						
								· · · · · · · · · · · · · · · · · · ·

WETLAND DETERMINATION DATA FORM -	
Project/Site: DESERT X PRESS City/County: CLATE	Sampling Date: 2/27/08
CLASS QUAT	State: NV Sampling Point: <u>10-1W</u>
Section Township Ran	
Subregion (LRR):	tong: 10 56, 6 - 2 10 Dalum Nite na
Soli Map Unit Name:	NWI classification: N/A ZONE 1/
Are elimetic / bydrologic conditions on the site typical for this time of year? Yes $\frac{1}{1}$ No	(If no, explain in Remarks.)
Are Vegetation $\underline{Ves}^2$ , Soit $\underline{Ves}^2$ , or Hydrology $\underline{N\sigma}$ significantly disturbed? Are "h	Normal Circumstances" present? Yes/ No
	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	ocations, transects, important features, etc., with
Are Vegetation A.O., Soil, or Hydrology naturally problematic? (If new SUMMARY OF FINDINGS - Attach site map showing sampling point ic Hydrophytic Vegetation Present? Yes No Is the Sampled Hydric Soil Present? Yes No Is the Sampled Wetland Hydrology Present? Yes No Wetland Hydrology Present? Yes No Remarks: 8 CBCs(100'Wide botal) under I-15 SB onramp @ Huma interchange. Cc. RFCD facilities, fully feace have the Same Bond Minns.	d? Yes No V of 19
Flow enters CBCs from earthen-lined canals from the VEGETATION Fully developed when area. 2:1 slope in	South (30 wheed) + from the west (15 mberl)
VEGETATION Fully developed whom area. 2:1 slopein	channels, parallels I-15 Blue Diamond
Absolute Dominant Indicator	Dominance Test worksheet: #204
Tree Stratum     (Use scientific names.)     % Cover     Species?     Status       1.	Number of Dominant Species That Are OBL, FACW, or FAC:
2	Total Number of Dominant Species Across All Strata: (B)
3	Percent of Dominant Species
4	That Are OBL, FACW, or FAC: (A/B)
Sapjing/Shrub Stratum	Prevalence Index worksheet:
1	Total % Cover of: Muttiply by:
2	OBL species x1 =
3	FACW species x 2 =
4	FAC species x 3 =
5 Total Cover:	FACU species x 4 =
Herb Stratum	UPL species $x 5 = $ (B)
1	
2	Prevalence index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
8	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
oTotal Cover:	
Woody Vine Stratum           1.	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	
Total Cover: <u>D</u> % Bare Ground in Herb Stratum 100 % Cover of Biotic Crust <u>D</u>	Hydrophytic Vegetation Present? Yes <u>No</u>
Remarks: No veg present.	
I in the fillence.	
F-1.5-145	

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State was a submediate data data share data shirt for the submediate state of the second state of the second state of the second state state of the second state stat State s

OIL Profile Description: (Describe to the depth	needed to document the indicator or o	confirm the abs	sence of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type 1	Loc <sup>2</sup> Text	ure <u>Remarks</u>
	· · · · · · · · · · · · · · · · · · ·		
Type: C=Concentration, D=Depletion, RM=R	Reduced Matrix. <sup>2</sup> Location: PL=Pore L	ining, RC=Root	Channel, M=Matrix.
Hydric Soil Indicators: (Applicable to all Li		India	cators for Problematic Hydric Soils <sup>3</sup> :
	Sandy Redox (S5)		1 cm Muck (A9) (LRR C)
Histosol (A1) Histic Epipedon (A2)	Stripped Matrix (S6)		2 cm Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		Reduced Verlic (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)		
Sandy Mucky Mineral (S1)	Vemal Pools (F9)	'lndi	icators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)		N	vetland hydrology must be present.
Restrictive Layer (if present):		. [	$\Delta \Delta$
Туре:	· · · ·		
Depth (inches): Remarks: No Soil pit 2KG		Hydr	ic Soil Present? Yes No
		<u> </u>	
YDROLOGY			
Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)
Primary Indicators (any one Indicator is suffici	ent)		Water Marks (B1) (Riverine)
Surface Water (A1)	Salt Crust (B11)		Sediment Deposits (B2) (Riverine)
High Water Table (A2)	Biotic Crust (B12)		Drift Deposits (B3) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)		Drainage Patterns (B10)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Liv	ving Roots (C3)	Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)		Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Plowed	d Soils (C6)	Saturation Visible on Aerial Imagery (C9
Inundation Visible on Aerial Imagery (87)			Shallow Aquitard (D3)
	<u> </u>		FAC-Neutral Test (D5)
Water-Stained Leaves (89)	-		······································
Field Observations:	o Depth (inches):	P	
	o Depth (inches):		drology Present? Yes No _/
	o Depth (inches):		
(includes capillary fringe) Describe Recorded Data (stream gauge, mor	utoring well, aerial photos, previous inspe	ections), if availa	able:
Describe Recorded Data (stream gauge, moi	uteruită steal eermi kristen brennen uiehe	•	
Remarks: Unnamed trib to 1	Duck Creek, See H	emarks	on reverse.

### WETLAND DETERMINATION DATA FORM - Arid West Region

Investigator(s): <u>KS</u> , <u>BM</u> , <u>J</u> , <u>Hd</u> <u>Son</u> Section, Township, I Landform (hillslope, terrace, etc.): <u>Valley <u>Hosr</u> Local relief (concave Subregion (LRR): <u>Valley <u>Hosr</u> Local relief (concave Soil Map Unit Name: <u>Local relief</u> (<u>voncave</u>) Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>No</u> Are Vegetation <u>Mes</u>, Soil <u>Yes</u>, or Hydrology <u>NO</u> significantly disturbed? Ar Are Vegetation <u>Mo</u>, Soil <u>NO</u>, or Hydrology <u>NO</u> naturally problematic? (If <b>SUMMARY OF FINDINGS – Attach site map showing sampling point</b> Hydrophytic Vegetation Present? <u>Yes</u> <u>No</u> <u>NIA</u> Wetland Hydrology Present? <u>Yes</u> <u>No</u> <u>NIA</u> Wetland Hydrology Present? <u>Yes</u> <u>No</u> <u>NIA</u> Kemarks: <u>HcBCs</u> (<u>5D'wide</u> total) <u>under</u> <u>T-15</u>. <u>CCRFCD</u> <u>the</u> <u>Same</u> on <u>East</u> + <u>west</u> <u>sides</u> of a lignment. <i>Luters</i> <u>the</u> <u>CBCs</u> from the south ear them <u>Blind</u> ch bed) + from the west through a <u>Zo</u>'CBL under the</u></u>	State: <u>NV</u> Sampling Point: <u>98-2</u>
Landform (hillslope, terrace, etc.): <u>Volley</u> <u>Hoar</u> Local relief (concav Subregion (LRR): <u>Landform</u> Local relief (concav Soli Map Unit Name: <u>Are climatic / hydrologic conditions on the site typical for this time of year? Yes Nac</u> Are vegetation <u>Mes</u> . Soli <u>Mes</u> , or Hydrology <u>No</u> significantly disturbed? <u>Are</u> Are vegetation <u>Mo</u> . Soli <u>Mo</u> , or Hydrology <u>No</u> naturally problematic? (If SUMMARY OF FINDINGS – Attach site map showing sampling point Hydrophytic Vegetation Present? <u>Yes No</u> <u>Ma</u> Hydrology Present? <u>Yes No</u> <u>Ma</u> Hydrology Present? <u>Yes No</u> <u>Ma</u> Wetiand Hydrology Present? <u>Yes No</u> <u>Ma</u> Wetiand Hydrology Present? <u>Yes No</u> <u>Ma</u> Hydrology Present? <u>Yes No</u> <u>Ma</u> Wetiand Hydrology Present? <u>Yes No</u> <u>Ma</u> <u>Ma</u> <u>Solity Statum</u> <u>Total Cover</u> : <u>Ma</u> <u>Absolute</u> <u>Dominant findent</u> <u>Absolute</u> <u>Dominant findent</u> <u>Sapling/Shrub Stratum</u> <u>1.</u> <u>2.</u> <u>3.</u> <u>4.</u> <u>5.</u> <u>5.</u> <u>5.</u> <u>6.</u> <u>6.</u> <u>7.</u> <u>8.</u> <u>Total Cover</u> : <u>Ma</u> <u>4.</u> <u>5.</u> <u>5.</u> <u>6.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>8.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7.</u> <u>7</u>	Range: 98-2
Subregion (LRR): D       tat 12 - 11 5, 13 14242         Soil Map Unit Name:	
Soil Map Unit Name:	( )
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	NWI classification: N/A 201
Are Vegetation <u>Ues</u> , Soil <u>Ues</u> , or Hydrology <u>No</u> significantly disturbed?       Ar         Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>No</u> naturally problematic?       (If         SUMMARY OF FINDINGS - Attach site map showing sampling point       Is the Sampling Point         Hydrophytic Vegetation Present?       Yes       No       No         Hydrophytic Vegetation Present?       Yes       No       No       Is the Sampling Point         Hydrology Present?       Yes       No       No       Is the Sampling Point         Remarks: <u>H</u> CcSC_S (5D'Wide total) under T_HS. CCCFFCS       Schwarz on East + visst sid is of a lightward.       Child in the West         VEGETATION       Hotel Preperty       2:1 slope in child tot parallel       Total Cover:       March substite         1.	/
Are Vegetation ND, Soil ND, or Hydrology ND, naturally problematic?       (If         SUMMARY OF FINDINGS - Attach site map showing sampling point       Hydrophytic Vegetation Present?       Yes       No       No       Is the Sampling Point         Hydrophytic Vegetation Present?       Yes       No       No       Is the Sampling Point         Hydrophytic Vegetation Present?       Yes       No       No       Is the Sampling Point         Hydrophytic Vegetation Present?       Yes       No       No       Is the Sampling Point         Remarks:       HCBCS (SD'Wide total) under TI-IS. CCEFCS       CEFCS       Total Cover: Directory Present?       Yes       No       No       No       Law Present       L	lo (If no, explain in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point         Hydrophytic Vegetation Present?       Yes       No       NA       is the Sampling Point         Hydrophytic Vegetation Present?       Yes       No       NA       is the Sampling Point         Remarks:       HCBC's (SD'Wide total) under TI-15.       CCCFFCh or the South ear themest.       is the Sampling Point         Remarks:       HCBC's from the South ear themest.       Is the Sampling Point       is the Sampling Point         VEGETATION       Hotel property.       2:1 slope in chemiel that parelle       Absolute Dominant Indicato         I	re "Normal Circumstances" present? Yes No
Hydrophytic Vegetation Present?       Yes       No       NiA         Hydric Soil Present?       Yes       No       NiA         Wetland Hydrology Present?       Yes       No       No         Remarks:       # c.B.C.s. (SD'Wide total) under II-IS. CCLFCS       CLFCS       CLFCS         ittle       Samz. on East + west. Sides of a lignment.       Laters the CBCs from the south arr Plinde to bed) * From the West. through a 20'CBC under the Subolute Dominant Indicator         VEGETATION       Hotel preperty:       2:1 slope in chewelt that puelle         Image: Stratum       (Use scientific names.)       % Cover         1.	if needed, explain any answers in Remarks.)
Hydric Soit Present?       YesNo	nt locations, transects, important features, etc
Hydric Soit Present?       YesNo	
Wetland Hydrology Present?       YesNo	
the Same on East + west sides of a lighterit. unters the CBCs from the south ear three lined ch bed) * from the west through a 20'CBC under the Navel sub- VEGETATION Hotel property 2:1 slope in chemel that paralle Absolute Dominant Indicato Tree Stratum (Use scientific names.) % Cover Species? Status 1	· · · · · ·
the Same on East + west sides of a lighterit. unters the CBCs from the south ear three lined ch bed) * from the west through a 20'CBC under the Navel sub- VEGETATION Hotel property 2:1 slope in chemel that paralle Absolute Dominant Indicato Tree Stratum (Use scientific names.) % Cover Species? Status 1	Facilities, fully fenced. Conditions
bed.) # from the west, through a 20°CBC, where that sub.         VEGETATION         Hotel property: 2:1 slope in channel that paralle         Image: Stratum         1.         2.         3.         4.         5.         6.         7.         8.         7.         8.         7.         8.         Total Cover:         9.         1.         2.         3.         4.         5.         6.         7.         8.         Total Cover:         9.         1.         1.         1.         1.         1.         1.         2.         3.         4.         5.         6.         7.         8.         7.         8.         7.         8.         7.         8.         7.         8.         7.         8. <t< td=""><td>Flow Photos: 59 facing &amp; along (1) hennel (30/w Photos: 58 " E @ CBC</td></t<>	Flow Photos: 59 facing & along (1) hennel (30/w Photos: 58 " E @ CBC
VEGETATION       Hotel property: 2:1 slope in channel that paralle         Tree Stratum       (Use scientific names.)       Absolute       Dominant Indicato         1.	
Absolute       Dominant indicato         Tree Stratum       (Use scientific names.)       % Cover       Species?       Status         1.	
Absolute       Dominant indicato         Tree Stratum       (Use scientific names.)       % Cover       Species?       Status         1.	els I-15. in Photos re-
1.	or Dominance restworksheet. 77-2 175
2.	Number of Dominant Species $0798-2$ . That Are OBL, FACW, or FAC: $0798-2$ (A)
3.	
4.       Total Cover:       Ø         Sapling/Shrub Stratum       1.	Total Number of Dominant Species Across All Strata:
Saplina/Shrub Stratum         1.         2.         3.         4.         5.         Herb Stratum         1.         2.         3.         Herb Stratum         1.         2.         3.         4.         5.         3.         4.         5.         6.         7.         8.         Woody Vine Stratum         1.         2.         Total Cover:         Woody Vine Stratum         1.         2.         Yotal Cover of Biotic Crust	
Saplina/Shrub Stratum         1.         2.         3.         4.         5.         Herb Stratum         1.         2.         3.         Herb Stratum         1.         2.         3.         4.         5.         3.         4.         5.         6.         7.         8.         Woody Vine Stratum         1.         2.         Total Cover:         Woody Vine Stratum         1.         2.         Yotal Cover of Biotic Crust	Percent of Dominant Species (A/B) That Are QBL, FACW, or FAC: (A/B)
2.	
3.	Prevalence Index worksheet:
4.	Total % Cover of: Multiply by:
5.       Total Cover:       Image: Cover:       <	OBL species x 1 =
Total Cover:	FACW species         x 2 =           FAC species         x 3 =
Herb Stratum         1.         2.         3.         4.         5.         6.         7.         8.         Total Cover:         Woody Vine Stratum         1.         2.         Total Cover:         Ø         Bare Ground in Herb Stratum         10.0         % Cover of Biotic Crust	FAC species X 3 =
1.	UPL species x 5 =
2.	Column Totals: (A) (B)
3.	1.4
4.	Prevalence Index = B/A =
5.	Hydrophytic Vegetation Indicators:
6	Dominance Test is >50%
7.	Prevalence Index is ≤3.0 <sup>1</sup>
8	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
Woody Vine Stratum         1.         2.         Total Cover:         % Bare Ground in Herb Stratum         0.0         % Cover of Biotic Crust	— data in Remarks or on a separate sneet) — Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum         1.         2.         Total Cover:         % Bare Ground in Herb Stratum         0.0         % Cover of Biotic Crust	
2	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Total Cover: % Bare Ground in Herb Stratum % Cover of Biotic Crust	be present.
% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust	
	Hydrophytic Vegetation
	Present? Yes No _/
NU VEG PIESUN.	

		th needed to document the indicator or co		
Depth	Matrix Color (moist) %	<u>Redox Features</u> Color (moist) % <u>Type<sup>1</sup> Lo</u>	c <sup>2</sup> Texture	Remarks
nches)	Color (moist) %	Color (moist) % Type <sup>1</sup> Lo		Тепака
		But the second s		<u> </u>
	·····			
				Langers .
		· · · · · ·		
	ntration D=Depletion PM	Reduced Matrix. <sup>2</sup> Location: PL=Pore Lini	ng RC=Root Char	nel. M≍Matrix.
		LRRs, unless otherwise noted.)	Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	• • •	Sandy Redox (S5)	1 cm	Muck (A9) (LRR C)
Histic Epiped		Stripped Matrix (S6)		Muck (A10) (LRR B)
Black Histic (	• •	Loamy Mucky Mineral (F1)		ced Vertic (F18)
Hydrogen Su	• •	Loamy Gleyed Matrix (F2)		arent Materiał (TF2)
	ers (A5) (LRR C)	Depleted Matrix (F3)	Other	(Explain in Remarks)
1 cm Muck (/	49) (LRR D)	Redox Dark Surface (F6)		
	ow Dark Sulface (A11)	Depieted Dark Surface (F7)		
Thick Dark S		Redox Depressions (F8)	3 indicators	of hydrophytic vagatation and
	/ Mineral (S1)	Vemal Poois (F9)		of hydrophytic vegetation and
	d Matrix (S4)		WEUZIA	i hydrology mast be present.
STRICTIVE LAVE				
-	r (if present):			NA
Туре:			Usudda Cal	NA No.
Type: Depth (inches)	):		Hydric Soi	D/A Present? Yes No
Type: Depth (inches)	):		Hydric Sol	Present? Yes No \
Type: Depth (inches)			Hydric Soi	Present? Yes No
Type: Depth (inches)	):		Hydric Soi	Present? Yes No
Type: Depth (inches) marks: NO	):		Hydric Soi	D/A Present? Yes No
Type: Depth (inches; narks: NO	soil pits ex			
Type: Depth (inches) narks: NO NO NOLOGY	soil pits ex	(cavated.	Seco	ndary indicators (2 or more required)
Type: Depth (inches) narks: NO PROLOGY tland Hydroic nary Indicators	soil pits ex	(ca.Vated.	<u>Seco</u>	ndary indicators (2 or more required) Vater Marks (B1) (Riverine)
Type: Depth (inches) narks: NO PROLOGY land Hydroid hary Indicators Surface Wate	soil pits ex soil pits ex gy Indicators: s (any one Indicator is suffice or (A1)	cient)	<u>Seco</u>	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Type: Depth (inchest narks: NO PROLOGY dand Hydroic nary Indicators Surface Wate High Water T	soil pits ex sojl pits ex gy Indicators: s (any one Indicator is suffic able (A2)	cient) Salt Crust (B11) Biotic Crust (B12)	<u>Seco</u>	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Type: Depth (inches) narks: NO PROLOGY dand Hydroic hary Indicators Surface Wate High Water T Saturation (A	soil pits ex sojl pits ex gy Indicators: s (any one indicator is suffic er (A1) able (A2) 3)	cient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	<u>Seco</u> 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Type: Depth (inches) narks: NO PROLOGY itand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks	soil pits ex gy Indicators: a (any one Indicator is suffic r (A1) able (A2) 3) (B1) (Nonriverine)	cient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	<u>Seco</u> 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type: Depth (inches) narks: NO PROLOGY itand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks	soil pits ex sojl pits ex gy Indicators: s (any one indicator is suffic er (A1) able (A2) 3)	cient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	<u>Seco</u> 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7)
Type: Depth (inches) narks: NO PROLOGY Itand Hydroid nary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De	soil pits ex gy Indicators: a (any one Indicator is suffic r (A1) able (A2) 3) (B1) (Nonriverine)	cient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	<u>Seco</u> 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Type: Depth (inches) narks: NO PROLOGY Itand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits	soil pits ex soil pits ex gy Indicators: s (any one Indicator is suffic er (A1) able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine)	cient) 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 Plowed Sc	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type: Depth (inches) narks: NO PROLOGY Itand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soil (	soil pits ex soil pits ex gy Indicators: s (any one Indicator is suffic er (A1) able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine)	cient) 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 Plowed So	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Type: Depth (inches) marks: NO PROLOGY ttand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soil ( Inundation Vi	soil pits ex soil pits ex agy Indicators: s (any one Indicator is suffice er (A1) able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine) Cracks (B6) sible on Aerial Imagery (B7	cient) 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 Plowed Sc	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type: Depth (inches) marks: NO PROLOGY tiand Hydroic nary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soil ( Inundation Vi Water-Staine	soil pits ex sojl pits ex agy Indicators: s (any one Indicator is suffice or (A1) able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine) Cracks (B6) sible on Aerial Imagery (B7 d Leaves (B9)	cient) 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 Plowed Sc	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Type: Depth (inches) marks: NO DROLOGY fland Hydroid nary Indicators Surface Water High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soli ( Inundation Vi Water-Staine Id Observatio	so) ( pits ex so) ( pits ex so	cient) 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 Plowed Sc	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Type: Depth (inches) marks: NO DROLOGY tland Hydroid mary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposite Surface Soil ( Inundation VI Water-Staine Id Observatio face Water Print	so) ( pits ex so) ( pits ex so	Cient) 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 Plowed Sc Other (Explain in Remarks)	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth (inches) emarks: NO DROLOGY etiland Hydroic mary Indicators Surface Wate High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soli (	SOIL pits ex SOIL pits ex sign Indicators: a (any one Indicator is suffice ar (A1) able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine) Cracks (B6) sible on Aerial Imagery (B7 d Leaves (B9) ns: essent? Yes N	cient) 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 Plowed So Other (Explain in Remarks) Depth (inches): No Depth (inches):	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Type: Depth (inches) marks: NO DROLOGY Etland Hydroid mary Indicators Surface Water High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soli ( Inundation Vi Water-Staine Id Observatio fface Water Pro- ther Table Press turation Pressen	so) ( pits ex so) ( pits ex so) ( pits ex so) ( pits ex so) (any one indicator is suffice able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine) Cracks (B6) sible on Aerial Imagery (B7 d Leaves (B9) ns: essent? Yes N ent? Yes N fringe)	Cient) 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 Plowed Sc Other (Explain in Remarks) Depth (inches): No Depth (inches):	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type: Depth (inches) marks: NO DROLOGY tland Hydroid nary Indicators Surface Water High Water T Saturation (A Water Marks Sediment De Drift Deposits Surface Soli ( Inundation Vi Water-Staine d Observatio face Water Pro- ler Table Presen uration Presen	so) ( pits ex so) ( pits ex so) ( pits ex so) ( pits ex so) (any one indicator is suffice able (A2) 3) (B1) (Nonriverine) posits (B2) (Nonriverine) (B3) (Nonriverine) Cracks (B6) sible on Aerial Imagery (B7 d Leaves (B9) ns: essent? Yes N ent? Yes N fringe)	cient) 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 Plowed So Other (Explain in Remarks) Depth (inches): No Depth (inches):	Seco 	ndary Indicators (2 or more required) Vater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DR.Selt Xpress City/County: Clar	12 Sampling Date: 2/27/08
pplicant/Owner: Circle Point.	State: <u></u> Sampling Point: <u>9 &amp;3 W</u>
Investigator(s): Bryon Monse, Kelly Shook, John Huls Section, Township, Ra	
Landform (hillslope, terrace, etc.): Valley Floor Local relief (concave,	convex pope): MOME Signe (%): 1-5
	-tong: 12 36, 233914 Datum: NAP 83
.14	1000000000000000000000000000000000000
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
-	"Normal Circumstances" present? Yes / No No
Are Vegetation, Soll, or Hydrology naturally problematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No I Is the Sampled	Area .
Hydric Soil Present? Yes No No Nition a Wetter	
Wetland Hydrology Present? Yes No V	
Remarks: Sel temanles on tellers a page.	Hotos 64 Facing Nalong I-15, 63 "Salong Visit
NO DHWM indicators on parcel.	63 " S "U" 62 " Eatculvert. 61." Wot swale upstram
	60 " E " " downstream
VEGETATION	Dominance Test worksheet:
Tree Stratum         (Use scientific names.)         Absolute         Dominant         Indicator           Mathematical Stratum         % Cover         Species?         Status	Number of Dominant Species
1	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant 7
3	Species Across All Strata: (B)
4	Percent of Dominant Species 5/
Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
i Latin Midentia	Total % Cover of: Multiply by:
2. ALCON AVIA AT	OBL species         x1 =
3. Ambrosia dumosa 15 TNL OFF	FACW species x 2 =
	FAC species x 3 =
5 Total Cover:	FACU species $10 \times 4 = 40$
Herb Stratum	UPL species <u>23</u> x 5 = <u>11.5</u>
1. Salsola tradias N ITPE	Cotumn Totals: <u>33</u> (A) <u>/55</u> (B)
2. Brownus tectorum NALLYPE	Provalence Index = B/A = 3.5
3. Staling FACIO	
$4. \underline{RR} = \underline{S. Plsnler} \underline{FACH}$	Hydrophytic Vegetation Indicators:
5. as prod NWI	Dominance Test is >50% Prevalence index is ≤3.0 <sup>1</sup>
6	Prevalence index is \$3.0 Morphological Adaptations <sup>1</sup> (Provide supporting
. 7	data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	be present.
2	Hydrophytic
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Vegetation Present? Yes No
Remarks:	
F-I 5-149	

Sampling Point 92-3W

Construction       Construction       Reduce Features       Type       Loc       Texture       Remarks         Depth       Matrix       Reduce Features       Texture       Remarks       Remarks         (inches)       Color (moist)       %       Color (moist)       %       Type       Loc       Texture       Remarks         (inches)       Color (moist)       %       Color (moist)       %       Type       Loc       Texture       Remarks         (inches)       Color (moist)       %       Color (moist)       %       Type       Loc       Texture       Remarks         (inches)       Color (moist)       %       Color (moist)       Remarks       Remark
Depth       Matrix       Redox Features       Toxe*       Loc*       Texture       Remarks
(Inches)       Color (moist)       %       IVB       Luc       IEAds       Indiana         (Inches)       Color (moist)       %       IVB       Luc       IEAds       Indiana         (Inches)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix.       *Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils*:         Histosol (A1)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>3</sup> :         Histosol (A1)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>3</sup> :         Histosol (A1)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>3</sup> :         Histosol (A1)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>3</sup> :         Histosol (A1)
'Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, RC=Root Channel, M=Matrix.         Hydric Soli Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Solis <sup>3</sup> :         Histosol (A1)
Hydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators of Problematic Hydric Soils*:
Hydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators of Problematic Hydric Soils*:
Hydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators of Problematic Hydric Soils*:
Hydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators of Problematic Hydric Soils*:
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators: (Applicable to all LRRs, unless otherwise noted.)         Histosol (A1)
Histosol (A1)       Sandy Redox (S5)       1 cm Multx (A9) (LRR C)         Histic Epipedon (A2)       Stripped Matrix (S6)       2 cm Multx (A9) (LRR B)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Suffice (A4)       Loamy Mucky Mineral (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)       Other (Explain in Remarks)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       Thick Dark Surface (A11)       Depleted Dark Surface (F7)         Sandy Gleyed Matrix (S4)       Redox Depressions (F8)       *Indicators of hydrophytic vegetation and wetland hydrology must be present.         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)       *Indicators of hydrophytic vegetation and wetland hydrology must be present.         Type:
Histic Epipedon (A2) ***
Black Histic (A3)
Hydrogen Sultide (A4)
I 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)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       Wetland hydrology must be present.         Restrictive Layer (if present):       N/A.         Type:
Image: Secondary Indicators (2 or more required)         Primary Indicators (any one indicator is sufficient)         Surface Water (A1)         Surface Water (A1)         Depleted Dark Surface (F7)         Redox Depressions (F8)         *Indicators of hydrophytic vegetation and wetland hydrology must be present.         Sandy Gleyed Matrix (S4)         Restrictive Layer (if present):         Type:         Depth (inches):         No         Soci   p'it was example (A1)         Secondary Indicators (2 or more required)         Wetland Hydrology Indicators:         Primary Indicators (any one indicator is sufficient)         Surface Water (A1)         Salt Crust (B11)
Type:
Depth (inches):
Depth (inches):
iYDROLOGY       Secondary indicators (2 or more required)         Wetland Hydrology Indicators:
iYDROLOGY       Secondary indicators (2 or more required)         Wetland Hydrology Indicators:
Wetland Hydrology Indicators:       Secondary Indicators (2 or more required)         Primary Indicators (any one indicator is sufficient)       Water Marks (B1) (Riverine)         Surface Water (A1)       Salt Crust (B11)         Drift Deposits (B3) (Riverine)       Drift Deposits (B3) (Riverine)
Wetland Hydrology Indicators:       Secondary Indicators (2 or more required)         Primary Indicators (any one indicator is sufficient)       Water Marks (B1) (Riverine)         Surface Water (A1)       Salt Crust (B11)         Drift Deposits (B3) (Riverine)       Drift Deposits (B3) (Riverine)
Wetland Hydrology Indicators:       Secondary Indicators (2 or more required)         Primary Indicators (any one indicator is sufficient)       Water Marks (B1) (Riverine)         Surface Water (A1)       Salt Crust (B11)         Drift Deposits (B3) (Riverine)       Drift Deposits (B3) (Riverine)
Wetland Hydrology Indicators:       Secondary Indicators (2 or more required)         Primary Indicators (any one indicator is sufficient)       Water Marks (B1) (Riverine)         Surface Water (A1)       Salt Crust (B11)         Drift Deposits (B3) (Riverine)       Drift Deposits (B3) (Riverine)
Primary Indicators (any one indicator is sufficient)
Surface Water (A1)Salt Crust (B11)Sediment Deposits (B2) (Riverine)
Surface Water (A1) Out or day (21.1) Drift Deposits (B3) (Riverine)
Biotic Crust (812)
High Water Table (A2)       Biotic Crust (B12)       Dnn Deposits (B3) (Riverine)         Saturation (A3)       Aquatic Invertebrates (B13)       Drainage Patterns (B10)
- Oddination (10)
Counter population ( ) ( ) Cravits Burrows (CB)
Drift Deposits (B3) (Nonriverine)     Presence of Reduced Iron (C4)     Carbonal Carbona
Output of Shallow Aquitard (D3)
Water-Stained Leaves (B9)
Field Observations:
Surface Water Present? Yes No Depth (inches):

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

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches):

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches):

Water Table Present?

Saturation Present?

Remarks: Channel shown as blue line on topo, but there's no defined bed 4- bank across undeveloped parcel (only a slight swale). Relatively new housing development west of this undevel, parcel may have redirected flow away from parcel. Asyl" cup crosses under I-15; flows parallel I-15 southbound toward Duck Creek in an earther lived channel (20'w x1'h; 1:4"bank" shoe).

Wetland Hydrology Present? Yes

No \_\_\_\_\_

roject/Site: Desert Xpress	City/County:	5 Vegas / Clauk_ Sampling Date: 2/27/0
, pplicant/Owner: <u>Circle Point</u>		State: <u>NV</u> Sampling Point: <u>'98-41</u>
,pplicant/Owner: <u>CIVCLE_POIME</u> nvestigator(s): John Holsmi, Kolly Shank	-BMAN MOR Section, Township,	, Range:
andform (hillslope, terrace, etc.): Valley Flo	Local relief (conca	ave, convex, none): <u>PIOPIC</u> Sope (%): <u>IC</u>
Subregion (LRR): 1-2		
Soil Man Unit Name:	un 119	NWI classification: NWI classification:
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes N	No (If no, explain in Remarks.)
Are Vegetation NO, Soit NO, or Hydrology		Are "Normal Circumstances" present? Yes No
Are Vegetation <u>NO</u> , Soil <u>NO</u> , or Hydrology <u>K</u>		If needed, explain any answers in Remarks.)
NUMMARY OF FINDINGS - Attach site	map showing sampling poir	nt locations, transects, important features, et
	1	
	No is the Samp	pled Area
Hydric Soil Present? Yes	- No $-$ within a We	etland? Yes No
Wetland Hydrology Present? Yes		Photos
Remarks:	1	nd to southwest 67 " Wat wash upstream 66 " 5011 pit.
Hay land use to east is I-15 y- to	istruction equipment you	ra La solutionary of E
underel. Lange to Diest F Mortine to set.		
/EGETATION		,
	Absolute Dominant Indicat % Cover Species? Statu	
<u>Tree Stratum</u> (Use scientific names.)	<u></u>	IS Number of Dominant Species (A)
a		
۲		Species Across All Strata;(B)
4		Percent of Dominant Species
Total	Cover:	That Are OBL, FACW, or FAC: 2073 (A/E
Sapling/Shrub Stratum	3 Y EAL	Prevalence Index worksheet:
1. Acacia progati 2. Ericampia l'aricitatia	7 YNU-19E	
4. Aught Dia dumosa		FACW species x 2 =
5.		FAC species $1 \times 3 = 3$
	Cover: <u>6</u>	FACU species $4 \times 4 = 4$
Herb Stratum	I Y FAC	
1. Lyndom dactulism 2. Brassica tournetortii		
		Prevalence Index = B/A = 4.5
3. Bromus tectorium		Hydrophytic Vegetation Indicators:
4		Dominance Test is >50%
•		Prevalence Index is ≤3.0 <sup>1</sup>
7		Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	· · · · · · · · · · · · · · · · · · ·	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total	Cover: <u>7</u>	
Woody Vine Stratum		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1		be present.
2	Cover:	Hydrophytic
		Vegetation Present? Yes No
	Cover of Biotic Crust	
Remarks:	I	

and the second second

SOIL

## Sampling Point: <u>92-4</u> W

Profile Description: (Describe to the depth nee	ded to document the indicator or con	firm the absence of indicators.)
Depth Matrix	Redox Features	
	or (moist) % Type Loc	Sandy Loan w/ aravel
0-11 10YR 516	and a market is port	
>11 pick ax retusal - los	rap rock + anavel 75"	
I		
	······································	
		a RC=Root Channel, M=Matrix.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Redu Hydric Soil Indicators: (Applicable to all LRRs,	Lucason: PL-Fore Linin	Indicators for Problematic Hydric Soils <sup>3</sup> :
	_ Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
	_ Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
Histic Epipedon (A2)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Stratified Lavers (A5) (LRR C)	_ Depleted Matrix (F3)	Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)	_ Redox Dark Surface (F6)	
Dopiolog 2012 / 2 / 2	Depleted Dark Surface (F7)	
	_ Redox Depressions (F8) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Mucky Mineral (S1)		wetland hydrology must be present.
Sandy Gleyed Matrix (S4) Restrictive Layer (if present):		
Type: Depth (inches):		Hydric Soil Present? Yes No/
Remarks: Soil pit dug in cho		
HYDROLOGY		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is sufficient)		Sediment Deposits (B2) (Riverine)
	Salt Crust (B11)	Drift Deposits (B3) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Drainage Patterns (B10)
Saturation (A3)	Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Water Marks (B1) (Nonriverine)	Oxidized Rhizospheres along Living	
Sediment Deposits (B2) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Drift Deposits (B3) (Nonriverine)	Recent iron Reduction in Plowed Sol	
Surface Soil Cracks (B6)	Other (Explain in Remarks)	Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)		FAC-Neutral Test (D5) Sed invent Sortin
Water-Stained Leaves (B9)		
Field Observations: Surface Water Present? Yes No	Depth (inches):	
Ballace frence		
		Vetland Hydrology Present? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitorir	ng well, aerial photos, previous Inspection	ns), it available:
Remarks: Obannal stanin as Alue U	inc on topo + the to DKCK	Check. 36" CMP Closses under I-15.
Drainage DHM: 6'W X1'h +1:2	slope - Drains east ward to,	Large SWALE THAT PARALLES 1-15.
Drainage crosses undevel. private	parcel & trash is disposed	Creek. 36" CMP Crosses under I-15. large swale that parallels I-15. of in drainage.

	TION DATA FORM - Arid West Region
Project/Site: Desert X press	City/County: Las Venas / Clark Sampling Date: 2/27/02 State: NV Sampling Point: 98-5W
plicant/Owner CIFCU FOLK	State. <u>NV</u> State. <u>NV</u>
Investigator(s): KS, BM, JShn Holson	_ Section, Township, Range:
Landform (hillslope, terrace, etc.): Valley 1700F	Local relief (concave, convex, none): Slope (%): 1-4
Subregion (LRR): D	NWI classification: N/A 20N
Soil Map Unit Name: <u>AIA</u>	
Are climatic / hydrologic conditions on the site typical for this time of y	/ear? Yes No (If no, explain in Remarks.)
Are Vegetation NO_, Soil, or Hydrology significant	
Are Vegetation, Soil, or Hydrology naturally p	
SUMMARY OF FINDINGS – Attach site map showin	g 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
Wetland Hydrology Present? Yes No	- This conthe stinged Dets IK Frains Est A
Remarks: Drainage parallels I-15, No blue line	on topo, This earthen-lined Photo 75 facing Eat Cl s area is 400 /2 - a 24" CMP is 74 "I Is of ch w I-15 + On East side another 73 " N " Charles 72 soil pitting
at midpoint in the 400 L. 24" CMP cosses unde	v I-15 + On East side another 73 " N "
wide, shallow "Swale" parallels I-15 + conveys f	Yow south toward DuckCreck. 72 soil pitting
VEGETATION Land use: I-15; part undereloped, + block wall we construction word.	Yow south toward DuckCreck. 72 soil pit (nel par out to the west See point, 98-4 for more detailed land use info.
	e Dominant Indicator Dominance Test worksheet: ar <u>Species? Status</u> Number of Dominant Species
Tree Stratum (Use scientific names.) <u>% Cove</u>	That Are OBL, FACW, or FAC: (A)
2	
· · · · · · · · · · · · · · · · · · ·	Species Across All Strata: (B)
4	Percent of Dominant Species     That Are OBL_FACW, or FAC: 00 (A/B)
Total Cover:	
1	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x 1 = FACW species x 2 =
4	=
5	FACU species x 4 =
Herb Stratum	UPL species $x_5 = 5$
1. Lundow dadielyen 45	
2. Bracsica tournefortii	Prevalence Index = B/A = 3.0
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations: (Provide supporting
8.	data in Remarks or on a separate sneet)
8	
Woody Vine Stratum	
1	be present.
2	Hydrophytic
Total Cover:	Vegetation /
6 Bare Ground in Herb Stratum <u>54</u> % Cover of Biotic	
Remarks:	

	a needed to document the indicator or	confirm the absence of indicators.)
ofile Description: (Describe to the dept	R Reeded to document the molector of	
epth <u>Matrix</u>	Redox Features Color (moist) % Type1	Loc <sup>2</sup> Texture Remarks
		Sandy Loam
0-6 10YR 5/6		
>1. TOIX ax refusal -	rocks + cobbles >51	
		الله المحمد المراجع الم
ype: C=Concentration, D=Depletion, RM=	Reduced Matrix. <sup>2</sup> Location: PL=Pore	Lining, RC=Root Channel, M=Matrix.
ydric Soil Indicators: (Applicable to all I	RRs, unless otherwise noted.)	Indicators for Problematic Hydric Solls <sup>3</sup> :
	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)
_ Histosol (A1)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR B)
_ Histic Epipedon (A2)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)
Black Histic (A3) 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)		
	×	
	25	1
THE MOCK ST COMPLET	- age	
estrictive Layer (if present): Type: <u>MCKS + Cobble</u>		Hydric Soil Present? Yes No
Dooth (inches)		Hydric Soil Present? Yes No
Dooth (inches)		Hydric Soil Present? Yes No
Dooth (inches)		Hydric Soil Present? Yes No
Depth (inches):		Hydric Soil Present? Yes No
Dooth (inches)		Hydric Soil Present? Yes No
Depth (inches): <u>la</u> lemarks: Soil pit dug in c		
Depth (inches): <u>le</u> lemarks: Soil pit dug in cl YDROLOGY		Hydric Soil Present? Yes No Secondary indicators (2 or more required)
Depth (inches): lemarks: Soil pit olug in cl YDROLOGY Vetland Hydrology Indicators:	hannel.	
Depth (inches): lemarks: Soil pit olug in cl YDROLOGY Vetland Hydrology Indicators:	hannul . 	Secondary indicators (2 or more required) Water Marks (B1) (Riverine)
Depth (inches): emarks: Soil pit dug in cl Soil pit dug in cl /DROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is suffi		Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inches): emarks: Soil pit dug in cl YDROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is suffi Surface Water (A1)	 kanh , , , 	Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inches): emarks: Soil pit dug in cl /DROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is suffi Surface Water (A1) High Water Table (A2)	kannu . 	Secondary indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inches):	icient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13)	<u>Secondary indicators (2 or more required)</u> Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	<u>Secondary indicators (2 or more required)</u> Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Living Roots (C3) Thin Muck Surface (C7)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L	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) Iving Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)
Depth (inches): temarks: Soil pit dug in cl YDROLOGY Vetland Hydrology Indicators: Primary Indicators (any one indicator is suffi 	icient) Salt Crust (B11) Salt Crust (B12) Aquatic Invertebrates (B13) Aduatic Invertebrates (B13)	Secondary indicators (2 or more required)
Depth (inches): temarks: Soil pit dug in cl YDROLOGY Vetland Hydrology Indicators: Primary Indicators (any one indicator is suffi 	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow	Secondary indicators (2 or more required)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow	Secondary indicators (2 or more required)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow	Secondary indicators (2 or more required)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7)Other (Explain in Remarks)	Secondary Indicators (2 or more required)
Depth (inches):	icient) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along L Presence of Reduced Iron (C4 Recent Iron Reduction in Plown 7) Other (Explain in Remarks) No	Secondary indicators (2 or more required)
Depth (inches):	kanhud ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches):	Secondary indicators (2 or more required)
Depth (inches):	kanhud ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches):	Secondary indicators (2 or more required)
Depth (inches):	kanut ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary indicators (2 or more required)         Water Marks (B1) (Riverine)         Sediment Deposits (B2) (Riverine)         Drift Deposits (B3) (Riverine)         Drift Deposits (B3) (Riverine)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Iving Roots (C3)         Thin Muck Surface (C7)         Crayfish Burrows (C8)         ed Soils (C6)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         Wetland Hydrology Present?         Yes         No
Depth (inches):	kanut ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary indicators (2 or more required)
Depth (inches):	kanut ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary indicators (2 or more required)         Water Marks (B1) (Riverine)         Sediment Deposits (B2) (Riverine)         Drift Deposits (B3) (Riverine)         Drift Deposits (B3) (Riverine)         Drainage Patterns (B10)         Dry-Season Water Table (C2)         Iving Roots (C3)         Thin Muck Surface (C7)         Crayfish Burrows (C8)         ed Soils (C6)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)         Wetland Hydrology Present?         Yes         No
Depth (inches):	kanut ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches): No Depth (inches):	Secondary indicators (2 or more required)
Depth (inches):	kanut ident) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along I Presence of Reduced Iron (C4 Recent Iron Reduction in Plow 7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary indicators (2 or more required)

F-I.5-154

## WETLAND DETERMINATION DATA FORM – Arid West Region

Not Yourses city county 105 Ve	State: <u>NV</u> Sampling Date: <u>3/6/08</u> State: <u>NV</u> Sampling Point: <u>98-7</u>
roject/Site: Desert Xpress City/County: Las Ve	State: NV Sampling Point: 98-7
Applicant/Owner: <u>Circle Bint</u> nvestigator(s): <u>Kelly Shook, Margaret Widdowson</u> Section, Township, Ran	
andform (hillslope, terrace, etc.): Vallen Graby Local relief (concave, concerned) Local relief (concerned) Local r	trang D 36.052044 Datum: NAD 22
Subregion (LRR):	NWI classification: N/2 20NE
Soil Map Unit Name:	(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	Normal Circumstances" present? Yes No
Are vedetation rich, on riversiegys.	eded, explain any answers in Remarks.)
Are Venetation VIC Soll AC or invuluiogy	
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	ocations, transects, important reatures, etc.
Hydrophytic Vegetation Present? Yes No is the Sampled	Area
Ves No (V/A+) while a Matter	d? YesNo
Vor No V	741 de Proto
Remarks: MSGS shows blue line. This drainage has OHM of 2 6"high, with 2:1 side slope, Remonant desert scrub surrounded l landuse. Trib, to Duck Creek.	sy urban 332 " W " " urban
VEGETATION	
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum         (Use scientific names.)         % Cover         Species?         Status           1.	Number of Dominant Species (A)
2	Total Number of Dominant (B)
3	Species Across All Strata: (B)
4	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1. Amorala aumosta	Total % Cover of: Multiply by:
2. Latra-Videntation 2 N Faria	OBL species x1 =
3. Acacia areagii	FACW species x 2 =
4	FAC species x3 =
5	FACU species $3$ $x4 = \frac{12}{150}$ UPL species $30$ $x5 = \frac{150}{150}$
Herb Stratum	UPL species $20$ $x_5 =Column Totals: 33 (A) 17D (B)$
1	
2	Prevalence index = $B/A = 5775$
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
5 7	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover: 12	
Woody Vine Stratum 1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
	Hydrophytic
2	Vegetation Present? Yes No
Remarks: Remarkt desert scrub surrounded by urban lan	
	d eetp

### SOIL

## Sampling Point: <u>98-7</u>

Profile Description: (Describe to the depth needed to document to	ne indicator or confirm the absence of indicators.)
Depth <u>Matrix Redox Fea</u>	ures Type <sup>1</sup> Loc <sup>2</sup> Texture Remarks
(inches) Color (moist) % Color (moist) %	Type <sup>1</sup> Loc <sup>2</sup> Texture Remarks
	tion: PI -Pore Lining RC=Root Chappel M=Matrix
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Loca Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise	noted.) Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1) Sandy Redox (S5 Histic Epipedon (A2) Stripped Matrix (S	
Black Histic (A3) Loamy Mucky Mir Hydrogen Sulfide (A4) Loamy Gleyed M	
Stratified Layers (A5) (LRR C) Depleted Matrix (	
1 cm Muck (A9) (LRR D) Redox Dark Surfa	
Depleted Below Dark Surface (A11) Depleted Dark Su	
Thick Dark Surface (A12) Redox Depressio	
Sandy Mucky Mineral (S1) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	wetland hydrology must be present.
Restrictive Layer (if present):	an subscription of some many defaults and the solution of the
Туре:	
Depth (inches):	Hydric Soil Present? Yes No
Remarks: No soil present, Surface substrate	in a hourself and solid a
NO SOI PRESENC. SUMACE SMENTANCE	13 sand, grand and repland.
	~
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine)
	Sediment Deposits (B2) (Riverine)
and a second	pheres along Living Roots (C3) Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine) Presence of Re	
Inundation Visible on Aerial Imagery (B7) Other (Explain i	Remarks) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	FAC-Neutral Test (D5)
Field Observations:	8
Surface Water Present? Yes No Depth (inches)	
Water Table Present? Yes No Depth (inches)	/
Saturation Present? Yes No Depth (inches)	
(includes capillary frigge)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), ir available.
Remarks:	a relacities on reverse i
Remarks: TF16, to Duck Greek. S	
	1.5-156

WETLAND DETERMINATION DATA FORM	
Project/Sile: Desert Xpress City/County: Las City/County: Las	Vencus/Cloute Sampling Date: 2/27/08 State: NV Sampling Point: 97-1W
Investigator(s): Kell & Shosk, Bryan Marse, John Holson Section, Township, F	
Landform (hillislope, terrace, etc.): Valley Hoor Local relief (concave	convex none): Maine Slope (%): 1-5
Subregion (LRR):	Datum: NAD 53
Soil Map Unit Name: <u>NA</u>	NWI classification: LL LA 20NE []
Are elimatic / hydrologic conditions on the site typical for this time of year? Yes V	(If no, explain in Remarks.)
Are Vegetation Yes Soil, or Hydrology significantly disturbed? Are	e "Normal Circumstances" present? Yes No No
Are Vegetation <u>NO</u> , 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       No N/A       Is the Sample within a Wetl         Hydric Soil Present?       Yes No       No N/A       within a Wetl         Wetland Hydrology Present?       Yes No       No No	ed Area
Hydric Soil Present? Yes No N/H within a Wetl	and? Yes No
Wetland Hydrology Present? Yes <u>No //</u>	a phone way in the Photo
Remarks: Topo indicates a blue line. No swales or drainages with field on the land parcels immed west of I-15 Row. Parcel How been groded. Natural drainage may have been diverted away from this A 24" CMP under I-15 Convey's road runoff via sweller (30" w slope) that paralleg I-15 on the west. Flows travel ultimatrily to	tecently bladedt 82 facing SW at adjacent landese. Jecently bladedt 82 facing SW at adjacent landese. Disc I'bigh, 1:4 50 "NW"""""""""""""""""""""""""""""""""""
VEGETATION NO DHWM indicators	OVER UTERA & 83 " Falance available to black
Tree Stratum         (Use scientific names.)         Absolute         Dominant         Indicator           1.	
2,	- Total Number of Dominant
3	Species Across All Strata: (B)
μ4	
Total Cover:	(A/B)
Sapling/Shrub Stratum 1	- 6 F Total Cover:
2	Ratum % Gover of Bietic Grust
3	- ++ ++ ++++++++++++++++++++++++++++++
4	- 5 - 1 - 1
5	
Total Cover:	
Herb Stratum	s (B)
1.        2.	Photo Vantage points (B)
3	site 97-1w _ 9
4	
5	Dominance Test is >50%
6	Prevalence Index is ≤3.0'
7	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	
	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2	be present.
Total Cover:	Hydrophytic
% Bare Ground in Herb Stratum 100 % Cover of Biotic Crust	Vegetation Present? Yes No
Remarks: No veg present.	
in ill i and i	
F-I.5-157	
	· · · · · · · · · · · · · · · · · · ·

S	0	IL
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## Sampling Point: 97-1 W

Profile Descriptio	on: (Describe to the dept)	needed to document the indicator or o	confirm the absence of inc	licators.)
Depth	Matrix	Redox Features		à,
	olor (moist) %	Color (moist) % Type <sup>1</sup> L	.oc <sup>2</sup> Texture	Remarks
			· · ·	
		·····		and the second sec
				<u>5775789</u> 41
				anya a sana ang ang ang ang ang ang ang ang ang
	<u> </u>		·····	
	<u></u>			
pe: C=Concent	tration, D=Depletion, RM=F	Reduced Matrix. <sup>2</sup> Location: PL=Pore Li	ning, RC=Root Channel, M	-Matrix.
dric Soll Indica	tors: (Applicable to all L	RRs, unless otherwise noted.)		oblematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Redox (S5)	1 cm Muck (/	
Histic Epipedo		Stripped Matrix (S6)	2 cm Muck (/	
Black Histic (A		Loamy Mucky Mineral (F1)	Reduced Ve	
_ Hydrogen Sulf		Loamy Gleyed Matrix (F2)	Red Parent M	
	rs (A5) (LRR C)	Depleted Matrix (F3)	Other (Expla	
1 cm Muck (As		Redox Dark Surface (F6)		
	w Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Su		Redox Depressions (F8) Vernal Pools (F9)	<sup>3</sup> Indicators of hyd	rophytic vegetation and
_ Sandy Mucky I				logy must be present.
_ Sandy Gleyed				. )
strictive Layer			9 34	NA
			Hydric Soil Prese	nt? Yes No
and the second sec			Hydric Soll Frese	
Mo so	oil pit excavated	F		
DROLOGY				
etland Hydrolog	y Indicators:			ndicators (2 or more required)
mary Indicators	(any one indicator is suffici	ent)		larks (B1) (Riverine)
Surface Water		Salt Crust (B11)	Sedimə	nt Deposits (B2) (Riverine)
- High Water Tal		Biotic Crust (B12)	. Drift De	posits (B3) (Riverine)
Saturation (A3)		Aquatic Invertebrates (B13)		e Patterns (810)
	, 31) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Dry-Sea	son Water Table (C2)
T	osits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) 🔡 Thin Mu	ck Surface (C7)
N	B3) (Nonriverine)	Presence of Reduced Iron (C4)		Burrows (C8)
_ Surface Soil Cr		Recent Iron Reduction in Plowed S	Solls (C6) Saturati	on Visible on Aerial Imagery (C
in the second se	ble on Aerial Imagery (87)	Other (Explain in Remarks)		Aquitard (D3)
_ Inditidation visit				utral Test (D5)

vvater-stanieu Leaves	(09)			
Field Observations:			1	
Surface Water Present?	Yes	No	Depth (inches):	
Water Table Present?	Yes	No	_ Depth (inches):	
Saturation Present?	Yes	No	Depth (inches):	

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

Remarks:

See remarks on reverse.

Wetland Hydrology Present? Yes \_\_\_\_\_ No \_\_\_\_

# Exhibit B2

# DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

Huffman-Broadway Group

# **Field Data Forms**

# For DesertXpress

HUC 12 Watershed Duck Creek

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 39

## WETLAND DETERMINATION DATA FORM - Arid West Region

De las te Marches Ciby/Coupty Las	State: <u>NV</u> Sampling Date: <u>3/1/08</u> State: <u>NV</u> Sampling Point: <u>C93-1W</u>
roject/Site: Desert Xpress City/County: Lass	State: NV Sampling Point: C93-1W
	P201
Applicant/Owner: <u>LIFCLE FORM</u> Investigator(s): <u>KS, BM, J.Holson</u> Landform (hillslope, terrace, etc.): <u>Valley - Apor</u> Local relief (concave, Local relief (concave,	convex pone): 1/6/ Slope (%):
Landform (hillslope, terrace, etc.): Valley -1 par Local relet (concave,	- tong: NAD E3
Subregion (LRR):	NWI classification: N/A- ZANETI
Soll Map Unit Name:	
Soli Map Unit Name: No	"Normal Circumstances" present? Yes No
Are Vegetation u.c., Soli <u>4000</u> , of Hydrology <u>1000</u>	eeded, explain any answers in Remarks.)
An Manually problematics (and	
SUMMARY OF FINDINGS – Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled	Area
Hydric Soil Present? Yes No V within a Wetla	
Hydrophytic Vegetation Present? Yes No V within a Wetland Wetland Hydrology Present? Yes No V within a Wetla	•
Wetland Hydrology Present? Yes <u>No P</u> Remarks: Blue line on topo, Concrete open box channel - CUEFC Web site for facility details) - converse flows from west to e	est under the 214 " W
website for facility details)-converse thous from where con	212 " E
UPPER to Duck Creek/Las Vegas Wash.	
VEGETATION	• • • •
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) <u>% Cover Species? Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1	Total Number of Dominant
3	Species Across All Strata: (B)
4	Percent of Dominant Species
Total Cover:	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x1 =
3	FACW species x2 =
4 5	FAC species x 3 =
Total Cover:	FACU species x 4 =
Herb Stratum	UPL species x 5 = (B)
1	·
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Mombological Adaptations <sup>1</sup> (Provide supporting
7	data in Remarks or on a separate sheet
8 Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
and the second se	4 supervised budgetogy must
Woody Vine Stratum           1.	<sup>1</sup> Indicators of hydric soit and wetland hydrology must be present.
2	
2	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Present? Yes No V
Remarks: Concrete-lined, No veg.	

Sampling Point: C.93 -1 W

SOIL							Samping Form	
Profile Des	scription: (Describe t	o the depth ne	eded to docu	ment the indicato	r or confirm	the absence of in	dicators.)	
Depth	Matrix		Redo	nx Features				
(inches)	Color (moist)	<u>%</u> C	olor (moist)	'sqvT%	<u>Loc</u> 	Texture		
						······		
	C 1980					<u> </u>		
<sup>1</sup> Type: C=C	Concentration, D=Depl	tion, RM=Red	uced Matrix.		ore Lining, R	C=Root Channel, I	/=Matrix.	
Hydric Sol Histoso Histic E Black H Hydrog Stratific 1 cm M Deplete Thick E Sandy Sandy	I Indicators: (Applica ol (A1) Epipedon (A2) Histic (A3) gen Sulfide (A4) ed Layers (A5) (LRR C Auck (A9) (LRR D) ed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	ble to all LRR - - - - - - - - - - - - -	s, unless othe Sandy Rec Stripped M Loamy Mu Loamy Gle Depleted N Redox Dar Depleted I	dox (S5) Natrix (S6) oky Mineral (F1) oyed Matrix (F2) Matrix (F3) ok Surface (F6) Dark Surface (F7) pressions (F8)	¥.	1 cm Muck     2 cm Muck     Reduced V     Red Paren     Other (Exp	Problematic Hydric Soils <sup>3</sup> (A9) (LRR C) (A10) (LRR B) ertic (F18) Material (TF2) lain in Remarks) ydrophytic vegetation and rology must be present.	
Туре:	• Layer (if present):				8 13	Hydric Soil Pre	sent? Yes No	
Remarks:	Concrete-l	ined.	No soil	pit dug	,			
HYDROL	DGY							
	ydrology Indicators:						/ Indicators (2 or more requ	ired)
	dicators (any one indica	tor is sufficient	)				Marks (B1) (Riverine)	
	e Water (A1)		Salt Crus	st (B11)			nent Deposits (B2) (Riverin	e)
	Vater Table (A2)		Biotic Cru	ust (B12)	<i></i>	and the second se	Deposits (B3) (Riverine)	
	tion (A3)		Aquatic li	nvertebrates (B13)		Drain	age Patterns (B10)	

		10
Dry-Season V	Vater Ta	ble (C2

- Oxidized Rhizospheres along Living Roots (C3) \_\_\_\_ Thin Muck Surface (C7)
  - Crayfish Burrows (C8)
    - Saturation Visible on Aerial Imagery (C9)
    - Shallow Aquitard (D3)

No F

FAC-Neutral Test (D5)

Field Observations:	/		
Surface Water Present?	Yes No Depth (inches):		
Water Table Present?	Yes No Depth (inches):		20
Saturation Present?	Yes No Depth (inches):	Wetland Hydrology Present? Y	'es

\_\_\_\_

Saturation Present? (includes capillary fringe)

Saturation (A3)

\_ Water Marks (B1) (Nonriverine)

\_\_\_\_ Drift Deposits (B3) (Nonriverine)

\_\_\_\_ Surface Soil Cracks (B6)

\_\_\_\_ Water-Stained Leaves (B9)

Sediment Deposits (B2) (Nonriverine)

\_\_\_\_ Inundation Visible on Aerial Imagery (B7)

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

Concrete - Lined Facility. Remarks:

Hydrogen Sulfide Odor (C1)

Presence of Reduced Iron (C4)

Other (Explain in Remarks)

Recent Iron Reduction in Plowed Soils (C6)

roject/Site:       Descrit X press       Clip/County:       Las Veras / Clorking       Sampling Date: 3/1 / 0 8         spplicant/Owner:       Circle Point       State:       MV       Sampling Point:       C94 - 1 MV         nvestigator(s):       KS, BM, THOLSON       Section, Township, Range:	WETLAND DETERMINATION DATA FORM -	Arid West Region
operatives:       Lirch. PDisc.       Section. Township, Range.       Sope (M) 3-7.         westignate(s):       Lirch. PDisc.       Local relation (Name).       Sope (M) 3-7.         westignate(s):       Lirch. PDisc.       Local relation (Name).       Not classification:       N/A       Zali 6/3         withing and link Nome:	Durley account Las VI	6665 ( ( 01/2- Sampling Date: 3/1/08
operative version of the set of the	roject/Site: Desert X pr-ess City/County. And the	State: NV Sampling Point: <u>C94-1-14</u>
androm (LER):       Local reliet (concerve, during, hold, hold):       Datum, N.D. 63         uburgion (LER):       tark N-1/5 (f. 11 ( 2/b)       Local reliet (concerve, during, hold, hold):       NM coastRestort:       N/A       ZAIE1         vie climits / hydrologic conditions on the site typical for the lime of year? Yes       No       (thoo, explain Remarks.)       No       No <td></td> <td></td>		
bible goin (LRR):	nvestigator(s): <u>RS, BM, THOLSON</u> Section, Township, Ran	Slope (%): 3-7
bible goin (LRR):	andform (hillslope, terrace, etc.): Vallen + Took Local relief (concave, c	Unverticity 76 053304 Datum:NAD 83
Biol Map Unit Nume:		
use simatic / hydrologic coordinates on the site bypical for this time of year? Yes No (Inc) capation (Non-basility (Non-bypical Key Magalian Stream)       No No No No No No (Inc) capation (Non-bypical Key Magalian Stream)         use Vegetation //O Soil No No No No (Inc) capation (Non-bypical Key Magalian Stream)       No		
vie Vegetelion       MO       oil       Mo       Mile       Mile       Mo       Mile       Mo       Mo       Mile       Mo	Are climatic / hydrologic conditions on the site typical for this time of year? Yes $V_{-}$ No	
vire Vagetation MQsoil MQor Hydrology MQnetworking sampling point locations, transacts, important features, etc.         SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, etc.         Hydrophylo Vegetation Present?       YesNo	Are Vegetation NO , Soil NO , or Hydrology NO significantly disturbed?	
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important reaches, etc.         Hydrophylic Vagetation: Present?       Yes       No	1000 maturally problematic? (If new	
Hydrophytic Vegetation Present?       Yes       No       No <td>Attach site map showing sampling point lo</td> <td>ocations, transects, important features, etc.</td>	Attach site map showing sampling point lo	ocations, transects, important features, etc.
Instrument of the second status       Yes       No       Ves       No       Ves <td>SUMMARY OF FINDINGS - Attach sits map on and</td> <td></td>	SUMMARY OF FINDINGS - Attach sits map on and	
Hydro Sol Present?       Yes       No       Within a Wetfand?       Yes       No         Weiland Hydrology Present?       Yes       No       Image: Sol		
Weinstructure       Weinstructure<	Hydric Soil Present? Yes No/ within a Wetlan	d? Yes No_/
Stop 4-S. A.S., Lock List, Link KL, Link KL, Dark List, Park Link T, KL, Link KL, Link KL,	Wetland Hydrology Present? Yes No /	Mur HARR-Filled Photos 195 facings
Stop 4-S. A.S., Lock List, Link KL, Link KL, Dark List, Park Link T, KL, Link KL, Link KL,	Remarks: Blue line on topo + tips to hope and the Flow ape	acity but no sign 192 " Epice
Stop 4-S. A.S., Lock List, Link KL, Link KL, Dark List, Park Link T, KL, Link KL, Link KL,	of pondination either east or west side of culvert. Offin= 41W'x	14 Worth 1:3 SIDE 192 " W
President (Use scientific names.)       Absolute % Cover       Dominant Indicator Trat Ara OBL, FACW, or FAC:       (A)         1.	slopes. Adi, land use is UPRR, undevel, pairculs immed, west w/r	2.51 dent 121 atta-
Trop Stratum       (Use scientific names.)       Woodey       Species 2       Status.       Number of Dominant Species       (A)         1.	VEGETATION west of that (passible that some of all this top the	t of UPPR.
Intersection intervent       That Are OBL, FACW, or FAC:(A)         1	Absolute Dominant Absolute	
2	Tree Stratum (Use scientific interior)	That Are OBL, FACW, or FAC: (A)
2.       Species Across All Strata:       (B)         3.       Total Cover:       Percent of Dominant Species         4.       Total Cover:       Prevalence Index worksheet:         1.       Total & Cover of:       Multiply by:         2.       OBL species       x1 =         3.       Total & Cover of:       Multiply by:         2.       Total Cover:       Prevalence Index worksheet:         3.       Total Cover:       Prevalence Index worksheet:         4.       Total Cover:       Prevalence Index worksheet:         1.       Stockers       x1 =         5.       Total Cover:       Prevalence Index is 2.0         1.       Stockers       x4 =         Herb Stratum       If Not UPET       Column Totals:       (A)         2.       Arrich iso       Prevalence Index is 5.0       Prevalence Index is 5.0         3.       If Not UPET       Dominance Test is >50%       Prevalence Index is 5.0         6.       Dominance Test is >50%       Prevalence Index is 5.0       Prevalence Index is 5.0         7.       Dominance Test is >50%       Prevalence Index is 5.0       Prevalence Index is 5.0         8.       Total Cover:       Dominance Test is >50%       Prevalence Index is 5.0       <		Total Number of Dominant
4.       Total Cover:       Derivation       Parent of Dominant Species       (VB)         Sapling/Shrub Stratum       Total Cover:       Description       (VB)         1.       Total Cover:       Description       Prevalance Index worksheet:       (VB)         2.       Description       Multiply by:       Description       (VB)         3.       Total Cover:       Description       Multiply by:       Description         4.       Total Cover:       Description       FACU species       x 2 =       x 4 =         1.       Stochast onderfice       Exigure Sciences       x 4 =       Description       Descripion       Description <t< td=""><td>2</td><td>Species Across All Strata: (B)</td></t<>	2	Species Across All Strata: (B)
Total Cover:       Ø         Sapling/Shrub Stratum       That Are OBL, FACW, or FAC:       Ø         1.       Image: Stratum       Image: Stratum         1.       Image: Stratum       Image: Stratum         3.       Image: Stratum       Image: Stratum         4.       Image: Stratum       Image: Stratum         1.       Steppides       X1 =         5.       Total Cover:       Ø         1.       Stephaw.ow/Cline       E-Xiou As         1.       Stephaw.ow/Cline       E-Xiou As         1.       Stephaw.ow/Cline       E-Xiou As         2.       Arristice       Image: Ywitew         3.       Image: Ywitew       Image: Ywitew         3.       Image: Ywitew       Image: Ywitew         3.       Image: Ywitew       Image: Ywitew         4.       Image: Ywitew       Image: Ywitew         5.       Image: Ywitew       Image: Ywitew         6.       Image: Ywitew       Image: Ywitew         7.       Image: Ywitew       Image: Ywitew         8.       Image: Ywitew       Image: Ywitew         9.       Total Cover: Image: Ywitew       Image: Ywitew         9.       Total Cover: Image: Ywit	3	Percent of Dominant Species
1.	4 Total Cover:	That Are OBL, FACW, or FAC: (A/B)
2	Sapling/Shrub Stratum	Prevalence Index worksheet:
3	1	
4	2	
5.       Total Cover:       Ø         Herb Strätum       Y       N L UPL         1.       Stankan owelia exiaue       Y       N L UPL         2.       Aristide guvoutea       Y       Y       N L UPL         3.       Y       Y       N L UPL       Column Totals:       E       (A)       (B)         4.       Y       Y       N L UPL       Prevalence Index = B/A =       5       (B)         5.       Onlinance Test is >50%       Prevalence Index is \$3.0°       Prevalence Index is \$3.0°       (Provide supporting data in Remarks or on a separate sheet)         7.       Otal Cover:       Q       Problematic Hydrophytic Vegetation' (Explain)         8.       Total Cover:       Q       Problematic Hydrophytic Vegetation' (Explain)         1.       Total Cover:       Q       Vegetation       No         2.       Total Cover:       Q       Vegetation       No       Yes         8.       Total Cover:       Q       Vegetation       No       Yes       No         1.       Vegetation       Yes       No       Ye	3	
Total Cover:         Herb Stratum         1Stop An Orker Line exige and in Herb Stratum        Y NL-YAT       Column Totals:       (A)       (B)         2Aristide	4	FAC species x 3 =
Herb Stratum       I       Y NL-Uft       Column Totals:       E       (A)       I/I       (B)         2.       Aristida       purputea       I       Y NL-Uft       Column Totals:       E       (A)       II       II       II       Y NL-Uft       Column Totals:       E       (A)       III       IIII       IIIIII       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	5 Total Cover:	FACU species x 4 =
1       Y Mutpt         2.       Aristica parentea         3.		
3.       Hydrophytic Vegetation Indicators:         4.	1. <u>Stephanowelia exigua</u>	
3.       Hydrophytic Vegetation Indicators:         4.	2. Aristida purputea	Prevalence Index = B/A =
5.	3	Hydrophytic Vegetation indicators:
6.	4	Dominance Test is >50%
7.		Prevalence Index is ≤3.0 <sup>1</sup>
8.		Morphological Adaptations' (Provide supporting
Total Cover:       1         1.       1         2.       Total Cover:         Total Cover:       0         You be present.       1         You be present.		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum       1.       1.       1.       1.       1.       be present.         2.       Total Cover:       Ø       Hydrophytic       Vegetation         % Bare Ground in Herb Stratum       9.%       Cover of Biotic Crust       Present?       Yes       No         Remarks:       Remarks:       No       Image: No       Image: No       Image: No       Image: No	8 Total Cover:	
1.     be present.       2.     Total Cover:       % Bare Ground in Herb Stratum     9%       % Cover of Biotic Crust     Present?       Yes     No	Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Total Cover:     Vigetation       % Bare Ground in Herb Stratum     % Cover of Biotic Crust     Present?     Yes       Remarks:	1	be present.
% Bare Ground in Herb Stratum % Cover of Biotic Crust       Vegetation Present? Yes No         Remarks:       Remarks:	2	
% Bare Ground in Herb Stratum     1.7)     % Cover of Blobb Cruat       Remarks:		Magnifica
Remarks:	% Bare Ground in Herb Stratum <u> </u>	
F-I.5-163		6
F-I.5-163		
	F-I.5-163	

### SOIL

## Sampling Point: <u>C94-1</u>W

Profile Description: (Describe to the depth needed to document the inc	licator or confirm the absence of indicators.)
Pedox Features	
(inches) Color (moist) % Color (moist) %	Type <sup>1</sup> Loc <sup>2</sup> Texture Remarks
Rock + cobble @ surface.	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location:	PL=Pore Lining, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted	() mulcators for replemane righter concer
Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LRR C) 2 cm M⊔ck (A10) (LRR B)
Histic Epipedon (A2) Stripped Matrix (S6)	
Black Histic (A3) Loamy Mucky Mineral (	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F	Other (Explain in Remarks)
Stratified Layers (A5) (LRR C) Depleted Matrix (F3) 1 cm Muck (A9) (LRR D) Redox Dark Surface (F0	
Thick Dark Surface (A12) Redox Depressions (F8 Sandy Mucky Mineral (S1) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)	wetland hydrology must be present.
Restrictive Layer (if present):	.11
	NIA
	Hydric Soil Present? Yes No
Depth (inches):	
No soil pit excavated.	
IYDROLOGY	Secondary indicators (2 or more required)
Wetland Hydrology Indicators:	
Primary Indicators (any one indicator is sufficient)	Water Marks (B1) (Riverine)
Surface Water (A1) Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
High Water Table (A2) Biotic Crust (B12)	Drift Deposits (B3) (Riverine)
Saturation (A3) Aquatic Invertebrates	(B13) Drainage Patterns (B10)
Water Marke (B1) (Nonriverine) Hydrogen Sulfide Odo	r (C1) Dry-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizosphere	s along Living Roots (C3) Thin Muck Surface (C7)
Drift Deposits (B3) (Nonriverine) Presence of Reduced	Iron (C4) Crayfish Burrows (C8)
Surface Soil Cracks (B6) Recent Iron Reduction	in Plowed Soils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem	
Water-Stained Leaves (B9)	EAO Newtrel Teat (DE)
Field Observations:	
	2
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, prev	ious inspections), if available:
Domatke	
Remarks:	\$
Sed. sort, shelving,	
	· · · · · · · · ·

WETLAND DETERMINATION DATA FORM -	Arid West Region
roject/site: Desept Kpress City/County: Las Ve	state: <u>MV</u> Sampling Date: <u>3/1/08</u> State: <u>MV</u> Sampling Point: <u>C94-2</u> W
Applicant/Owner: Circle Point	State: <u>MV</u> Sampling Point: <u>CT4-2W</u>
L Q QUI TILLE Q L'E Teuropie Pag	
Valley Ideala local relief (concave, c	
Subregion (LRR):	
Soli Map Unit Name:	NWI classification: N/A 2013E /
No No	(If no, explain in Remarks.)
Are Vegetation <u>hD</u> , Soil <u>ND</u> , or Hydrology <u>ND</u> significantly disturbed? Are "I	Normal Circumstances" present? Yes No No
Are Venetation // (C, Soll //C, 0) Hydrology (attaining Free	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	ocations, transects, important features, etc.
Remarks: Blue line on topo + trib. to Duck Crede + Tropicanal Piles where the filed half the way up w/ rocks + sant	d? Yes No
Adj. lend use-UARR, undeveloped descent to Wa-SW, land under	constructionin NW. 196 " N
VEGETATION	
Absolute         Dominant         Indicator <u>Tree Stratum</u> (Use scientific names.)         % Cover         Species?         Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:(A)
1.	Total Number of Dominant 2 Species Across All Strata: (B)
4 Total Cover:	Percent of Dominant Species (A/B)
Saplino/Shrub Stratum	Prevalence Index worksheet:
1. Larren tridentata 8 Y All Art	Total % Cover of: Multiply by:
2. Baccharic brachughylla 7 YNLYPE 2. House aller 2 NMLYPE	OBL species x1 =
3. TICHMPROCIES SALENTS	FACW species x 2 =
4. Ambrosia dumosa I NNL STE	FAC species x 3 =
5 Total Cover:	FACU species x 4 =
	UPL species $20$ x 5 = $100$
Herb Stratum 1 NNL-UPT=	Column Totals: (A) (B)
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.01
6	Morphological Adaptations <sup>1</sup> (Provide supporting
7.	data in Remarks or on a separate sheet)
8 Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum 1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	Hydrophytic Vegetation Present? Yes No
Remarks:	
т	

## Sampline Point: C94-ZW

SOIL		N 10				Samping Fond.
Profile Desc	ription: (Describe to the depth	needed to docume	nt the indicator (	or confirm	the abse	ince of indicators.)
Depth	Matrix	Redox P	eatures			
(inches)	Color (moist) %	Color (moist)				
						· · · · · · · · · · · · · · · · · · ·
17	oncentration, D=Depletion, RM=R	educed Matrix. 2	ocation: PL=Pore	e Lining, R	C=Root C	hannel, M=Matrix.
Hydric Soil I Histosol Histic Ep Black His Hydroge Stratified 1 cm Mu Depletec Thick Da Sandy M	ndicators: (Applicable to all Li (A1) olpedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) (LRR C) ck (A9) (LRR D) I Below Dark Surface (A11) urk Surface (A12) fucky Mineral (S1)	RRs, unless otherw.         Sandy Redox         Stripped Matri         Loamy Mucky         Loamy Gleyed         Depleted Matri         Redox Dark S         Depleted Dark         Redox Depress         Vernal Pools (	(S5) x (S6) Mineral (F1) I Matrix (F2) ix (F3) urface (F6) ; Surface (F7) isions (F8)		1 2 R R 0	tors for Problematic Hydric Soils <sup>3</sup> : cm Muck (A9) (LRR C) cm Muck (A10) (LRR B) educed Vertic (F18) ed Parent Material (TF2) ther (Explain in Remarks)
	leyed Matrix (S4)				T	
	.ayer (if present):		× <sup>10</sup>			NA
Depth (inc	shes):	_			Hydric	Soil Present? Yes No
Remarks:	Sand + gravel/co Jo soil pit exc	bble on su cavated.	uface,			
HYDROLO	GY					
Wetland Hyd	trology Indicators:				5	econdary Indicators (2 or more required)
Primary Indic	ators (any one indicator is suffici-	ent)				Water Marks (B1) (Riverine)
High Wa     Saturatic     Water M     Sedimen     Drift Dep     Surface     Inundatic	Water (A1) ter Table (A2) on (A3) arks (B1) (Nonriverine) at Deposits (B2) (Nonriverine) sosits (B3) (Nonriverine) Soil Cracks (B6) on Visible on Aerial Imagery (B7) tained Leaves (B9)	<ul> <li>Hydrogen SL</li> <li>Oxidized Rhi</li> <li>Presence of</li> <li>Recent Iron I</li> <li>Other (Expla</li> </ul>	B12) rtebrates (B13)	) ed Solls (0	- ts (C3) _ - C6) _ -	<ul> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Thin Muck Surface (C7)</li> <li>Crayfish Burrows (C8)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> </ul>
Field Observ	· · · · · · · · · · · · · · · · · · ·		1415 - 144			
Surface Wate	er Present? Yes No	Depth (inch	es):			

1							
	Water Table Present?	Yes	No	Depth (inches):		2011-0000	
	Saturation Present?	Yes	No	Depth (inches):	Wetland Hydrology Present?	Yes	No _
	(includes capillary fringe)				tions) if available:		
1	Describe Recorded Data (stre	am dalide. M	ionitorina v	vell, aerial photos, previous inspec	stions), n available.		

Remarks:

Litter + debris, Sed, sorting.

WETLAND	DETERMINATION	DATA FORM -	- Arid West Region

WETLAND DETERMINATION	
Project/Site: Desett Xpress City	//County: Las Vegas/Clottk_ sampling Date: 3/1/08 State: <u>NV</u> sampling Point: <u>C94-3</u> W
Applicant/Owner: <u>Circle Point</u>	State: <u>AIV</u> Sampling Point: <u>C94-3W</u>
VC RM TUSICOO	ction, Township, Range:
Low Low Low Low Low Low Low	cal relief (concave, convex, none): // carde Slope (70).
Subregion (LRR):	5,216190 EOMS. 10 36,013,161 Datum. 1012 07
Subregion (4.6.6)	NWI classification: N/A 2010E1
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No (If no, explain in Remarks.)
Are Vegetation <u>465</u> , Soil <u>465</u> , or Hydrology <u>N0</u> significantly dist	turbed? Are "Normal Circumstances" present? Yes No
Are Vegetation (10), Soil (10), or Hydrology (10) significantly proble	
Are Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>NO</u> naturally proble	ampling point locations, transects, important féatures, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No_V_ Remarks: Blue line on topo. Concrete open bik i Convers flows from west to east under the l and ultimately to the Las Vegas Wash.	abarrial-CORDEND FACILITY- Photo 203 Facing N
Remarks: Blue line on topo. Concrete open but	LPER, N30 wide) 202 11 5
Convers flows from west b use what he	1 inte 200 " W
	r tacility
VEGETATION	- Autorits
· · · · · · · · · · · · · · · · · · ·	ominant Indicator Dominance Test worksheet: Species? Status Number of Dominant Species
The Sublam (Die Solentile names)	That Are OBL, FACW, or FAC: (A)
1	Total Number of Dominant
3	Species Across All Strata; (B)
4	Percent of Dominant Species
Total Cover:	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1	
2	
3	
5	FAC species x3
Total Cover: 17	FACU species x 4 =
Herb Stratum	UPL species x 5 = Column Totals: (A) (B)
1	
2	
3	Hydrophytic Yogeanon merorate
4	
5	
D	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1	be present.
2 Total Cover:	Hydrophytic
	st S Vegetation Present? Yes No
% Bare Ground in Herb Stratum <u>NA</u> % Cover of Biotic Crus	
Remarks:	
Remarks: Concrete lined, No Veg.	
	.5-167
F-1	
	- Si - Silar Johnst - Si

Inling Point C. 946 - Rul

SOIL					Sampling Point: <u>C77</u> OW			
Profile Description: (Describe to	the depth needed	to document the in	ndicator or c	confirm th	ne absence of indicators.)			
Redox Features								
(inches) Color (moist)	% Color (	moist)%	Type' L	.0C <sup>2</sup>	Texture Remarks			
		······································						
*			<u> </u>					
· · · · · · · · · · · · · · · · · · ·								
			•• ••	/= /+	· · · · · · · · · · · · · · · · · · ·			
<sup>1</sup> Type: C=Concentration, D=Depleti	on, RM=Reduced	Matrix. <sup>2</sup> Location:	: PL=Pore Li	ning, RC-	Root Channel, M=Mathx. Indicators for Problematic Hydric Solls <sup>3</sup> :			
Hydric Soll Indicators: (Applicab)	le to all LRRs, un	ess otherwise note	ed.)		Indicators for i robiendule rijane eene i			
Histosol (A1)		andy Redox (S5)			1 ст Миск (А9) (LRR C) 2 ст Muck (А10) (LRR B)			
Histic Epipedon (A2)		tripped Matrix (S6)	(54)		2 cm Muck (A10) (Erkk B) Reduced Vertic (F18)			
Black Histic (A3)		bamy Mucky Mineral bamy Gleyed Matrix			Red Parent Material (TF2)			
Hydrogen Sulfide (A4)		epleted Matrix (F3)	(1 2)		Other (Explain in Remarks)			
Stratified Layers (A5) (LRR C)		edox Dark Surface (	F6)					
1 cm Muck (A9) (LRR D) Depleted Below Dark Surface (A)		epleted Dark Surface						
Thick Dark Surface (A12)		edox Depressions (F						
Sandy Mucky Mineral (S1)		ernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and			
Sandy Gleyed Matrix (S4)					wetland hydrology must be present.			
Restrictive Layer (if present):					ALA			
Туре:					THE			
Durit (instant)					Hydric Soil Present? Yes No			
Remarks: NO SOIL PIT	· L	1 0	- linet	cha	in in O.			
NO SOIL PIT	excavate	J. LONCHU	Duna					
			·					
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indicators (2 or more required)			
Primary Indicators (any one indicato	r is sufficient)				Water Marks (B1) (Riverine)			
Surface Water (A1)		Salt Crust (B11)			Sediment Deposits (B2) (Riverine)			
High Water Table (A2)		Biotic Crust (B12)			Drift Deposits (B3) (Riverine)			
Saturation (A3)		Aquatic Invertebrate	s (B13)		Drainage Patterns (B10)			
Water Marks (B1) (Nonriverine		Hydrogen Sulfide Oc			Dry-Season Water Table (C2)			
Sediment Deposits (B2) (Nonri	,	Oxidized Rhizospher	res along Livit	ng Roots	(C3) Thin Muck Surface (C7)			
Drift Deposits (B3) (Nonriverin		Presence of Reduce			Crayfish Burrows (C8)			
Surface Soil Cracks (B6)	-,	Recent Iron Reduction	on in Plowed	Solls (C6	) Saturation Visible on Aerial imagery (C9)			
Inundation Visible on Aerial Ima	адегу (В7)	Other (Explain in Rei	marks)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)								
Field Observations:								
	No	Depth (inches):			,			
		Depth (inches);						
		Depth (inches):		Wetlan	d Hydrology Present? Yes No			
Saturation Present? Yes (includes capillary fringe)				tings) if (				

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

Remarks:

Concrete-lined channel.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Desert Kpress	City/County: Las Vegas/Class State: NV Sampling Point: <u>C94-4</u> W
Applicant/Owner: <u>Circle Point</u> Investigator(s): <u>KS, BM, J, Holson</u>	Section, Township, Range:
Ve latt to 1911	Local relief (concave, convex, none): <u>MITAR</u> Slope (%):
Subregion (LRR): D	Lati-13 - 115, 211, 131 Long. C. JOB Constitution: N/A ZONE //
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this	time of year? Yes No (If no, explain in Remarks.)
Are Vegetation 465_, Soil 465, or Hydrology NO sig	gnificantly disturbed? Are "Normal Circuitistances presents" res
Are Vegetation <u>MD</u> , Soil <u>MD</u> , or Hydrology <u>MD</u> na SUMMARY OF FINDINGS – Attach site map s	howing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?     Yes No       Hydric Soil Present?     Yes No	within a Wetland 2000 Yes No

Wetland Hydrology Present?		Logitter Carling	Photo 207 facing S
Remarks: Blue line on topo. Papellels UPPE RDW on west	Concrete open box c	mule - CEFUS faling	206 1 JW
DA Hallels LIPPE RDW ON WEST	sole + con vers 110	WS TVOR WESC SIDESOT EV	205 " E
Parallels UPER ROW on west Valley under the UPER, to t	the east to Dulce CI	eleptras verns when,	204 " N

## VEGETATION

		Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.)	_	% Cover	<u>Species?</u>	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1 2 3				•	Total Number of Dominant Species Across All Strata:
4					Percent of Dominant Species (A/B)
Sapiling/Shrub Stratum	10(2) 0010(1)				
1				·	Prevalence Index worksheet:
2			<u> </u>		Total % Cover of;Multiply by:
3					OBL species x 1 =
4					FACW species x 2 =
					FAC species x 3 =
5	Total Cover:	Ø			FACU species x 4 =
Herb Stratum	1012. 01100				UPL species x 5 =
1					Column Totals: (A) (B)
2,					Prevalence Index = B/A =
3					Hydrophytic Vegetation Indicators:
4				0 <del>1</del>	Dominance Test is >50%
5					Prevalence Indax is ≤3.01
6				· <u>·····</u> ······························	Marshological Adaptations <sup>1</sup> (Provide supporting
7					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
o	Total Cover:	Ø_	-		
<u>Woody Vine Stratum</u> 1		·			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	Total Cover:	1999 (1995)			Hydrophytic Vegetation Present? Yes No
% Bare Ground in Herb Stratum <u>NA</u> ,	% Cover (	OF BIDTIC C	rust		
Remarks:					
No veg.					
			F-I.5-169		

S	O	Į	L

Sampling Point	094-1	fW
Sampling Point		

SOIL								
Profile Des	cription: (Describe t	o the depth	needed to docur	nent the l	ndicator	or confirm	the absence of ir	idicators.)
Depth	Matrix			x Feature	<u>s                                    </u>		Texture	Remarks
(inches)	Color (moist)	%	Color (moist)		_Type <sup>1</sup> _		<u> </u>	Keillaiks
		-						
			<u></u>					
		11-10-10-10-10-10-10-10-10-10-10-10-10-1						
<sup>1</sup> Type: C=C	Concentration, D=Depl	etion. RM=F	Reduced Matrix.	<sup>2</sup> Location	: PL=Por	e Lining, R	C=Root Channel, N	A=Matrix.
Hydric Soil	Indicators: (Applica	ble to all L	RRs, unless other	rwise not	ed.)		Indicators for i	Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy Red				1 cm Muck	
	pipedon (A2)		Stripped Ma				2 cm Muck	
	listic (A3)		Loamy Muc	ky Minera	i (F1)		Reduced V	
	en Sulfide (A4)		Loamy Gley		(F2)			Material (TF2)
	d Layers (A5) (LRR C	)	Depleted M				Other (Expl	ain in Remarks)
1 cm M	uck (A9) (LRR D)		Redox Dark					
	ed Below Dark Surface	e (A11)	Depleted D					
	ark Surface (A12)		Redox Dep	State Commence	H8)		<sup>3</sup> Indicators of h	drophytic vegetation and
	Mucky Mineral (S1)		Vernal Pool	IS (F9)				rology must be present.
	Gleyed Matrix (S4)			· · · ·			i victuria riya	
	Layer (if present):							7 a
Туре:							Undela Soll Prov	sent? Yes No
Depth (ir	nches):						Hyuric Son Free	
Remarks:	loncrett-lit	1 c	: 1'La A)	a stri	1 o'r	- exc	ava ted.	
(	morte lis	ed 74	citing N		. 6.10			
,			$\bigcirc$					
					<u>.</u>			
HYDROLC	)GY			6.125 <u></u>				
Wetland Hy	drology Indicators:						Secondan	Indicators (2 or more required)

Wetland Hydrology mulcators.	
Primary Indicators (any one Indicator is sufficient)	Water Marks (B1) (Riverine)
Field Observations:	Wetland Hydrology Present? Yes No _/
Remarks: Concrete lined channel.	

#### WETLAND DETERMINATION DATA FORM - Arid West Region Vea as / Clark Sampling Date: 3/1 City/County: Las oject/Site: De.Se DIESS Sampling Point: <u>C94</u> State: Point Applicant/Owner: KS, BM. THOISON Section, Township, Range: Investigator(s): Local relief (concave, convex, none): NSW Slope (%): \_ Landform (hillslope, terrace, etc.): Vallen Floor tat 11-115.223038 -Long: N 032506 Datum: <u>NAD</u> 310 Subregion (LRR): ZONE / NWI classification: Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_ (If no, explain in Remarks.) No Are "Normal Circumstances" present? Yes \_\_\_\_/ Are Vegetation 465, Soil 45, or Hydrology 10 significantly disturbed?

(If needed, explain any answers in Remarks.)

Are Vegetation 10, Soil 10, or Hydrology 10 naturally problematic?

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

r	/	
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area
Hydric Soil Present?	Yes No	within a Wetland? Provide Yes No
Wetland Hudroloov Present?	Yes No/	LEPO'SO LACIT the Death ZII Facing N
	Concrete open box	Champer - I KILD WEIGHT I THE A DIT
Parella a lipper on west si	Le 4 conveys flows	From west side of Las 200 tacing W ek/LN WASH, 208 11 5
VERAS Valley under UPRR, e	astward to buck cre	ek/LVIDASPI, 208 11 S

#### VEGETATION

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Use scientific names.) 1	% Cover	Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1.			<del></del>	Total Number of Dominant Species Across All Strata:
4 Total Cove				Percent of Dominant Species (A/B)
Sapling/Shrub Stratum				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x1 =
3				FACW species x 2 =
4		· · · · · · · · · · · · · · · · · · ·		FAC species x 3 =
5		<u> </u>	<u></u>	FACU species x 4 =
Total Cove	нт: <u>Ø</u>	-		UPL species x 5 =
Herb Stratum				Column Totals; (A) (B)
1				6
2				Prevalence Index = B/A =
3				Hydrophytic Vegetation Indicators:
4				Dominance Test is >50%
5				Prevalence index is ≤3.0 <sup>1</sup>
6 7	•••• •••••••••••••••••••••••••••••••••			Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
9			······	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
oTotal Cove	er:	22 1		
Woody Vine Stratum 1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2 Total Cove	ər:			Hydrophytic Vegetation
% Bare Ground in Herb Stratum NA % Cove	er of Biotic (	Crust <u>Ø</u>		Present? Yes <u>No</u>
Remarks:				
A) a Lan				
		F-I.5-171		

OIL	iption: (Describe t	a the dept	b peeded to docu	ment the indicator	or confirm	the absence of	Sampling Point: <u>C94-</u> , indicators.)
	Matrix	o ne depi	Redr	x Features			
Depth (inches)	Color (moist)	%		<u>%</u> Type <sup>1</sup>	_Loc <sup>2</sup>	Texture	Remarks
							· · · · · · · · · · · · · · · · · · ·
Гуре: С=Со	ncentration, D=Depl ndicators: (Applica	etion, RM=		<sup>2</sup> Location: PL=Po	e Lining, F	C=Root Channel	, M=Matrix. r Problematic Hydric Soils <sup>3</sup> :
Hydric Soil If Histosol (	10 M	Die to an	Sandy Red				ck (A9) (LRR C)
	ipedon (A2)		Stripped M	atrix (S6)		2 cm Muck (A10) (LRR B)	
Black His			Loamy Muc	cky Mineral (F1)		Reduced Vertic (F18) Red Parent Material (TF2)	
	n Sulfide (A4)		Loamy Gle	yed Matrix (F2)			kplain in Remarks)
Stratified	Layers (A5) (LRR C	)	Depleted M				
1 cm M⊔d	ck (A9) (LRR D)	14.045		k Surface (F6) eark Surface (F7)			
	Below Dark Surface	(A11)		ressions (F8)			
Thick Dai	rk Surface (A12) ucky Minerai (S1)		Vernal Poo				hydrophytic vegetation and
	leyed Matrix (S4)					wetland hy	/drology must be present.
	ayer (if present):						
			<del>,</del>		•		
Dopth (inc	hes).					Hydric Soll Pi	resent? Yes No
Remarks:	lo soil pi	t exi	cavated. (	oncrete-la	ned.	channel	,
1					а. С		
YDROLOG						Connet	ary Indicators (2 or more required)
	rology Indicators:						ier Marks (B1) (Riverine)
rimary Indici	ators (any one indica	tor is suffi	cient)				liment Deposits (B2) (Riverine)
	Water (A1)		Salt Crush		2.		t Deposits (B3) (Riverine)
High Wat	ter Table (A2)		Biotic Cru	ist (B12)	15	2 SOL 2 ST	

 Saturation (A3)

Saturation Present?

_	Water Marks (B1) (Nonriverine)
	Sediment Deposits (B2) (Nonriverine)
	Drift Deposits (B3) (Nonriverine)
	Surface Soil Cracks (B6)

TUIS THIN ONC INCOMO		D Record Descelle (DD) (Divering)
Vater (A1)	Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
er Table (A2)	Biotic Crust (B12)	Drift Deposits (B3) (Riverine)
	Aquatic Invertebrates (B13)	Drainage Patterns (B10)
a Nama and		Dry-Season Water Table (C2)
rks (B1) (Nonriverine)		
Deposits (B2) (Nonriverine)	<ul> <li>Oxidized Rhizospheres along Living Roots (C3)</li> </ul>	
osits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
	Recent Iron Reduction in Plowed Soils (C6)	Saturation Visible on Aerial Imagery (C9)
oil Cracks (B6)	(Econt norr to dedeler art server ( )	Shallow Aquitard (D3)
n Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	FAC-Neutral Test (D5)

Inundation Visible on A Water-Stained Leaves		· · · · ·	Other (Explain in Ren
Field Observations:		/	
Surface Water Present?	Yes	No <u>V</u>	Depth (inches):
Water Table Present?	Yes	No	Depth (inches):

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_ (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Concrete-lined channel. Remarks:

No

Wetland Hydrology Present? Yes \_\_\_\_

# Exhibit B2

# DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

# **ICF Jones & Stokes**

# Wetland Determination Data Forms – Arid West Region

# For DesertXpress

HUC 12 Watershed Tropicana Wash

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 40

### WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: City/County:	Lask Sampling Date: 3/6/07-
Applicant/Owner: Circle Point	State: NV Sampling Point: 99-1W
Investigator(s): KS, BM Section, Townsh	-
Landform (hillslope, terrace, etc.): Vallen floor Local relief (con	
Calculation (Initiality), terrace, etc.). <u>Vootaart (1000</u> Local feler (Con	7 Long: N 36,080184 Datum: NAD 83
	NWI classification: N/A
Soil Map Unit Name: NA	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
Are Vegetation, Soil, or Hydrology significantly disturbed?	
Are Vegetation <u>ND</u> , Soil , or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling po	bint locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sau	mpled Area
Hydric Soil Present? Yes No within a W	Wetland? Yes No /
Wetland Hydrology Present? Yes No /	
Remarks: This is a concrete-lined facility. (See ( for dimensions west side of LV Valley eastering to stropicane wash Colorado River). Parallels I-15 on the wes	(trib to LV Wash) 325 N
Converses into	of I-15 show rocks
Absolute Dominant India	cator Dominance Test worksheet: Construction, TOV
Tree Stratum     (Use scientific names.) <u>% Cover</u> Species?     State       1.	
2	
3	Total Number of Dominant Species Across All Strata:
4	
Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
1	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x 1 =
4,	FACW species x 2 =
5	FAC species x 3 =
Total Cover:	FACU species x 4 =
1	UPL species         x 5 =           Column Totals:        (A)
2	(A) (B)
3	Prevalence index = B/A =
4	Hydrophytic Vegetation Indicators:
5	Dominance Test is >50%
6	Prevalence Index is ≤3.0 <sup>1</sup>
7	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	
<u>Woody Vine Stratum</u> 1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	
Total Cover:	Hydrophytic Vegetation Present? Yes <u>No</u>
Remarks:	
- Condition	
F-I.5-175	

#### SOIL

Sampling Point: 99-1W

Profile Description: (Describe to the depth needed to document the indicator or co	firm the absence of indicator	s.)
DepthMatrixRedox Features	······	
(inches) Color (moist) % Color (moist) % Type <sup>1</sup> Lo	<sup>2</sup> Texture	Remarks
		2
······································		
19. 20 B. K.		
		- THE THE
	<u></u>	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lini		
Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problem	
Histosol (A1) Sandy Redox (S5)	1 cm Muck (A9) (LF	
Histic Epipedon (A2) Stripped Matrix (S6)	2 cm Muck (A10) (L	
Black Histic (A3) Loamy Mucky Mineral (F1)	Reduced Vertic (F1	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) (LRR C) Depleted Matrix (F3)	Red Parent Materia	
Stratified Layers (A5) (LRR C)     Depleted Matrix (F3)       1 cm Muck (A9) (LRR D)     Redox Dark Surface (F6)	Other (Explain in Re	anarks)
Perform Miller (A9) (ERR B) Redox Dark Surface (10)		
Thick Dark Surface (A12) Redox Depressions (F8)		
Sandy Mucky Mineral (S1) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophyti	c vegetation and
Sandy Gleyed Matrix (S4)	wetland hydrology m	-
Restrictive Layer (if present):		
Туре:		N/A.
Depth (inches):	Hydric Soll Present?	Yes No
No soil più ang.		
. 0		
Remarks: No soil pit day. See remarks on reverse.		
HYDROLOGY		8
Wetland Hydrology Indicators:	Secondary Indicato	rs (2 or more required)
Primary Indidators (any one indicator is sufficient)	Water Marks (E	1) (Riverine)
Surface Water (A1) Salt Crust (B11)		sits (B2) (Riverine)
High Water Table (A2) Biotic Crust (B12)	Drift Deposits (	anderste in the second s
Saturation (A3) Aquatic Invertebrates (B13)	Drainage Patte	
Water Marks (B1) (Nonriverine) Hydrogen Sulfide Odor (C1)	Dry-Season Wi	and Second constructions
Sediment Deposits (B2) (Nonriverine) Oxidized Rhizospheres along Living		
Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)	Crayfish Burrov	
Surface Soil Cracks (B6) Recent Iron Reduction in Plowed So		ble on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks)	Shallow Aquita	
Water-Stained Leaves (B9)	FAC-Neutral Te	
Field Observations:		
Surface Water Present? Yes No Depth (inches):		
Water Table Present?     Yes No Depth (inches):		ž.
		Yes No /
Saturation Present? Yes No Depth (inches): V (includes capillary fringe)	etland Hydrology Present?	Yes No _/
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspectio	is), if available:	wa wate fin the .
Remarks:		
$\setminus H$ ,		9

## WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Desert Xpress	City/County: Las Vegas / Clark Sampling Date: 3/6/08						
Project/Site: <u>USE CONTUNESS</u>	City/County: 200 1900 Joint Sampling Bailt. 100-3 and						
Applicant/Owner: Circle Point	Section Township Bange: Sampling Point: 100-3 and 100-4						
Investigator(s): Margaret, Widdowson, Kelly Shook							
	Local relief (concave, convex, none): <u>MSNE</u> Slope (%):						
	-115.153817 -Long: 136.092400 Datum: 110 20NE11						
Soil Map Unit Name: NWI classification: M / X2							
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (if no, explain in Remarks.)							
Are Vegetation <u>Yes</u> , soil <u>Yes</u> , or Hydrology <u>Yes</u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>V</u> No							
Are Vegetation <u>MD</u> , Soil <u>MD</u> , or Hydrology <u>MD</u> naturally pro							
SUMMARY OF FINDINGS - Attach site map showing	sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area						
Hydric Soll Present? Yes NoNA	within a Wetland? Yes No						
Wetland Hydrology Present? Yes No							
Remarks: USGS topo indicates blue lines however no channels exist on property. Photo Terrain has been bladed and no longer converis flow. Adjacent 320 facine SW. Land use is light industrial and I-15. 321 facing NE.							
Major flood control facilities conven flow around	this and in concrete						
VEGETATION Channels parallel to LIS4 below	this and in concrete ) Motos 228 ) surface at I-IS interchange w/ Tropicana AVC. 322-328 <u>NON - LIVIS dictional</u> Dominant Indicator Dominance Test worksheet:						
2.							
3.	Total Number of Dominant (B)						
4							
Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)						
Sapling/Shrub Stratum	Y WE UPE Prevalence Index worksheet:						
1. Ambrosia dumosa 10 2. Laurea tridentata 2	NULTE Total % Cover of: Multiply by:						
	N FACIL OBL species x1 =						
3. Acacia gregail 3	FACW species x 2 =						
5	FAC species x 3 = FACU species x 4 =						
Total Cover:							
Herb Stratum	UPL species $12 \times 5 = 60$						
1							
2	Prevalence index = $B/A = -7 + 4$						
3 4	Hydrophytic Vegetation Indicators:						
5	Dominance Test is >50%						
6	Prevalence Index is ≤3.0'						
7	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)						
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)						
Total Cover:	-						
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must						
1	be present.						
2	Hydrophytic						
% Bare Ground in Herb Stratum 100 % Cover of Biotic C	Crust Present? Yes No						
Remarks: Vegetation is beside remnant channel.							
	F-1.5-177						

SOIL								Sampling	Point: <u> D</u>	<u>0-34</u> 0-4
Profile Des	cription: (Describe	to the dept	h needed to docu	ment the	indicator	or confirm	n the absence of	indicators.)	10	
Depth	- Notrix Redox Features					_				
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type'_	Loc <sup>2</sup>	Texture	Rer	narks	
		·	<u></u>				<u> </u>			
		. <u></u>	a ang ang ang ang ang ang ang ang ang an							
<u></u>		·								
				<u> </u>				<u></u>		
, <u> </u>		<u></u>					<u> </u>			
						<u>.                                    </u>	<u> </u>	Thêm 1		
	oncentration D=Den	letion. RM=	Reduced Matrix.	<sup>2</sup> Locatio	n: PL=Por	e Lining, F	RC=Root Channe	I, M=Matrix.		
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining, R Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Histosol (A1) Sandy Redox (S5)						Indicators for Problematic Hydric Soils <sup>3</sup> : 1 cm Muck (A9) (LRR C) 2 cm Muck (A10) (LRR B) Reduced Vartic (F18)				
Histic Epipedon (A2)     Stripped Matrix (S6)										
Black Histic (A3) Loamy Mucky Mineral (F1) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)						Red Parent Material (TF2)				
Stratified Layers (A5) (LRR C) Depleted Matrix (F3)						Other (Explain in Remarks)				
	uck (A9) (LRR D) d Below Dark Surfac	e (A11)	Depleted D	Dark Surfa	ce (F7)					
Thick Dark Surface (A12)     Redox Depressions (F8)       Sandy Mucky Mineral (S1)     Vernal Pools (F9)						<sup>3</sup> Indicators of hydrophytic vegetation and				
	Gleyed Matrix (S4)						wetland h	iydrology must b	e present.	<u> </u>
Restrictive Layer (if present): Type:						N/A.				
Depth (in	iches):						( -	resent? Yes	No	>
Remarks:	No soil pre	sent.	NO Soil	pit	excal	ated	1			
,				t						
		<u></u>								

### HYDROLOGY

	Secondary Indicators (2 or more required)						
Wetland Hydrology Indicators:	Water Marks (B1) (Riverine)						
Drift Deposits (B3) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Dupdation Visible on Aerial Imagery (B7)     Other (Explain in Remarks)	Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) GRoots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)						
Field Observations:         Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         (includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Wetland Hydrology Present? Yes No         Remarks:       CCRFCD have reduceded flows frequencies flows							
F-I.5-178							

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

			2/1/27
Project/Site:	_ City/County:	Clark	Sampling Date: 3/6/07
ipplicant/Owner: Civele Point		State: <u>N V</u>	Sampling Point: 100-5W
Investigator(s): <u>KS</u> , BM	_ Section, Towns	ship, Range:	
Landform (hillslope, terrace, etc.): Valley Plan	_ Local relief (co	ncave, convex, none)	Slope (%):
			571 Datum: NAD 83
Soil Map Unit Name: N/A		NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of y	/ear? Yes	No (If no, explain in Re	emarks.)
Are Vegetation Y, Soil Y, or Hydrology N significant			
Are Vegetation, Soil, or Hydrology naturally p	-	(If needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map showin		point locations, transects	important features, etc.
			······
Hydrophytic Vegetation Present?     Yes No       Hydric Soil Present?     Yes No	1	ampled Area	
Wetland Hydrology Present? Yes No	> within a	Wetland? Yes	No
	- nveris Plaus	From WSide of LV	Photos photo
Remarks: This is a blue line on topo + con Valley eastering to Trop i cano wash (Trib to tock lined divariage under construction by lined channel paintell to I-15 on the west eastward. See CCRECS website for f	· Colorado K	ziver). It is a	322 FACINGNE On W,
Lined channel paralell to I-15 on the West	side + con	Wey ing flows	J'side off I-IS
	acility o	linternest on s.	
VEGETATION			
Absolute <u>Tree Stratum</u> (Use scientific names.) <u>% Cove</u>	e Dominant Inc e <u>r Species? S</u>	tature	-
1		Number of Dominant Sp That Are OBL, FACW, o	
2		Total Number of Domina	ant A/
· 3		Species Across All Strat	
4		Percent of Dominant Sp	ecies 🖌
Total Cover:		That Are OBL, FACW, o	
Sapling/Shrub Stratum		Prevalence Index work	sheet:
1 2		Total % Cover of:	
3.			x 1 =
4			x 2 =
5		FAC species	x 3 =
Total Cover:		FACU species	x 4 =
Herb Stratum		UPL species	S
1		Column Totals:	(A) (B)
2		Prevalence Index	= B/A =
3 4		Hydrophytic Vegetatio	· · · ·
5		Dominance Test is	>50%
6		Prevalence Index is	s ≤3.0 <sup>1</sup>
7		Morphological Adar	ptations <sup>1</sup> (Provide supporting
8	·		or on a separate sheet)
Total Cover:	_	Problematic Hydrop	hytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum		<sup>1</sup> Indicators of bydric soil	and wetland hydrology must
1		be present.	and wettand hydrology must
ZTotal Cover:		Hydrophytic	
		Vegetation	
% Bare Ground in Herb Stratum 100 % Cover of Biotic	Crust	Present? Yes	No
Remarks:			
	F-1 5-170		

#### SOIL

1

### Sampling Point: 100-5W

Depth	Matrix	e depth needed to document the indicator or Redox Features	50mm the 203	
(inches)	Color (moist)	% Color (moist) % Type <sup>1</sup>	Loc <sup>2</sup> Textu	re Remarks
				· · · · · · · · · · · · · · · · · · ·
<i></i>				
	·			
Type: C=Co	oncentration, D=Depletior	n, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore L	Lining, RC=Root (	Channel, M=Matrix.
		to all LRRs, unless otherwise noted.)		ators for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)	Sandy Redox (S5)		cm Muck (A9) (LRR C)
	vipedon (A2)	Stripped Matrix (S6)		cm Muck (A10) (LRR B)
Black Hi		Loamy Mucky Mineral (F1)		Reduced Vertic (F18)
	n Sulfide (A4)	Loamy Gleyed Matrix (F2)		Red Parent Material (TF2)
	Layers (A5) (LRR C)	Depleted Matrix (F3)		Other (Explain in Remarks)
	ck (A9) (LRR D)	Redox Dark Surface (F6)	0	saler (aspentin remaine)
	Below Dark Surface (A1			
	rk Surface (A12)	Redox Depressions (F8)		
	lucky Mineral (S1)	Vernal Pools (F9)	<sup>3</sup> India	ators of hydrophytic vegetation and
	leyed Matrix (S4)			ations of hydrology must be present.
	ayer (if present):		1	kand hydrology must be present.
				AIA
· · ·				1-10
Depth (inc			Hydric	: Soil Present? Yes No
		dug. ents on reverse.		
YDROLOO	GY			
Vetland Hyd	rology Indicators:		5	Secondary Indicators (2 or more required)
rimary Indica	ators (any one indicator is	s sufficient)		Water Marks (B1) (Riverine)
Surface V	Nater (A1)	Salt Crust (B11)		Sediment Deposits (B2) (Riverine)
	ter Table (A2)	Biotic Crust (B12)	_	Drift Deposits (B3) (Riverine)
Saturatio		Aquatic Invertebrates (B13)	· –	Drainage Patterns (B10)
	arks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)		Dry-Season Water Table (C2)
1	t Deposits (B2) (Nonriver			
1	osits (B3) (Nonriverine)	Presence of Reduced iron (C4)		Crayfish Burrows (C8)
- 1	Soil Cracks (B6)	Recent Iron Reduction in Plowed	• • • =	Saturation Visible on Aerial Imagery (C9
L	n Visible on Aerial Image	ry (B7) Other (Explain in Remarks)		Shallow Aquitard (D3)
Water-Sta	ained Leaves (B9)			FAC-Neutral Test (D5)
ield Observ	ations:			and an
Surface Wate	r Present? Yes	No Depth (inches):		
Vater Table F		No Depth (inches):		
/			Mothand Lizzt-	ology Present? Yes No
aturation Ply ncludes capi		No Depth (inches):		
		e, monitoring well, aerial photos, previous inspec	ctions), if available	e:
			- ,	
emarks:				
	- //			

# Exhibit B2

# DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan	Yes	Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

# **ICF Jones & Stokes**

# Wetland Determination Data Forms – Arid West Region

# For DesertXpress

HUC 12 Watershed Tropicana Wash

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 40

### WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: <u>DXA</u>	City/County: Clark Sampling Date: 3/6/07 State: NV Sampling Point: 99-2-W
pplicant/Owner: <u>Circle Point</u>	
	Section, Township, Range:
	_ Local relief (concave, convex, rione): Slope (%): Z
Subregion (LRR):	1-115, 181252 Long: N 36.077815 Datum: NAD 83
Soil Map Unit Name: NA	NWI classification: NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of the site state of the site s	year? YesNo (If no, explain in Remarks.)
Are Vegetation Y_, Soil Y, or Hydrology N significant	
Are Vegetation <u>AD</u> , Soil, or Hydrology naturally p	oroblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showin	ig 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
Wetland Hydrology Present? Yes No	
Remarks: This is a blue, line on topo of a	CCREFCD concrete-lined Thoto
Channel (see CCRFCD Website for facility from west LV Valley easterly to parallel #	dimensions). It conveys yous 326 facing W
Converges with the Tropicena Wash (tril	

#### VEGETATION

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2				Total Number of Dominant Species Across All Strata:
4 Total Cove	r: <u>Ø</u>			Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum				Prevalence Index worksheet:
1				Total % Cover of; Multiply by:
2				OBL species x1 =
3				FACW species x 2 =
4				FAC species x 2 =
5	<u> </u>			FACU species x 4 =
Total Cove	r: <u></u>			UPL species x 5 =
1				Column Totals: (A) (B)
23				Prevalence Index = B/A =
4				Hydrophytic Vegetation Indicators:
5.				Dominance Test is >50%
6.				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8 Total Cove	r: _Ø_	_ <u></u>	<u></u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	f			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present.
2		<u> </u>	<u> </u>	
Total Cove	r:	$\sim$		Hydrophytic Vegetation
% Bare Ground in Herb Stratum 800 % Cove	r of Biotic C	rust		Present? Yes No
Remarks:				

### SOIL

Sampling Point: <u>99-2</u>W

Profile Description:					or confirm	the absence	of indicators.)
Depth	Matrix (moist) %	Rec Color (moist)	lox Features	; Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches) Color	(moist) %			<u> </u>			
						<b>_</b>	
						. <u> </u>	
						······	
<u></u>							
<sup>1</sup> Type: C=Concentrati	on, D=Depletion, F	RM=Reduced Matrix.	<sup>2</sup> Location	: PL=Por	e Lining, R	C=Root Chanr	nel, M=Matrix.
Hydric Soil Indicator	s: (Applicable to	all LRRs, unless oth	erwise note	ed.)		Indicators	for Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)		Sandy Re	dox (S5)			1 cm M	/luck (A9) (LRR C)
Histic Epipedon (#	(2)		/latrix (S6)			2 cm M	/luck (A10) (LRR B)
Black Histic (A3)		Loamy Mi	icky Mineral	(F1)		Reduc	ed Vertic (F18)
Hydrogen Sulfide	(A4)	Loamy Gl	eyed Matrix	(F2)			arent Material (TF2)
Stratified Layers (	A5) (LRR C)	Depleted	Matrix (F3)			Other (	(Explain in Remarks)
1 cm Muck (A9) (I	.RR D)	Redox Da	rk Surface (	F6)			
Depleted Below D	ark Surface (A11)		Dark Surfac				
Thick Dark Surface			pressions (F	-8)		4	
Sandy Mucky Min	eral (S1)	Vernal Po	ols (F9)				of hydrophytic vegetation and
Sandy Gleyed Ma						wetland	hydrology must be present.
Restrictive Layer (if p	oresent):						N/A.
Туре:							N(A.
Depth (inches):						Hydric Soll	Present? Yes No
Remarks:	cn't c't	dun					
No	Solipi	The second					
		<b>S</b>					
$\sim$							
Der	<u>e rema</u>	dug. His on H	WARE	and di			
IYDROLOGY							
/ Wetland Hydrology Ii	dicators:					Secon	dary Indicators (2 or more required)
Primary Indicators (an		ufficient					/ater Marks (B1) (Riverine)
			4 (D44)				ediment Deposits (B2) (Riverine)
Surface Water (A1	·	Salt Crus	• •				
High Water Table	(A2)	Biotic Cri			4		rift Deposits (B3) ( <b>Riverine</b> )
Saturation (A3)	٠.		nvertebrates	• •			rainage Patterns (B10)
Water Marks (B1)	(Nonriverine)		n Sulfide Oc				ry-Season Water Table (C2)
Sediment Deposit	s (B2) (Nonriverin						hin Muck Surface (C7)
Drift Deposits (B3)	(Nonriverine)		e of Reduce				rayfish Burrows (C8)
Surface Soil Crack	s (B6)	Recent li	on Reductio	on in Plow	ed Soils (C	·	aturation Visible on Aerial Imagery (C9)
Inundation Visible	on Aerial Imagery	(B7) Other (E:	xplain in Rei	marks)		SI	hallow Aquitard (D3)
Water-Stained Lea	ives (B9)					F/	AC-Neutral Test (D5)
Field Observations:	· · · · · · · · · · · · · · · · · · ·	Strate of	<u></u>				· · · · ·
Surface Water Present	? Yes	_ No Depth (i	nches):				
Ì		No Depth (i					
Water Table Present?						معامدات المحد	y Present? Yes No 💆
Saturation Present? (includes capillary fring		_ No Depth (i	nones):			ana Ukatotoĝ)	yriesentr 185 №0 <u>**</u>
Describe Recorded Da	ta (stream oauge.	monitoring well, aeria	photos, pre	vious ins	pections),	if available:	
	,	<b>C</b> ,			. ,,		
Demodest							
Remarks:							
×							

### WETLAND DETERMINATION DATA FORM – Arid West Region

and the second second

Project/Site: City/County:	ark Sampling Date: 77707
pplicant/Owner: <u>Circle</u> Point	State: <u>NV</u> Sampling Point: <u>100-1w</u>
Investigator(s): KS, BM Section, Township, Ra	
Landform (hillslope, terrace, etc.): Valley floor Local relief (concave,	
	Long: N. 36.098605 Datum: NAD 83
	NWI classification: N/A
· · · · · · · · · · · · · · · · · · ·	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _	
	"Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally problematic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point I	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled	t Area
Hydric Soil Present? Yes No within a Wetlaw	
Wetland Hydrology Present? Yes No	-tau -
Remarks: This is a blue line on Topo & hamed TropPlana LV Wash / Colorado River). It is a fully constructed CCRF Conveys flow from W >E. It transitions from open box, channels (multiple; see photos) to under ground CBCs throw On the west of I-15	Wash (TUB to Photos: K ED Facility that 100-1W-main-F-e concrete bithed 100-1W-main-F-Wr Lah the I-LEATropiced both photos taken facing the Concrete states facing the states facing the states of
VEGETATION See CORFED website for facility dimensi	ORS_
Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum         (Use scientific names.)         % Cover         Species?         Status           1.	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant Species Across All Strata:
· 3	
4 Total Cover:	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
	Prevalence Index worksheet:
2	Total % Cover of: Multiply by:
3	OBL species x 1 =
4	FACW species x 2 =
5	FAC species x 3 =
Total Cover:	FACU species x 4 =
Herb Stratum	UPL species x 5 =
1	Column Totals: (A) (B)
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>4</sup>
7	Morphological Adaptations <sup>1</sup> (Provide supporting
8	data in Remarks or on a separate sheet)
Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<u>Woody Vine Stratum</u> 1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2	be present.
Total Cover:	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Present? Yes No V
Remarks:	
F-I.5-185	

### SOIL

### Sampling Point: 100-1 W

Profile Desc	ription: (Describe to th	e depth needed to docu	ment the indicator of	r confirm	the absence of ind	icators.)
Depth	Matrix		ox Features1			
(inches)	Color (moist)	% Color (moist)	<u>% Type<sup>1</sup></u>	Loc <sup>2</sup>	Texture	Remarks
					<u></u>	
						· ··
				<b>`</b>	. <u></u>	
					. <u></u>	
1			21			BActric
Type: C=Co	ncentration, D=Depletion	n, RM=Reduced Matrix. to all LRRs, unless othe	-Location: PL=Pore	Lining, K	Indicators for Pr	oblematic Hydric Soils <sup>3</sup> :
-					1 cm Muck (A	
Histosol	• •	Sandy Rec				(LRR B)
Black His	ipedon (A2)		cky Mineral (F1)		Reduced Ver	
	n Sulfide (A4)		yed Matrix (F2)		Red Parent M	
	Layers (A5) (LRR C)	Depleted N	• • •			in in Remarks)
	ck (A9) (LRR D)		k Surface (F6)			
	Below Dark Surface (A1	1) Depleted D	ark Surface (F7)			
Thick Da	rk Surface (A12)		ressions (F8)			
	ucky Mineral (S1)	Vernal Poo	ols (F9)			rophytic vegetation and
	leyed Matrix (S4)				wetland hydrol	ogy must be present.
Restrictive L	ayer (if present):					ALA.
Туре:						P/H,
Depth (inc			_		Hydric Soil Prese	nt? Yes No
Remarks:	Als sail.	pit dua				
	NO SON					
		~				
	Sec. rema	rit dug. uks on rev	use.			
HYDROLO						
		.1			Secondary II	ndicators (2 or more réquired)
	Irology Indicators:	(7. 1				larks (B1) (Riverine)
	ators (any one indicator i					
	Water (A1)	Salt Crus				nt Deposits (B2) (Riverine)
	ter Table (A2)	Biotic Cru				posits (B3) (Riverine)
Saturatio			vertebrates (B13)			e Patterns (B10)
	aiks (B1) (Nonriverine)		Sulfide Odor (C1)			Ison Water Table (C2)
	t Deposits (B2) (Nonrive		Rhizospheres along L			
	ośits (B3) (Nonriverine)		of Reduced Iron (C4)			Burrows (C8)
	Soil Cracks (B6)		on Reduction in Plowe	ed Soils (C	=	on Visible on Aerial Imagery (C9)
Inundatio	on Visible on Aerial Image	ery (B7) Other (Ex	plain in Remarks)			Aquitard (D3)
Water-St	ainęd Leaves (B9)				FAC-Ne	outral Test (D5)
Field Observ	1					
Surface Wate	er Present? Yes _	No/ Depth (ir	iches):	_		
Water Table I	Present? Yes_	No Depth (ir	iches):			
Saturation Pro	esent? Yes _	No Depth (ir	iches):	_ Wetla	ind Hydrology Pres	ent? Yes No V
(includes cap	illary fringe)		1 1		i avellabler	
Describe Rec	orded Data (stream gau	ge, monitoring well, aerial	photos, previous insp	ections), i	r avallable:	
	N					
Remarks:						
l i						
•	//					
		•				

### WETLAND DETERMINATION DATA FORM - Arid West Region

	eaas/Clark_ Sampling Date: 3/1/08
Project/Site: Deseit Xpress City/County: Las M	State: NV Sampling Point: C99-1W
Applicant/Owner: Circle Point	State:State:State:State:
	ige:
	Long- <u>N 3/6-0662778</u> Datum: <u>NAD 83</u>
Subregion (LRR):	NWI classification: N/A ZONEII
	(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical of this time of your second time and the site typical of the site of your second time site typical of the site of your second time	Normal Circumstances" present? Yes No
Are Venetation, Vices, Soli <u>Vices</u> , or Hydrology <u>- 122</u>	eded, explain any answers in Remarks.)
Are Vegetation MO Soil MO , or Hydrology MO naturally problemate? (If the	
SUMMARY OF FINDINGS – Attach site map showing sampling point to	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No // Is the Sampled	
Hydric Soil Present? Yes No V within a Wetlan	
Weiland Hydrology Present? Yes <u>No V</u> Remarks: 12' Concrete bridge under UPPR. Flows drain from to Tropicana Wash. Contrete & barbed wire litter the drainage. Ad west + such is under construction, UPPR + old telephone Unt to the	Lusst to east Photo 183 facing soil Art j. land to the 182 II N@I-215 Least, +I-215 tother with, 180 II W
OHM = 9WX 1.5 h W/ 1:1 side slope	179 ·· EQ Litage under UA2
VEGETATION Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Use scientific names.) % Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1.	Total Number of Dominant 3 (B)
3.	Species Across All Strata: (B)
4 Total Cover:	Percent of Dominant Species
Sapling/Shrub Stratum	Prevalence Index worksheet:
1. Armbrosia dunitian 2 VN-FAC	Total % Cover of: Multiply by:
2. Rumer laumenosepalus 2 YNF FAC 3 Larrea tridentata 2 YNL HPE	OBL species x 1 =
3. Larrea trideritate	FACW species x2 =
4 5	FAC species X3 =
Total Cover:	1171  spacing $911  x5 = 48555$
Herb Stratum 1. Schismus harbatas INNE HPE	Column Totals: $11$ (A) $5155$ (B)
2. Reassion Fourmerfortic . I NNL-UPE	
	Prevalence Index = $B/A = 4 \frac{1}{16} \frac{5.0}{5.0}$ Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5.	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
7.	data in Remarks or on a separate sneet)
8, Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
12	
Total Cover:       7         % Bare Ground in Herb Stratum       9,8         % Cover of Biotic Crust       9	Hydrophytic Vegetation Present? Yes <u>No</u>
Remarks:	

AMERICANNES - COMPANYANA AN

SOIL	
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997 FR 2020

Profile Description: (Describe to the depth needed to document the indicator	r or confirm the absence of indicators.)
Depth <u>Matrix Recox Features</u> (inches) <u>Color (moist) % Color (moist) % Type</u> 1	Loc <sup>2</sup> Texture Remarks
1-22 IOYR 6/6	Sand w/ calable
Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pr	ore Lining, RC=Root Channel, M=Matrix.
Type: C=Concentration, D=Depleton, the recessory of the second se	Indicators for Problematic Hyune Sona .
Sandy Reday (55)	1 cm Muck (A9) (LRR C)
Histosof (A1) Referred Matrix (S6)	2 cm Muck (A10) (LRR B)
Distic Epipedon (A2)	Reduced Vertic (F18)
Loamy Gleyed Matrix (F2)	Red Parent Material (TF2)
Bydrogen connect (11) Depleted Matrix (F3)	Other (Explain in Remarks)
Redox Dark Surface (F6)	
Depleted 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)	Wettand Hydrology (Host of Press
Restrictive Layer (if present):	
Туре:	Hydric Soil Present? Yes No
Depth (inches):	
Remarks:	
IYDROLOGY	Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:	Water Marks (B1) (Riverine)
Primary Indicators (any one Indicator is sufficient)	
Surface Water (A1) Salt Crust (B11)	Sediment Deposits (B2) (Riverine)
Sullace Match (ref)	Drift Deposits (B3) (Riverine)
	) Drainage Patterns (B10)
	) Dry-Season vyater Table (C2)
	ng Living Roots (C3) this Muck Salace (C7)
	(C4) Crayfish Bullows (C6)
	lowed Solis (C6) Saturation Visible on Aenal Anager, (C
	) Shallow Aquitaro (DS)
	FAC-Neutral Test (D5)
Water-Stained Leaves (B9)	
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Weter Tobio Bresent? Yes No Depth (inches):	No No
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No/
(includes capillary fringe)	inspections), if available:
(Includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	mopedianon in a servere
Remarks:	
Remarks:	
Remarks: Shelving, substrate sorting.	

WETLAND DETERMINATION DATA FORM -	Arid West Region
oject/Site: Desert X press City/County: Las Ve	Arid West Region <u>Arid West Region</u> Sampling Date: <u>3/1/08</u> Sampling Point: <u>C99-2W</u>
ojeci/Site:	State: Sampling Found
vestigator(s): KS, BM, JHJSON Section, Township, Range	je:
vestigator(s): <u>KS, BM, JHolson</u> Section, Township, Rang Indform (hillslope, terrace, etc.): <u>Valley Floor</u> Local relief (concave, or 	Siope (%): 2
-tati W-115, 206662	LONG: N 36, 062563 Datum: NAU 83
	NWI classification: <u>N/A</u> ZUNE
bil Map Unit Name:	(if no, explain in Remarks.)
e climatic / hydrologic conditions on the site typical for this tartie of y and	Normal Circumstances" present? Yes V No
Vegetation UPS Soil UPS, or Hydrology - r to significantly and	eded, explain any answers in Remarks.)
UMMARY OF FINDINGS – Attach site map showing sampling point lo	cations, transects, important reasons,
Hydrophytic Vegetation Present? Yes No Is the Sampled	Area
Hydric Soll Present? Yes No within a Wetlan Wotland Hydrology Present? Yes No	IN to 187 Fring S
Wetland Hydrology Present? Yes No_V Remarks: 12' Concrete bridge under UPPR. OHM=5WX1'h w Tributary to Tropicane Wash. See C99-1W datafrim für ad K-pails our placed in channel to privent vehicle access bit a	ith 1=2 side shoer, thou 181 in JN j. land use description 186 " W low bike/ped. access. 184 11 ED
K-rails and placed in cheating of	U.P.P.P. by
EGETATION	Dominance Test worksheet:
Cover         Species?         Status           Tree Stratum         (Use scientific names.)         % Cover         Species?         Status	Number of Dominant Specles That Are OBL, FACW, or FAC: (A)
1	Total Number of Dominant (B)
3	
4 Total Cover:	Percent of Dominant Species (A/B)
· ·	
Sapling/Shrub Stratum	Prevalence Index worksheet: Total % Cover of: Multiply by:
2	OBL species         x 1 =
3	FACW species         x 2 =
4	FAC species x3 =
5	FACU species x 4 =
Total Cover:	UPL species         x 5 =
Herb Stratum	Column Totals: (A) (B)
1	
2	Prevalence Index = B/A =
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
7	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
8 Total Cover:	
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	Hydrophytic
Total Cover:	Vegetation Present? Yes <u>No 1</u>
Remarks:	

### Sampling Point: C99-2W

Denth Matrix		ed to document the indicator or co Redox Features		
Depth <u>Matrix</u> inches) Color (moist)	<u>%</u> Colc	Redox Features r (moist) % Type <sup>1</sup> Lo		
				Chappel M=Matrix
Type: C=Concentration, D=Deple	etion, RM=Reduc	ed Matrix. <sup>2</sup> Location: PL=Pore Lin	ing, RC=Root	ators for Problematic Hydric Soils <sup>3</sup> :
<ul> <li>Hydric Soil Indicators: (Applica</li> <li>Histosol (A1)</li> <li>Histic Epipedon (A2)</li> <li>Black Histic (A3)</li> <li>Hydrogen Sulfide (A4)</li> <li>Stratified Layers (A5) (LRR C</li> </ul>	able to all LRRs, 	Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	1 2 F	cm Muck (A9) (LRR C) cm Muck (A10) (LRR B) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)
1 cm Muck (A9) (LRR D)     Depleted Below Dark Surface     Thick Dark Surface (A12)     Sandy Mucky Mineral (S1)     Sandy Gleyed Matrix (S4) Restrictive Layer (if present):	e (A11)	Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)		ators of hydrophytic vegetation and etland hydrology must be present.
(estrictive Laver (ii present)				
Type: Depth (inches):		9	Hydri	N A, c Soil Present? Yes No
Type: Depth (inches): Remarks: NO Soil pit C		2_,	Hydri	N[A, c Soil Present? Yes No
Type: Depth (inches): Remarks: NO Soil pit C	xcavated	?		
Type: Depth (inches): Remarks: NO Soil pit & YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indica	xcavated			<u>Secondary Indicators (2 or more required)</u> Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Type: Depth (inches): Remarks: NO Soil pit C YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicators Surface Water (A1) High Water Table (A2) Saturation (A3)	X CAN A Ted	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) — Dry-Season Water Table (C2)
Type: Depth (inches): Remarks: NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial In	X (a) a ted	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed S Other (Explain in Remarks)	ng Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8)
Type: Depth (inches): Remarks: NOSoil pit & YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indica Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriver Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9)	X (a) a ted	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed	ng Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (I Shallow Aquitard (D3)
Type: Depth (inches): Remarks: NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriveri Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriveri Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9) Field Observations:	X (all a ted	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed I Other (Explain in Remarks)	ng Roots (C3)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (I Shallow Aquitard (D3)
Type: Depth (inches): Remarks: NO YDROLOGY Wetland Hydrology Indicators: Primary Indicators (any one indicators) Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverf Sediment Deposits (B2) (Nor Drift Deposits (B3) (Nonriverf Surface Soil Cracks (B6) Inundation Visible on Aerial In Water-Stained Leaves (B9) Field Observations: Surface Water Present?	X (a) a ted	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Livir Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed I Other (Explain in Remarks)	ng Roots (C3) Soils (C6)	Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Thin Muck Surface (C7) Crayfish Burrows (C8) Saturation Visible on Aerial imagery (C Shallow Aquitard (D3)

WETLAND DETERMINATION DATA FORM - A	Arid West Region
oject/site: Desert Xpress City/County: Las Vec	AS/Clark Sampling Date: 3/1/08 State: NV Sampling Point: C99-3W
Applicant/Owner: Circle Point	State: <u>/) V</u> Sampling Point: <u>C (77-379</u>
Investigator(s): <u>KS, RM, J. Halson</u> Section, Township, Rang Landform (hillslope, terrace, etc.): <u>Valley Floor</u> Local relief (concave, concerned) -115,201552	nvex, none); Slope (%);
Landform (hillslope, terrace, etc.): <u>Valley Floov</u> Local reliet (concave, concave,	TONG: 13 36.07233 Datum: AHP 02
Soil Map Unit Name: No	(If no, explain in Remarks.)
	ded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point loc	cations, transects, important features, etc.
SUMMARY OF FINDINGS – Attach site map showing sumpling parts	
Hydrophytic Vegetation Present? Yes No No NIA Hydric Soli Present? Yes No NiA within a Wetland Wetland Hydrology Present? Yes No Wetland Remarks: Blue Line on topo, 36" CMP under UPPR. Conveys flow OHM: 6"WX I'M with 1:2 side slopes, Bredominantly sodale che Adj, land use: UPRE, I-215 to the south, Industrial forfice complex of	1? Yes No /
VEGETATION Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum     (Use scientific names.)     % Cover Species? Status       1.	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant Species Across All Strata: (B)
3	
4 Total Cover:	Percent of Dominant Species (A/B) That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x1 =
3	FACW species x 2 =
4	FAC species $X3 = $
5 Total Cover:	
Hoth Siratum	UPL species $10^{-6} \times 5 = 50^{-6}$ Column Totals: $10^{-6}$ (A) $50^{-6}$ (B)
1. salsola trages 10 Y OTT	
	Prevalence Index = $B/A = -\frac{94.0}{2}$
$\begin{array}{c} 2,  \searrow ( \square \square$	Hydrophytic Vegetation Indicators:
4. <u>as pro NWI-</u>	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup> Morphological Adaptations <sup>1</sup> (Provide supporting
6. 7	data in Remarks or on a separate sneet)
	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover: 117	
Woody Vine Stratum	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1	
2	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover of Biotic Crust	Vegetation Present? Yes No
% Bare Ground In Held Stratam	
Remarks:	
F-I.5-191	

140-040

. . . . . . . . . . . . . . . . . . .

Received and second second second

### Sampling Point: <u>C99-3</u>W

No 🔽

Wetland Hydrology Present? Yes \_\_\_\_

SOIL		-	The absence of indicators )
Profile Desci	ription: (Describe to the	e depth needed to document the indicator or conf	I'm the absence of molearors.
Depth	Matrix	Redox Features	
(inches)	Color (moist) 9	6 Color (moist) % Type' Loc"	
			· · · · · · · · · · · · · · · · · · ·
· · · ·			
·			
<u> </u>	·······		
		· · · · · · · · · · · · · · · · · · ·	
<sup>1</sup> Type: C=Co	oncentration, D=Depletion	I, RM=Reduced Matrix. <sup>2</sup> Location: PL=Pore Lining	g, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Hydric Soil I	ndicators: (Applicable	to all LRRs, unless otherwise noted.)	1 cm Muck (A9) (LRR C)
Histosof		Sandy Redox (S5)	2 cm Muck (A10) (LRR B)
	ыpedon (A2)	Stripped Matrix (S6)	Reduced Vertic (F18)
Black Hi	stic (A3)	Loamy Mucky Mineral (F1)	Red Parent Material (TF2)
Hydroge	n Sulfide (A4)	Loamy Gleyed Matrix (F2) Depleted Matrix (F3)	Other (Explain in Remarks)
	Layers (A5) (LRR C)	Redox Dark Surface (F6)	
1 cm Mu	ick (A9) (LRR D)		
	Below Dark Surface (A1		
	ark Surface (A12)	Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and
	Nucky Mineral (S1) Bleyed Matrix (S4)		wetland hydrology must be present.
	Layer (if present):		NA
			te (tx
	( );		Hydric Soll Present? Yes No
	ches):		
Remarks:	i i i i i i i i	ted, Surface is gravel + so	and
NO SO	il pit excava	Tran, and mach is grander to	1 187 1 199
100 -		•	
HYDROLO			Secondary indicators (2 or more required)
Wetland Hy	drology Indicators:		Water Marks (B1) (Riverine)
	cators (any one indicator		Sediment Deposits (B2) (Riverine)
	Water (A1)	Salt Crust (B11)	Drift Deposits (B3) (Riverine)
	ater Table (A2)	Blotic Crust (B12) Aquatic Invertebrates (B13)	Drainege Patterns (B10)
Saturati	on (A3)		Dry-Season Water Table (C2)
Water M	farks (81) (Nonriverine)	Hydrogen Sulfide Odor (C1) oxidized Rhizospheres along Living	
	nt Deposits (B2) (Nonrive		Crayfish Burrows (C8)
	posits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	
Surface	Soil Cracks (B6)	Recent Iron Reduction in Plowed Sol	Shallow Aquitard (D3)
Inundati	ion Visible on Aerial Imag	ery (B7) Other (Explain in Remarks)	FAC-Neutral Test (D5)
Water-S	Stained Leaves (B9)		the second s
Field Obser	vations:		
Surface Wat	ter Present? Yes _	No Depth (inches):	,

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_\_

Yes \_\_\_\_\_ No \_\_\_\_ Depth (inches): \_

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

Water Table Present?

shelving, sed, orting

Saturation Present?

Remarks:

roject/Site: <u>Nesert X piress</u> City/County: pplicant/Owner: <u>Circle Paint</u>	Las Vegas/ Lan- Sampling Date:
pplicant/Owner: <u>Circle Paint</u>	State: <u>NY</u> Sampling Point: <u>CTTTW</u>
Vall St. ( IA set Distantes Britishering To	
ubracian (IRB): /	1557 Long: N 3/e, 053060 Datum: NAD 83
andform (hillslope, terrace, etc.): <u>Vallea, Hoby</u> Eddartener ubregion (LRR): <u>b</u>	NWI classification: <u>AUA</u>
on Map Onit Name:	No (If no, explain in Remarks.)
re climatic / hydrologic conditions on the site typical of this time of year	Are "Normal Circumstances" present? Yes No
re Vegetation <u>yes</u> , Soil <u>yes</u> , or Hydrology <u>kes</u> significantly disturbed?	(If needed, explain any answers in Remarks.)
re Vegetation <u>No</u> , Soil <u>No</u> , or Hydrology <u>NO</u> naturally problematic?	
UMMARY OF FINDINGS – Attach site map showing samplin	g point locations, transects, important reaches, etc.
Hydrophytic Vegetation Present? Yes No Is the hydric Soil Present? Yes No WA with	e Sampled Area
Welland Hydrology Present? Yes No Remarks: CCRFCD facility - open, Concrete - lined chamme from west to east under the UPER ; trib. to Tropic CCRFCD website indicates this is a light Adjacent land use is fully developed metro findu	I conveys Flows Photo
from west to east under the UPER; trib. to Tropic	and mastin, [316 tacing chainted bottony, 315 ", W.
CCRFCD Welds ITE indicates this is a light	trial and UPRR : [313 ". E.
Adjacent land use is fully developed more finan	312 " N,
EGETATION	
Tree Stratum (Use scientific names.) Absolute Dominant <u>% Cover Species?</u>	
1	= 1 + 1 + 0 = 1 + 0 = 1 + 0 = 0
2	Total Number of Dominant
3	
4	Percent of Dominant Species
Total Cover:	That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1	Total % Cover of: Multiply by:
2	OBL species x1 =
3	FACW species x 2 =
4	FAC species x 3 =
5	FACU species x 4 =
Herb Stratum	UPL species x 5 =
1	Column Totals: (A) (B)
2	
3	Hydrophytic Vegetation Indicators:
4	Dominance Test is >50%
5	Prevalence Index is ≤3.0 <sup>1</sup>
6	Morphological Adaptations <sup>1</sup> (Provide supporting
~7,	Data In Nonaria of on a soperate encory
8 Total Cover:	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	1. It was at hundred and watered budgelook must
1 (	<ul> <li><sup>1</sup>indicators of hydric soil and wetland hydrology must be present.</li> </ul>
2	
Total Cover:	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover of Biotic Crust	
Remarks: No veg present.	

Unoperativity set

Sampling Point: <u>C99-4W</u>

OIL	depth needed to document the indicator or cor	nfirm the absence of indicators.)
Depth <u>Matrix</u> (inches) <u>Color (moist) %</u>	Color (moist) % Type <sup>1</sup> Loc	2 Texture Remarks
Type: C=Concentration, D=Depletion		ing, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric Solls <sup>3</sup> :
Hydric Soil Indicators: (Applicable 6 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR C) 1 cm Muck (A9) (LRR D)	o all LRRs, unless otherwise noted.) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6)	<ul> <li>1 cm Muck (A9) (LRR C)</li> <li>2 cm Muck (A10) (LRR B)</li> <li>Reduced Vertic (F18)</li> <li>Red Parent Material (TF2)</li> <li>Other (Explain in Remarks)</li> </ul>
Depleted Below Dark Surface (A1 Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	1) Depleted Dark Surface (F7) Redox Depressions (F8) Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present.
Restrictive Layer (if present):		N/A.
Туре:		Hydric Soil Present? Yes No
Depth (inches):		
Remarks: No soil pit ex	cavated.	
IYDROLOGY		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		Water Marks (B1) (Riverine)
Primary Indicators (any one indicator		Sediment Deposits (B2) (Riverine)
Surface Water (A1)	Salt Crust (B11) Biotic Crust (B12)	Drift Deposits (B3) (Riverine)
High Water Table (A2)	Aquatic Invertebrates (B13)	Drainage Patterns (B10)
Saturation (A3) Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Dry-Season Water Table (C2)
Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	erine) Oxidized Rhizospheres along Livir	ng Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8)

Wetland Hydrology Indicators:	DECONDERV INDUCTION 12 OF MOTO FOLIERONT
	Water Marks (B1) (Riverine)
Primary Indicators (any one indicator is sufficient)	<ul> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>g Roots (C3)</li> <li>Thin Muck Surface (C7)</li> <li>Crayfish Burrows (C8)</li> </ul>
Field Observations:         Surface Water Present?       Yes No Depth (inches):         Water Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):         Includes capillary fringe)       Depth (inches):         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection)	Wetland Hydrology Present? Yes No tions), if available:
Remarks:	

WETLAND DETERMINATION DATA FORM -	1 1 1
Project/Site: Desett Kpiess City/County: Las Ve	P.O.S. / Clark_ Sampling Date: 2/25/08
Ci-L ALT	State: NV Sampling Point: C100-1W
LI CI I Bay I Haven John HolSospetion Township Ban	ge:
Incal relief (concave, c	onvex, none): <u>Pturk</u> Slope (76).
Subregion (LRR):	LONG: 10 20, 104 70 7 Datum. 101 9 00
Soil Map Unit Name: _N/A	NWI classification: D/A ZONE ( ]
An elimetia / hydrologic conditions on the site typical for this time of year? Yes V No	(If no, explain in Remarks.)
Are Veretation No Soil No, or Hydrology RSS' significantly disturbed? Are "	Normal Circumstances" present? Yes No
Are Vegetation 10 a, Soil, or Hydrology naturally problematic? (If new	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point lo	cations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sampled	Area
Hydric Soil Present? Yes V No within a Wetlan	d? Yes No
Wetland Hydrology Present? Yes No	+ Photas:
Remarks: Land USL in area: UPRE to east. Auto repair yards to west tal. Equipment singing. Culvert under UPPE is a b'wide w/earthe	n botton. 40 " E (cullent opening)
Dead American coot on top of whist bank - Margaret Widdows	n trok photo. 170 " E (culturet opening)
VEGETATION	
Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet: Number of Dominant Species
	That Are OBL, FACW, or FAC: (A)
2	Total Number of Dominant Species Across All Strata: (B)
3	Percent of Dominant Species
4Total Cover:	That Are OBL, FACW, or FAC: 100 (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet:
1. Jamary Vampsister	Total % Cover of: Multiply by:
2. Aracia arphan 2 NIN WEL	OBL species $2 \times 1 = \frac{2}{2}$
3. Olea europa	FACW species $12$ $x_2 = \frac{24}{30}$
5	FAC species x3 =
Total Cover: 17	FACU species <u>3</u> x 4 = <u>1 4</u> UPL species <u>3</u> x 5 = <u>15</u> .
Herb Stratum	Column Totais: $30$ (A) $\overline{13}$ (B)
1. Lundon daching	
2. Tupha latifation <u>2 NOBL</u> 3. Brassica tournefacti; <u>1 NNC-UPE</u>	Prevalence Index = B/A = 2,76
4	Hydrophytic Vegetation Indicators:
5	✓ Dominance Test is >50% ✓ Prevalence Index is ≤3.0 <sup>1</sup>
	Morphological Adaptations <sup>1</sup> (Provide supporting
7	data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum	
1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	Hydrophytic
Total Cover:	Vegetation /
% Bare Ground in Herb Stratum% Cover of Biotic Crust	Present? Yes <u>No</u>
Remarks:	
F-I.5-195	
г-і.э-195	

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		to the depth		(Features	01 0011111	the absence of inc	•
Depth (inches)	<u>Matrix</u> Color (moist)		Color (moist)	<u></u>	Loc <sup>2</sup>	Texture	Remarks
1-20	10 YR 3/1				<u></u>	Loamu clan	There is trash, intersoursed
							the upper 8". the soil pit.
	·····					4-47	<u></u>
<u> </u>					·		
<sup>1</sup> Type: C=Co	ncentration, D=Dep	pletion, RM=Re	educed Matrix.	<sup>2</sup> Location: PL=Poi	re Lining, R(	C=Root Channel, Mi	-Matrix. roblematic Hydric Soils <sup>3</sup> :
Hydric Soil I	ndicators: (Applic	able to all LR					
Histosol (			Sandy Redo			1 cm Muck (/	
	pedon (A2)		Stripped Ma			Reduced Ve	
Black His			Loamy Muck			Red Parent I	
	n Sulfide (A4) Layers (A5) (LRR -	C)	Depleted Ma				in in Remarks)
1 cm Mue	Eayers (A0) (ERR D) Ek (A9) (ERR D) Below Dark Surfac		Redox Dark Depleted Da	Surface (F6) irk Surface (F7)			
	rk Surface (A12)		Redox Depr			<sup>3</sup> ladiantars of hvo	trophytic vegetation and
	ucky Mineral (S1) eyed Matrix (S4)		Vernal Pools	s (F9)			logy must be present.
	ayer (if present):						
Type		<u></u>					ent? Yes Ko_
i ype,							
	hes): lo upland l ballast	pit exce to the ec	- wated bi ast.	scause the	- arta	is paveal	to the west an
Depth (inc Remarks: N rail <i>v</i> oac	lo upland ballast	p'it exce to the ec	- Wated bi ist.	icanse the	, arta	is paveal	to the west an
Depth (inc Remarks: N rai(100ac	lo upland L ballast	p'rt exce to the ec	- Walch br ast.	icanse the	, arta	is paved	to the west an
Depth (inc Remarks: N Pailmaa YDROLO( Wetland Hyd	ballast GY	p'rt ekce to the ec		icanse the	, arta	is paveal	to the west an
Depth (inc Remarks: N Fa'i (10000 Fa'i (10000 Primary Indice Primary Indice	ballast GY rology Indicators	p'rt ekce to the ec	int)		, arta	_ is pavea(	to the west an
Depth (inc Remarks: N Pail (10000 Primary Indice Surface N	GY rology Indicators: ators (any one Indic Vater (A1)	p'rt ekce to the ec	int) Salt Crust (	(B11)	arta	_ is pavea(	to the west an Indicators (2 or more require Marks (B1) (Riverine)
Depth (inc Remarks: N Pail (10000 (YDROLOC Wetland Hyd Primary Indic Surface V High Wat	GY rology Indicators: ators (any one Indic Vater (A1) er Table (A2)	p'rt ekce to the ec	int) Salt Crust ( Biotic Crust	(B11) t (B12)	. arta	<u>Secondary</u> <u>Vater</u> Sedime Drift De Drianac	Indicators (2 or more require Marks (B1) (Riverine) ent Deposits (B2) (Riverine) posits (B3) (Riverine) ge Patterns (B10)
Depth (inc Remarks: N Pail (10000 (YDROLOC Wetland Hyd Primary Indic Surface V High Wat Saturatio	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3)	p'rt .e.k.ce to the ec : : : : : :	nt) Salt Crust ( Biotic Crus Aquatic Inv	(B11)	, arta	<u>Secondary</u> <u>Vater</u> Sedime Drift De Drianac	Indicators (2 or more require Marks (B1) (Riverine) Poposits (B2) (Riverine)
Depth (inc Remarks: N Pail Poac YDROLOC Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma	GY rology Indicators: ators (any one Indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver	p'rt .e.K ce to the ee ; cator is sufficie rine)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1)		<u>Secondary</u> <u>Secondary</u> <u>Water M</u> <u>Sedime</u> <u>Drift De</u> <u>Drift De</u> <u>Dry-Sec</u> ts (C3) <u>Thin Ma</u>	to the west an Indicators (2 or more require Marks (B1) (Riverine) and Deposits (B2) (Riverine) aposits (B3) (Riverine) aposits (B3) (Riverine) ason Water Table (C2) uck Surface (C7)
Depth (inc Remarks: // rai(10000 (YDROLOO Wetland Hyd Primary Indice Surface V High Wat Saturatio Water Ma Sediment	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No	p'rt .e.k.ce to the ee : cator is sufficie rine) pariverine)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R	(B11) t (B12) rertebrates (B13)	Living Root	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea is (C3) Thin Mi Crayfisl	to the west an Indicators (2 or more require Marks (B1) (Riverine) ent Deposits (B2) (Riverine) eposits (B3) (Riverine) ge Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8)
Depth (inc Remarks: N Pail (10000) (YDROLOO) Wetland Hyd Primary Indic Surface V High Wat Saturatio Saturatio Saturatio Dift Dep	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver)	p'rt .e.k.ce to the ee : cator is sufficie rine) pariverine)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along	Living Root	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea is (C3) Thin Ma Crayfisl C6) Saturat	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B2) (Ri
Depth (inc Remarks: N Pail (10000) Prail (10000) Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Saturatio Drift Dep Surface S	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6)	p'rt . CK Ce to the Ce : cator is sufficie crine) onriverine) onriverine)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C	Living Root	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea (c3) Thin Mi Crayfish C6) Saturat Shallow	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B3) (Riverine) Marks (B3) (Riverine) Marks (B10) Marks (B10) Marks (B10) Marks (C1) Marks (C2) Marks (C2) Marks (C2) Marks (C3) Marks (C4) Marks (C4)
Depth (inc Remarks: N Pail ( 1000) (YDROLOO Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Saturatio Drift Dep Surface S Inundatio	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial	pirt . CK Ce to the Ce : cator is sufficie prine) erine) Imagery (B7)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reducetion in Piov	Living Root	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea (c3) Thin Mi Crayfish C6) Saturat Shallow	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B2) (Ri
Depth (inc Remarks: N Pail (10000) Prail (10000) Wetland Hyd Primary Indice Surface V High Wat Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Goil Cracks (B6) n Visible on Aerial ained Leaves (B9)	pirt . CK Ce to the Ce : cator is sufficie prine) erine) Imagery (B7)	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reducetion in Piov	Living Root	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea (c3) Thin Mi Crayfish C6) Saturat Shallow	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B3) (Riverine) Marks (B3) (Riverine) Marks (B10) Marks (B10) Marks (B10) Marks (C1) Marks (C2) Marks (C2) Marks (C2) Marks (C3) Marks (C4) Marks (C4)
Depth (inc Remarks: N Pai (10000) Prain (10000) Wetland Hyd Primary Indic Surface V High Wat Saturatio Water Ma Saturatio Unift Dep Surface S Inundatio Water-St Field Observ	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial alned Leaves (B9) ations:	pirt - CK Ce to the Ce : cator is sufficie prine) erine) Imagery (B7)	ent) Salt Crust ( Biotic Crus Aquatic inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reduction in Piov lain in Remarks)	Living Root 4) ved Soils (C	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea (c3) Thin Mi Crayfish C6) Saturat Shallow	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B3) (Riverine) Marks (B3) (Riverine) Marks (B10) Marks (B10) Marks (B10) Marks (C1) Marks (C2) Marks (C2) Marks (C2) Marks (C3) Marks (C4) Marks (C4)
Depth (inc Remarks: N Pail ( Poal YDROLOO Wetland Hyd Primary Indic Surface V High Wal Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Wate	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial ained Leaves (B9) ations: r Present?	pirt . ek ce to the ec : : : : : : : : : : : : : : : : : : :	nt) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reduction in Piov lain in Remarks) shes):	Living Root 4) ved Soils (C	Secondary <u>Secondary</u> <u>Water M</u> <u>Sedime</u> <u>Drift De</u> <u>Drift De</u> <u>Drift De</u> <u>Dry-Sea</u> (cayfish <u>Crayfish</u> <u>Shallow</u> <u>FAC-Ne</u>	Indicators (2 or more require Marks (B1) (Riverine) ant Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagen Aquitard (D3) (Lt be sutral Test (D5) Sed in
Depth (inc Remarks: N Pail ( Poac YDROLOC Wetland Hyd Primary Indice Surface V High Wat Saturatio Water Ma Sedimen Drift Dep Surface S Inundatio Water-St Field Observ Surface Water	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial alned Leaves (B9) ations: r Present?	pirt ekce to the ec cator is sufficie cator is sufficie prine) imagery (B7) (es No res No	ent) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp Depth (inc Depth (inc	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced from (C n Reduction in Piov lain in Remarks) thes):	Living Root 4) ved Soils (C	Secondary <u>Secondary</u> <u>Water M</u> <u>Sedime</u> <u>Drift De</u> <u>Drift De</u> <u>Drift De</u> <u>Dry-Sea</u> (cayfish <u>Crayfish</u> <u>Shallow</u> <u>FAC-Ne</u>	Indicators (2 or more require Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B1) (Riverine) Marks (B3) (Riverine) Marks (B3) (Riverine) Marks (B10) Marks (B10) Marks (B10) Marks (C1) Marks (C2) Marks (C2) Marks (C2) Marks (C3) Marks (C4) Marks (C4)
Depth (inc Remarks: N Pail ( Poac Primary Indice Surface V High Wat Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pre	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) m (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) m Visible on Aerial alned Leaves (B9) ations: r Present? Present?	pirt - CK Ce to the Ce cator is sufficie cator is sufficie prine) prine) Imagery (B7) (es No (es No (es No	ent) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp Depth (inc Depth (inc Depth (inc	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced iron (C n Reduction in Piov lain in Remarks) lain in Remarks) shes): thes):	Living Root 4) wed Soils (C	Secondary Secondary Water M Sedime Drift De Drift De Dry-Sea (C3) Thin Ma Crayfish Saturat Shallow FAC-Ne and Hydrology Press	Indicators (2 or more require Marks (B1) (Riverine) ant Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagen Aquitard (D3) (Lt be sutral Test (D5) Sed in
Depth (inc Remarks: // Praci (100000 Wetland Hyd Primary Indice Surface V High Wal Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pro (includes cap Describe Rec	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial alined Leaves (B9) ations: r Present? Present? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Se	pirt ekce to the ec cator is sufficie prine) prine) Imagery (B7) (es No (es No (es No (es No (es No	ent) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp Depth (inc	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reduction in Piov lain in Remarks) thes): thes): thes): thes):	Living Roof 4) wed Soils (C	Secondary Secondary Water M Sedime Drift De Drift De Drift De Dry-Sea is (C3) Thin Mi Crayfisl Saturat Shallow FAC-Ne and Hydrology Press f available:	to the west an Indicators (2 or more require Marks (B1) (Riverine) ant Deposits (B2) (Riverine) posits (B3) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagen Aquitard (D3) (wt be sent? Yes No
Depth (inc Remarks: // Praci (100000 Wetland Hyd Primary Indice Surface V High Wal Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pro (includes cap Describe Rec	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial alined Leaves (B9) ations: r Present? Present? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Se	pirt ekce to the ec cator is sufficie prine) prine) Imagery (B7) (es No (es No (es No (es No (es No	ent) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp Depth (inc	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reduction in Piov lain in Remarks) thes): thes): thes): thes):	Living Roof 4) wed Soils (C	Secondary Secondary Water M Sedime Drift De Drift De Drift De Dry-Sea is (C3) Thin Mi Crayfisl Saturat Shallow FAC-Ne and Hydrology Press f available:	to the west an Indicators (2 or more require Marks (B1) (Riverine) ant Deposits (B2) (Riverine) posits (B3) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagen Aquitard (D3) (wt be sent? Yes No
Depth (inc Remarks: // Praci (100000 Wetland Hyd Primary Indice Surface V High Wal Saturatio Water Ma Sediment Drift Dep Surface S Inundatio Water-St Field Observ Surface Water Saturation Pro (includes cap Describe Rec	GY rology Indicators: ators (any one indic Vater (A1) er Table (A2) n (A3) arks (B1) (Nonriver t Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) n Visible on Aerial alined Leaves (B9) ations: r Present? Present? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Seent? Se	pirt ekce to the ec cator is sufficie prine) prine) Imagery (B7) (es No (es No (es No (es No (es No	ent) Salt Crust ( Biotic Crus Aquatic Inv Hydrogen S Oxidized R Presence c Recent Iror Other (Exp Depth (inc	(B11) t (B12) rertebrates (B13) Sulfide Odor (C1) hizospheres along of Reduced Iron (C n Reduction in Piov lain in Remarks) thes): thes): thes): thes):	Living Roof 4) wed Soils (C	Secondary Secondary Water M Sedime Drift De Drift De Drift De Dry-Sea is (C3) Thin Mi Crayfisl Saturat Shallow FAC-Ne and Hydrology Press f available:	Indicators (2 or more require Marks (B1) (Riverine) ant Deposits (B2) (Riverine) posits (B3) (Riverine) pe Patterns (B10) ason Water Table (C2) uck Surface (C7) h Burrows (C8) ion Visible on Aerial Imagen Aquitard (D3) (Lt be sutral Test (D5) Sed in

WETLAND DETERMINATION DATA FORM -	- Arid West Region
City/County: Las V	LAGS/CIGHE Sampling Date: 2/25/08
pplicant/Owner: <u>Circle Point</u> , <u>City/County: Las V</u>	State: <u>NV</u> Sampling Point: <u>CIDI-IIU</u>
Investigator(s): Kelly Short John Holson, Bryan Morse Section, Township, Rar	nge:
Investigator(s): <u>Kelly Shock, John Holson, Bryan Morse</u> Section, Township, Rar Landform (hillslope, terrace, etc.): <u>Valley Floar</u> Local relief (concave, o Subregion (LRR): <u>D</u>	convex, none): <u>NOME</u> Slope (%): <u>1-5</u>
Landform (hillsiope, terrace, etc.): Valler I conv	Longi 13 361140101 Datum: MAD 83
Soil Map Unit Name:	NWI classification: 1) 14 2010E11
Soil Map Unit Name: Are climatic / hydrologic conditions on the site typical for this time of year? Yes No	(If no, explain in Remarks.)
Are climatic / hydrologic conditions on the site typical for this time of year 1 res (10) Are Vegetation Yes, Soil Yes, or Hydrology ND significantly disturbed? Are "	Normal Circumstances" present? Yes No
	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling point in	ocations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No       Is the Sampled within a Wetlan         Hydric Soil Present?       Yes No       Is the Sampled within a Wetlan	Area .
Wetland Hydrology Present? Yes No Kenter Within a Wetland Remarks: USGS topo map indicates a blue line. This CCPF channel that transitions to concrete lined as it passe the I-15 inter change at Flamingo Road. This channel	=CD facility is a gravel-lined
Remarks USGS topo map ma, cares a blue une. mis	sunder, Photos cut
the I-15 interchange at Flamingo Road. This channel	is harmed 32 facing tast
Flamingo Wash and is a trib to the Colorado River. The CCRFC Flamingo Wash and is a trib to the Colorado River. The CCRFC VEGETATION this facility's dimensions are 30'W, 4'D, 1:1 si	D Indicates 135 mo
VEGETATION this facility's almensions are so with Dime	
Absolute Dominant Indicator	Dominance lest worksneet.
	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1	Total Number of Dominant
3	Species Across All Strata: (B)
4	Percent of Dominant Species
Total Cover:	That Are OBL, FACW, or FAC: <u>50</u> (A/B)
Sapling/Shrub Stratum	Prevalence Index worksheet: -
1	Total % Cover of:Multiply by:
2	OBL species x 1 =
3	FACW species x 2 =
5.	FAC species $5 \times 3 = \frac{15}{2}$
Total Cover:	FACU species
Herb Stratum	UPL species
1. CUMOBON DALVELAVE	
2. Sala Tracus	Prevalence Index = 8/A = 3753.3
3. (Brassira tournefattii IN NICHTE 4 (5 (= 5, Kali) (FACU)	Hydrophytic Vegetation Indicators:
$4. \xrightarrow{9} (1 + 1) \xrightarrow{1} (1 + 1) $	Dominance Test is >50%
$5. \underline{\qquad } cR = 5. per A w I$	Prevalence Index is ≤3.01
7	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover: <u>8</u>	
Woody Vine Stratum           1	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2	
Total Cover:	Hydrophytic Vegetation
% Bare Ground in Herb Stratum <u>12</u> % Cover of Biotic Crust <u>&amp;</u>	Present? Yes No
Remarks:	
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Sampling Point: <u>CI0/HW</u>

SOIL									nt: <u>CIM [PV</u>
Profile Desc	ription: (Describe)	o the depth	needed to docu	ment the i	ndicator	or confirm	the absence of	indicators.)	
\ Depth	Matrix		Redo	x Feature	s			Remarks	
(inches)	Color (moist)		Color (moist)		<u>_ Type'</u> _	_Loc-	<u>Texture</u>	Remarks	
N/A.						. <u></u>	<u> </u>		
					<u></u>				
			41. Lava			·			<u> </u>
							<u> </u>	······	
						. <u> </u>	·		
		2							
							<u> </u>		
			,					b d - 3 destatus	
<sup>1</sup> Type: C=Co	oncentration, D=Dep	etion, RM=F	Reduced Matrix.	Location	: PL=Por	e Lining, R	C=Root Channel	r Problematic Hydri	c Soils <sup>3</sup>
Hydric Soil I	ndicators: (Applica	ible to all L			ed.)			•	6 00113 .
Histosol (	(A1)		Sandy Red					ck (A9) (LRR C) ck (A10) (LRR B)	
· ·	ipedon (A2)		Stripped M		1/61)		Reduced		
Black His			Loamy Muc Loamy Gle				Red Pare	ent Material (TF2)	
	n Sulfide (A4)	•1	Depleted M		(1 -)			xplain in Remarks)	
	Layers (A5) (LRR C ck (A9) (LRR D)	•)	Redox Dark		(F6)				
	Below Dark Surface	a (A11)	Depleted D						
	rk Surface (A12)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Redox Dep						
	iucky Mineral (S1)		Vernal Poo					hydrophytic vegetatio	
	leyed Matrix (S4)						wetland hy	ydrology must be pres	sent,
	ayer (if present):								
									. /
Denth (inc	hes).							resent? Yes	No/
Remarks:	Vo soil pit				م مار م		PILENSE DA	60.	
Neinaiks.	In soil pit	- ekcavi	ated, S	ee ru	MORES	opt i	ever - Fri	F.	
								-	
-									
HYDROLO	GY								
							0	un la diante a (1) es en	(hosiupes ere

HIDROLOGI		Secondary Indicators (2 or more required)
Wetland Hydrology Indicators:		
Primary Indicators (any one indicator is a Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverin	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Iving Roots (C3) Thin Muck Surface (C7)
<ul> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery</li> <li>Water-Stained Leaves (B9)</li> </ul>	Presence of Reduced Iron (C4) Recent Iron Reduction in Plower	Crayfish Burrows (C8)
Water Table Present? Yes Saturation Present? Yes (hatwide applicant frigge)	No Depth (inches): No Depth (inches): No Depth (inches): monitoring well, aerial photos, previous inspe	Wetland Hydrology Present? Yes No
	*	olorado River (Lake Mead).
	F-I.5-198	

WETLAND DE	TERMINATION DATA FORM	- Arid West Region
Project/Site: Desert Xpress	City/County: Las	Anas/ Clark Sampling Date: 2/25/08 State: NV Sampling Point: C100-2W and C100-ZE
Applicant/Owner: <u>UPOLE POINT</u> , nvestigator(s): <u>KS, BM, J. Holson</u>	Section, Township, Ra	ange:
Subregion (LRR):	Lat: N -115, 101 17	_ LONG. TO ZONE I
3. IA		
Soil Map Unit Name: <u>N/F</u>	or this time of year? Yes <u>// No</u>	"Normal Circumstances" present? Yes _ / No
Are Vegetation <u>MD</u> , Soil <u>ND</u> , or Hydrology <u>ND</u>		weeded, explain any answers in Remarks.)
Are Vegetation <u>MD</u> , Soil <u>MD</u> , or Hydrology <u>MD</u>		
SUMMARY OF FINDINGS - Attach site m	ap showing sampling point	locations, transects, important features, etc.
Hydrophytic Vegetation Present?     Yes       Hydric Soil Present?     Yes       Wetland Hydrology Present?     Yes	No Visthin a Wetla	d Area .
Remarks:		Photos: 41 Facing N @ sollpit 43 " J S @ channel 44 " N @ culvert
VEGETATION		
Tree Stratum (Use scientific names.)	Absolute Dominant Indicator % Cover Species? Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1.		Total Number of Dominant Species Across All Strata:
4 Total (	Cover: 🖉	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
Sapling/Shrub Stratum	15 4_ 下紀()	
1. Hracia arean.	5 NEAG-FACO	Total % Cover of: Multiply by:
3. Proenocis alandalosca	3 NEFAL	OBL species $x = \frac{1}{2}$ FACW species $x^2 = \frac{1}{2}$
4. Atriclex conesions		FACW species $\frac{5}{18}$ $\times 2 = \frac{10}{18}$ FAC species $\frac{18}{18}$ $\frac{10}{20}$ $\times 3 = \frac{54}{54}$ $\frac{60}{60}$
5	Cover: <u>25</u>	FACU species $17/8 \times 4 = 107 7 7$
Herb Stratum		UPL species $2 \times 5 = 10$
1. Lyndon dactilan	<u>    15    Y                            </u>	Column Totals: 40 40 (A) 132 14 (B)
2,		Prevalence Index = B/A =
3		Hydrophytic Vegetation Indicators:
4		Dominance Test is >50%
5		Prevalence Index is <3.0 <sup>1</sup>
6 7		data (i) Kenaka bi bita abpatate energy
8		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total	Cover: <u>15</u>	

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Woody Vine Stratum

% Bare Ground in Herb Stratum \_

1.

2.

Remarks:

F-I.5-199

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Total Cover: \_\_\_\_\_

85

% Cover of Biotic Crust

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

Yes No Yes

Hydrophytic Vegetation Present?

- Sile Description (Describe to the destine	needed to document the indicator or con	Sampling Point: firm the absence of indicators.)	
	Redox Features		
Depth <u>Matrix</u> inches) Color (moist) %	Color (moist) % Type <sup>1</sup> Loc		
D-1		Gravel	
2-5 10 YR 4/2		Sandy Soil smulls 1	like Fuel-
		Sandy possibly fro	munit
6-12 7.5 YR 7/4	······································		
5-18+ 10 YR 7/2		<u>Sandy-Clay from adj.</u>	
		Hepair ya	rate the
		uest	
===============================			
ype: C=Concentration, D=Depletion, RM=Re		g, RC=Root Channel, M=Matrix. Indicators for Problematic Hydric	Soils <sup>3</sup> :
ydric Soil Indicators: (Applicable to all LR	Sandy Redox (S5)	1 cm Muck (A9) (LRR C)	
_ Histosol (A1)	Stripped Matrix (S6)	2 cm Muck (A10) (LRR 8)	
_ Histic Epipedon (A2) _ Black Histic (A3)	Loamy Mucky Mineral (F1)	Reduced Vertic (F18)	
_ Black Histic (A3) _ 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)	31-stars of budgophytic vocatation	and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)	<sup>3</sup> Indicators of hydrophytic vegetation wetland hydrology must be prese	
_ Sandy Gleyed Matrix (S4)	······································		
estrictive Layer (if present):			
Туре:	-	Hydric Soil Present? Yes	NO J
Depth (inches):	-		
emarks: Dhe soil pit dha in c East side because the	hannel on W-side (C100-2) e area is paved to the W	N). No soil pit dug in uplanest 4-UPER ballast on the	r east.
# Soils NEIL DRA	hannel on $w$ -side (C100-20 e arta is paved to the $w$ , we show the state $w$	W. No soil pit dug in uplan est 4 UPER ballast on the here in Area in	
# Soils NEIL DRA		tely well ARain	Contraction .
		たりりレンテリ ARaiN Secondary Indicators (2 or more	e reguired)
# Soils WENDRA	INES to MODER	<u>Secondary Indicators (2 or mor</u> Water Marks (B1) (Riverin	e)
YDROLOGY	nt) Sait Crust (B11)	<u>Secondary Indicators (2 or mor</u> Water Marks (B1) (Riverin Sediment Deposits (B2) (R	e required) e) Iverine)
Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient	nt) Sait Crust (B11) Biotic Crust (B12)	Secondary Indicators (2 or mor Water Marks (B1) (Riverin Sediment Deposits (B2) (R Drift Deposits (B3) (Riverin	e required) e) Iverine)
YDROLOGY Yetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3)	nt) Sait Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Secondary Indicators (2 or mor Water Marks (B1) (Riverin Sediment Deposits (B2) (R Drift Deposits (B3) (Riverin Drainage Patterns (B10)	e required) e) Iverine) ne)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	nt) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	<u>Secondary Indicators (2 or mor</u> Water Marks (B1) (Riverin Sediment Deposits (B2) (R Drift Deposits (B3) (Riverin Drainage Patterns (B10) Dry-Season Water Table (0	e required) e) Iverine) ne)
YDROLOGY Yetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3)	nt) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Secondary Indicators (2 or mor 	e required) e) Iverine) ne)
YDROLOGY Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine)	nt) - Sait 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 mor 	e required) e) Iverine) ne) C2)
Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	nt) 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 Plowed Sol	Secondary Indicators (2 or mor 	e required) e) Iverine) ne) C2)
Vetland Hydrology Indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	nt) 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 Plowed Sol Other (Explain in Remarks)	Secondary Indicators (2 or mor 	e required) e) iverine) ne) C2) I Imagery (C9) Sed , Sort ind
/DROLOGY /etiand Hydrology indicators: rimary Indicators (any one indicator is sufficient Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	nt) 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 Plowed Sol Other (Explain in Remarks)	Secondary Indicators (2 or mor Water Marks (B1) (Riverin Sediment Deposits (B2) (R Drift Deposits (B3) (Riverin Drainage Patterns (B10) Dry-Season Water Table (C Roots (C3) Thin Muck Surface (C7) Crayfish Burrows (C8) s (C6) Saturation Visible on Aerial Shallow Aguitard (D3)	e required) e) iverine) ne) C2) I Imagery (C9) Sed , Sort inc
Sort/s WEILERA      Yorongy      Yetland Hydrology Indicators:     rimary Indicators (any one indicator is sufficient     Surface Water (A1)     High Water Table (A2)     Saturation (A3)     Water Marks (B1) (Nonriverine)     Sediment Deposits (B2) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Inundation Visible on Aerial Imagery (B7)     Water-Stained Leaves (B9)  ield Observations:	nt) 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 Plowed Sol Other (Explain in Remarks)	Secondary Indicators (2 or mor 	e required) e) iverine) ne) C2) I Imagery (C9) Sed , Sort ind
# 50.7/s       WEIL D.R.a.         /DROLOGY         Vetiand Hydrology Indicators:         rimary Indicators (any one indicator is sufficient         _ Surface Water (A1)         _ High Water Table (A2)         _ Saturation (A3)         _ Water Marks (B1) (Nonriverine)         _ Drift Deposits (B2) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Surface Soil Cracks (B6)         _ Inundation Visible on Aerial Imagery (B7)         _ Water-Stained Leaves (B9)         ield Observations:         urface Water Present?	nt) 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 Plowed Sol Other (Explain in Remarks) Depth (inches):	Secondary Indicators (2 or mor 	e required) e) iverine) ne) C2) I Imagery (C9) Sed , Sort ind
# 50.7/s       WEIL D.R.a.         /DROLOGY         Vetland Hydrology indicators:         rimary Indicators (any one indicator is sufficient         _ Surface Water (A1)         _ High Water Table (A2)         _ Saturation (A3)         _ Water Marks (B1) (Nonriverine)         _ Drift Deposits (B2) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Surface Soil Cracks (B6)         _ Inundation Visible on Aerial Imagery (B7)         _ Water-Stained Leaves (B9)         Ield Observations:         urface Water Present?       Yes No         //ater Table Present?       Yes No	nt) Sait Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Sol Other (Explain in Remarks) Depth (inches): Depth (inches):	Secondary Indicators (2 or mor 	e required) e) Iverine) ne) C2) I Imagery (C9) Sed . Sort in Supped bank
# 50.7/s       WEIL D.R.a.         /DROLOGY         Vetland Hydrology indicators:         rimary Indicators (any one indicator is sufficient         _ Surface Water (A1)         _ High Water Table (A2)         _ Saturation (A3)         _ Water Marks (B1) (Nonriverine)         _ Drift Deposits (B2) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Surface Soil Cracks (B6)         _ Inundation Visible on Aerial Imagery (B7)         _ Water-Stained Leaves (B9)         Ield Observations:         urface Water Present?       Yes No         //ater Table Present?       Yes No	nt) Sait Crust (B11) Biotic Crust (B12) Aquatic invertebrates (B13) Hydrogen Sutfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Sol Other (Explain in Remarks) Depth (inches): Depth (inches):	Secondary Indicators (2 or mor 	e required) e) Iverine) ne) C2) I Imagery (C9) Sed . Sort in Supped bank
Sort/s WEILERA      Yorogenetic Stress     Yorogenetic Stress	nt) 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 Plowed Sol Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): M	Secondary Indicators (2 or mor	e required) e) Iverine) ne) C2) I Imagery (C9) Sed, Sartin Supped ban
Sori/s Well b Ra      Vetiand Hydrology Indicators:     rimary Indicators (any one indicator is sufficient     Surface Water (A1)     High Water Table (A2)     Saturation (A3)     Water Marks (B1) (Nonriverine)     Sediment Deposits (B2) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Inundation Visible on Aerial Imagery (B7)     Water-Stained Leaves (B9)     leid Observations:     urface Water Present? Yes No     //ater Table Present? Yes No	nt) 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 Plowed Sol Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): M	Secondary Indicators (2 or mor	e required) e) Iverine) ne) C2) I Imagery (C9) Sed, Sart in Supped ban
Sort/s WEILERA      Yorogenetic Stress     Yorogenetic Stress	nt) Sait 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 Plowed Sol Other (Explain in Remarks) Depth (inches): Depth (inches): Depth (inches): Market Sol	Secondary Indicators (2 or mor	e required) e) iverine) he) C2) I Imagery (C9) Sed, Sort in Stopped band
Sort/s WEILERA      Yorogy      Yetland Hydrology Indicators:     rimary Indicators (any one indicator is sufficient     Surface Water (A1)     High Water Table (A2)     Saturation (A3)     Water Marks (B1) (Nonriverine)     Sediment Deposits (B2) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Inundation Visible on Aerial Imagery (B7)     Water-Stained Leaves (B9)     ield Observations:     urface Water Present? Yes No     /ater Table Present? Yes No     rocludes capillary fringe)     escribe Recorded Data (stream gauge, monitor	nt)  Sait 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 Plowed Soi  Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches): Warding well, aerial photos, previous inspection	Secondary Indicators (2 or mor	e required) e) iverine) he) C2) I Imagery (C9) Sed, Sort inc Stoped bank
# 50:1/s       WEIL B Radional Stress         /DROLOGY         Vetiand Hydrology indicators:         rimary Indicators (any one indicator is sufficient         _ Surface Water (A1)         _ High Water Table (A2)         _ Saturation (A3)         _ Water Marks (B1) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Drift Deposits (B3) (Nonriverine)         _ Surface Soil Cracks (B6)         _ Inundation Visible on Aerial Imagery (B7)         _ Water-Stained Leaves (B9)         Ield Observations:         urface Water Present?       Yes No         //ater Table Present?       Yes No         //aturation Present?       Yes No         ncludes capillary fringe)       escribe Recorded Data (stream gauge, monitor)	nt)  Sait 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 Plowed Soi  Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches): Warding well, aerial photos, previous inspection	Secondary Indicators (2 or mor	e required) e) iverine) he) C2) I Imagery (C9) Sed, Sort inc Stoped bank
Sort/s WEILERA      Yorogy      Yetland Hydrology Indicators:     rimary Indicators (any one indicator is sufficient     Surface Water (A1)     High Water Table (A2)     Saturation (A3)     Water Marks (B1) (Nonriverine)     Sediment Deposits (B2) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Inundation Visible on Aerial Imagery (B7)     Water-Stained Leaves (B9)     ield Observations:     urface Water Present? Yes No     /ater Table Present? Yes No     rocludes capillary fringe)     escribe Recorded Data (stream gauge, monitor	nt)  Sait 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 Plowed Soi  Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches): Warding well, aerial photos, previous inspection	Secondary Indicators (2 or mor	e required) e) iverine) he) C2) I Imagery (C9) Sed, Sort inc Stipped bank
Sort/s WEILERA      Yorogy      Yetland Hydrology Indicators:     rimary Indicators (any one indicator is sufficient     Surface Water (A1)     High Water Table (A2)     Saturation (A3)     Water Marks (B1) (Nonriverine)     Sediment Deposits (B2) (Nonriverine)     Drift Deposits (B3) (Nonriverine)     Surface Soil Cracks (B6)     Inundation Visible on Aerial Imagery (B7)     Water-Stained Leaves (B9)     ield Observations:     urface Water Present? Yes No     /ater Table Present? Yes No     rocludes capillary fringe)     escribe Recorded Data (stream gauge, monitor	nt)  Sait 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 Plowed Soi  Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches): Warding well, aerial photos, previous inspection	Secondary Indicators (2 or mor	e required) e) iverine) he) C2) I Imagery (C9) Sed, Sort inc Stipped bank

WETLAND DETERMINATION DA	TA FORM – Arid West Region
Project/Site: Desert Xpress City/Con	nty: Las Vegas/ Clark sampling Date: 3/6/08
indiant/Owner Circle Point.	State: <u>NV</u> Sampling Point: <u>Cl01-ZW</u>
Investigator(s): Kelly Shook, Margaret Widdows Section.	Township, Range:
Landform (hillslope, terrace, etc.): Valley Floor Local re	lief (concave, convex, none): <u>Nonc</u> Slope (%): <u>B</u> 165025-toas:N 36(115595 Datum: <u>NAU 83</u>
Subregion (LRR):	
Soil Map Unit Name:	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)
Are Vegetation NO_, Soil NO_, or Hydrology NO_ significantly disturbe	d? Are "Normal Circumstances" present? Yes V No
Are Vegetation NO , Soil NO , or Hydrology NO naturally problemation	? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	ling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	s the Sampled Area

	Wetland Hydrology Present? Tes v No v
	Remarks: Orainage is channelized with boulders along each bank. Very Photos 318 ficines at channel down thread
	all a reader lite i to the newtre East Under histories and any reader build to the the sector of the
	AHM = 40° MX 411 MAT SOLE STORE OF A ASTACEN LANCE IS MOUTONSTRATE
	UPER, + I-15/ Flaming's Rd. interchange.
ļ	

### VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant Species Across All Strata:(B)
4			NO	Percent of Dominant Species / 00%, (A/B)
Sapling/Shrub Stratum Filitero Var	2	NELA	FACH	Prevalence Index worksheet:
			FACW	Total % Cover of: Multiply by:
2. <u>Pluchea</u> Serica		yaq-	1,011	OBL species $2 \times 1 = 7$
3		<u>ja</u>	<u> </u>	FACW species x 2 = K 6
4	•		. <u></u>	FAC species $15$ x 3 = $45$
5Total Cover	.5			
		•		FACU species $x 4 =$ UPL species $2   x 5 = 40$
1 Iwandon dactilon	15	<u> </u>	FAC	Column Totals: <u>12</u> (A) <u>5763</u> (B)
1. <u>Lyandon dactilon</u> 2. <u>Tupha angustifolia</u>	.2	N	<u>OBL*</u>	Prevalence index = $B/A = \frac{2+59}{2} \cdot 86$
3				Hydrophytic Vegetation Indicators:
				LV Dominance Test is >50%
5				Prevalence Index is ≤3.0 <sup>1</sup>
6				Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8 Total Cover	. 17	• ••		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum 1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2 Total Cover	Ø	-		Hydrophytic Vegetation
	(		<u>d</u>	
& Bare Ground in Herb Stratum <u>&amp; 2</u> % Cover Remarks: Typha patients (approx	, 4 m	2) on ci	harmel	edge on pebble sabstrate.
		F-I.5-201		

0	$\sim$	ŧ	Ł
0	v	IJ	-

SOIL						C	the chara	en of indicators \
Profile Descri	ption: (Describe to t	ne depth nee	ded to docu	ment the in	dicator	or contirm	i the apsen	ice of indicators.
Depth _	pth Matrix Redox Features							Remarks
(inches)	Color (moist)	<u>% Co</u>	lor (moist)	<u>%</u>	TYDe			
<u> </u>	·····	<u></u>						
							<u> </u>	
=						. <u> </u>		
			<u> </u>				<u>.                                    </u>	
	centration, D=Depletic	on, RM=Redu	iced Matrix.			re Lining, R	RC=Root Ch	nannel, M=Matrix.
Hydric Soil In	dicators: (Applicable	e to all LRRs	, unless othe				Indicate	ors for Problematic Hydric Solls":
Histosol (A		_	_ Sandy Red	dox (S5)				m Muck (A9) (LRR C)
·	pedon (A2)		_ Stripped N					m Muck (A10) (LRR B) duced Vertic (F18)
Black Hist	ic (A3)	-	_ Loamy Mu	icky Mineral	(F1)			d Parent Material (TF2)
Hydrogen	Sulfide (A4)		_ Loamy Gle		(F2)			her (Explain in Remarks)
	Layers (A5) (LRR C)		_ Depieted I _ Redox Da	vauix (FO) rk Surface (	F6)		••	
	k (A9) (LRR D)		_ Depleted	Dark Surfac	e (F7)			
	Below Dark Surface (/ k Surface (A12)	XUI)	Redox De					
	icky Mineral (S1)	_	Vernal Po	•	•			tors of hydrophytic vegetation and
	eyed Matrix (S4)	_					weti	and hydrology must be present.
	yer (if present):							non bruchen har for su man and an
Type:								annuments 1
							Hydric	Soil Present? Yes No
Remarks:		overilat	ed. Su	rface s	ubst	nate is	rock-	+ pebble with human
N	10 SOIL PIU	CREENAL	with here	Lles +	tras	h.	- ,	1
	x cremen, 1	Jugaan		-100)	6 40			
IYDROLOG		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				S	econdary indicators (2 or more required)
	rology Indicators:						~	Water Marks (B1) (Riverine)
····· /	ators (any one indicato	<u>r is sufficient</u>		-1/0443	<u> </u>			Sediment Deposits (82) (Riverine)
V Surface V			Salt Cru				 1	Drift Deposits (B3) (Riverine)
	er Table (A2)			rust (812) Jouortobrato	o (842)	•		_ Drainage Patterns (810)
Saturation		`		invertebrate			-	Dry-Season Water Table (C2)
	arks (81) (Nonriverine			en Sulfide O 5 Rhizosphe		a Livina Rr	oots (C3)	Thin Muck Surface (C7)
	t Deposits (82) (Nonri			e of Reduce				Crayfish Burrows (C8)
	osits (83) (Nonriverin	e)	Present	tron Reduct	ion in Pic	wed Solis	(C6) -	Saturation Visible on Aerial Imagery (C
	Soil Cracks (86)			Explain in Re			ι	Shallow Aquitard (D3)
	n Visible on Aerial ima	agery (B7)			onnanio)		-	FAC-Neutral Test (D5)
Water-St	ained Leaves (B9)							

Field Observations:		1 ~		
Surface Water Present?	Yes / No	Depth (Inches): <u>6 - 8</u>		
Water Table Present?	Yes No	Depth (inches):		
Saturation Present?	Yes No	Depth (inches):	Wetland Hydrology Present? Yes V No	
(includes capillary fringe)			ctions) if available:	
Describe Recorded Data (stre	am gauge, monitoring v	vell, aerial photos, previous inspe		
Remarks: = laminge eastward Rio Hotel L	Wash, Sn down the war and scope Inin	all area of surfi sh. Water source gation.	is likely tunoff from adjacent limmed	(, Wat

F-1.5-202

# Exhibit B2

# DesertXpress Field Data For Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed Number	HUC 12 Watershed Name	HBG Field Data	ICF Jones & Stokes Field Data	Comments
37	Town of Sloan		Yes	
38	Town of Arden	Yes	Yes	Delineated by HBG using adjacent watershed data.
39	Duck Creek	Yes	Yes	
40	Tropicana Wash	No	Yes	Delineated by HBG using adjacent watershed data.
41	City of Las Vegas-Las Vegas Wash	No	Yes	Only northernmost possible station locations would be in this watershed. Urban Drainage features. Delineated by HBG using adjacent watershed data.

\*

# **ICF Jones & Stokes**

# Wetland Determination Data Forms – Arid West Region

# For **DesertXpress**

HUC 12 Watershed City of Las Vegas-Las Vegas Wash

Within Las Vegas Wash Watershed (HUC 15010015)

HBG Watershed ID # 41

### WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: DXP splicant/Owner: Circle Point	_ City/County: <u>Clark</u> Sampling Date: <u>3/14/08</u> State: <u>NV</u> Sampling Point: <u>102-1</u>
Investigator(s): <u>Kelly Shook</u> , <u>Bryan</u> Morse Landform (hillslope, terrace, etc.): <u>Valley Floor</u>	
Subregion (LRR):	N-115.165232 Long: N 36.151421 Datum: NAD 83
Soil Map Unit Name: N/A Are climatic / hydrologic conditions on the site typical for this time of	NWI classification://A
Are Vegetation, Soil, or Hydrology significan Are Vegetation, Soil, or Hydrology naturally	tly disturbed? Are "Normal Circumstances" present? Yes No
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No         Wetland Hydrology Present?       Yes No	N/A. Is the Sampled Area within a Wetland? Yes No No
Remarks: This is a constructed CCP from W >> E purallel to + W for dimensions.	FCD facility that conveys Flows Photo 102-1w when I-15. See CCRFCB website facing S

#### VEGETATION

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Use scientific names.) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:
2				Total Number of Dominant
3				Species Across All Strata:(B)
4				Percent of Dominant Species
Total Cover:	<u> </u>			That Are OBL, FACW, or FAC:
Sapling/Shrub Stratum	<i>′</i>			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species x 3 =
Total Cover:	X			FACU species x 4 =
Herb Stratum				UPL species x 5 =
1				Column Totals: (A) (B)
2				
3.				Prevalence Index = B/A =
4				Hydrophytic Vegetation Indicators:
				Dominance Test is >50%
5				Prevalence Index is ≤3.0 <sup>1</sup>
6				Morphological Adaptations <sup>1</sup> (Provide supporting
7				data in Remarks or on a separate sheet)
8	-6/-			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Total Cover:	18			
Woody Vine Stratum				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1				be present.
2				
, Total Cover:			1	Hydrophytic Vegetation
% Bare Ground in Herb Stratum % Cover	of Biotic Cr	rust	í <u></u>	Present? Yes No
Remarks:				

### SOIL

### Sampling Point: 102-1w/

Depth	ription: (Describe Matrix	o ine aepth		ox Featur <u>e</u> :		or connen	a disence o	i maicators.j
(inches)	Color (moist)	%	Color (moist)		Type1	Loc <sup>2</sup>	Texture	Remarks
(1101100)		<u></u>	0010111101011					
	·	·						
							<u></u>	
				<u> </u>				
						<u> </u>	<u> </u>	
	····							
					. <u> </u>	<u> </u>		
<sup>1</sup> Type: C=Co	ncentration, D=Depl	etion, RM=R	educed Matrix.	<sup>2</sup> Location	: PL=Por	e Lining, R	C=Root Channe	l, M≔Matrix.
	ndicators: (Applica							or Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		Sandy Rec	lox (S5)			1 cm Mu	ick (A9) (LRR C)
Histic Ep			Stripped M					ick (A10) (LRR B)
Black His			Loamy Mu		(E1)			Vertic (F18)
	n Sulfide (A4)		Loamy Gle	-	• •			ent Material (TF2)
	Layers (A5) (LRR C	)	Depleted N		· -/			xplain in Remarks)
	zk (A9) (LRR D)	,	Redox Dar	• •	F6)			and the contained they
	Below Dark Surface	(A11)	Depleted D					
·	rk Surface (A12)	6004	Redox Dep					
	ucky Mineral (S1)		Vernal Poo		-,		<sup>3</sup> Indicators of	hydrophytic vegetation and
	eyed Matrix (S4)		veman oc	13 (1 5)				ydrology must be present.
	ayer (if present):						1 . 1	
							I NH	4,
Туре:			_					· P
Depth (incl	nes):						Hydric Soil P	resent? Yes No
	No soil See con	iment	s on	revens	e.			
YDROLÓO	SY .							
Netland/Hydi	rology Indicators:						Seconda	ary Indicators (2 or more required)
	ators (any one indica	tor is sufficie	nt)					ter Marks (B1) (Riverine)
1		01 10 00111010	Salt Crust	(011)				liment Deposits (B2) (Riverine)
Surface V								
· £	er Table (A2)		Biotic Cru			•		t Deposits (B3) (Riverine)
Saturation			Aquatic In					inage Patterns (B10)
1	rks (B1) (Nonriverir	-	Hydrogen				=	-Season Water Table (C2)
Sediment	Deposits (B2) (Non	riverine)	Oxidized F	Rhizospher	es along l	iving Root	ts (C3) Thir	n Muck Surface (C7)
Drift Depo	osits (B3) (Nonriveri	ne)	Presence	of Reduced	d Iron (C4	)	Cra	yfish Burrows (C8)
Surface S	oil Cracks (B6)		Recent Irc	n Reductio	n in Piow	ed Soils (C	6) Satu	uration Visible on Aerial Imagery (C9)
N N	n Visible on Aerial Im	agery (B7)	Other (Exp	blain in Rer	narks)		Sha	llow Aquitard (D3)
1	ined Leaves (B9)	,	<u> </u>		,			-Neutral Test (D5)
ield Observa						1		
4			Depth (in	ebec':				
Surface Water				-				
Vater Table P	resent? Ye	s No	Depth (in	ches):				/
Saturation		sNo	Depth (in	ches):		_   Wetla	nd Hydrolog <mark>y</mark> P	Present? Yes No
includes capil			antere qualtt-P	bates		undiana) <sup>14</sup>	Foundlabler	
vescribe Reco	orded Data (stream g	auge, monit	oning well, aerial	photos, pre	vious insp	ecuons), li	available:	
13								
Remarks:	No. of Concession, State of Co							We fee
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	the second							
	-							

and a second second

# Exhibit C

## Maps of Potential Jurisdictional Areas



Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segment 5 Alt B, Map Sheet C250



Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segment 5 Alt B, Map Sheet C251



Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segment 5 Alt B, Map Sheet C252

Aerial Photography Dated 2008 Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C253 C254 こうち ちんちち しきかんち C253 €Z Recent SEGMENT 6B Map Sheet Location Preferred SEGMENT Alt B Preferred SEGMENT 5 Alt B ----- Ephemeral Drainage (with ID number and \_\_\_\_\_\_OHWM width) Jurisdictional Delineation Study Area Potential Corps Jurisdictional Area: ax (415) 925-200 HBG Huffman-Broadway Group, Inc. · 828 Mission Avenue · San Rafael, California · Phone (415) 925-2000 · 800 1,000 Feet Corps Legend गा 600 R 400 200 0



Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C254

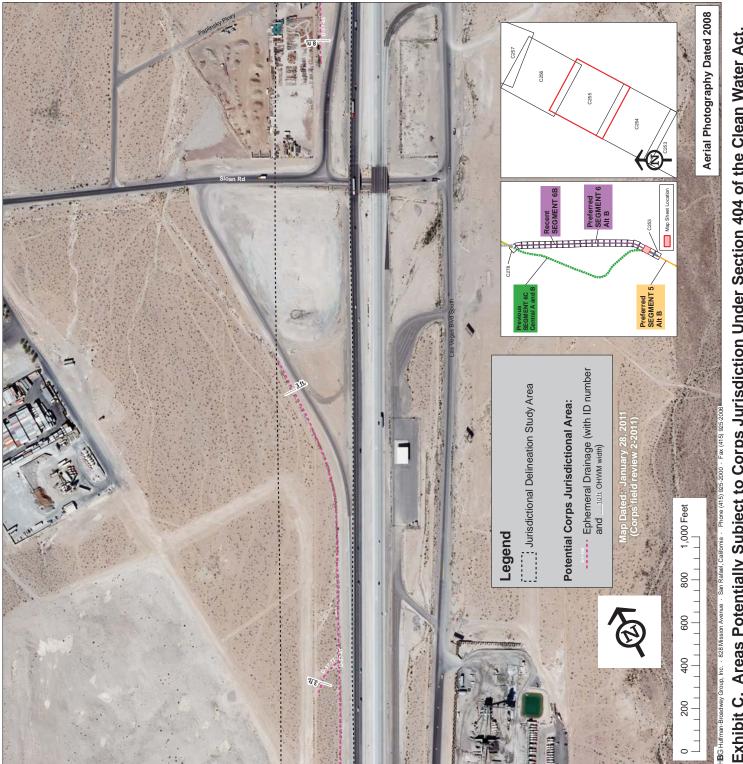


Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C255

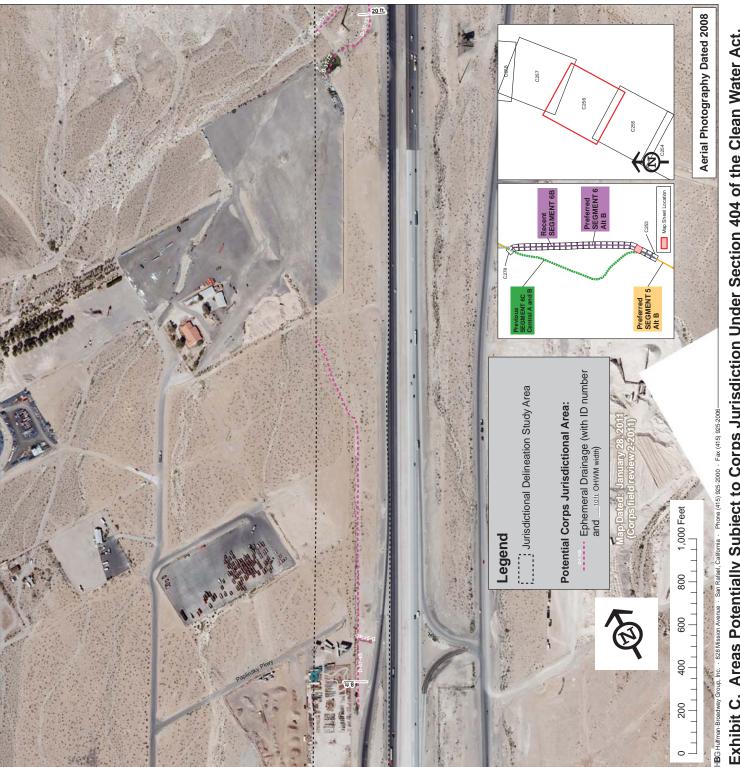
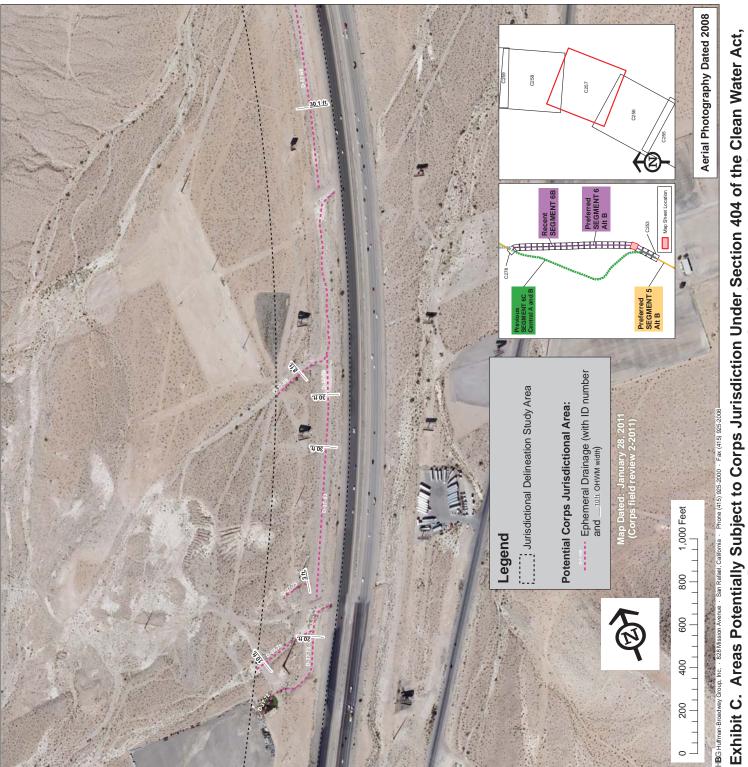
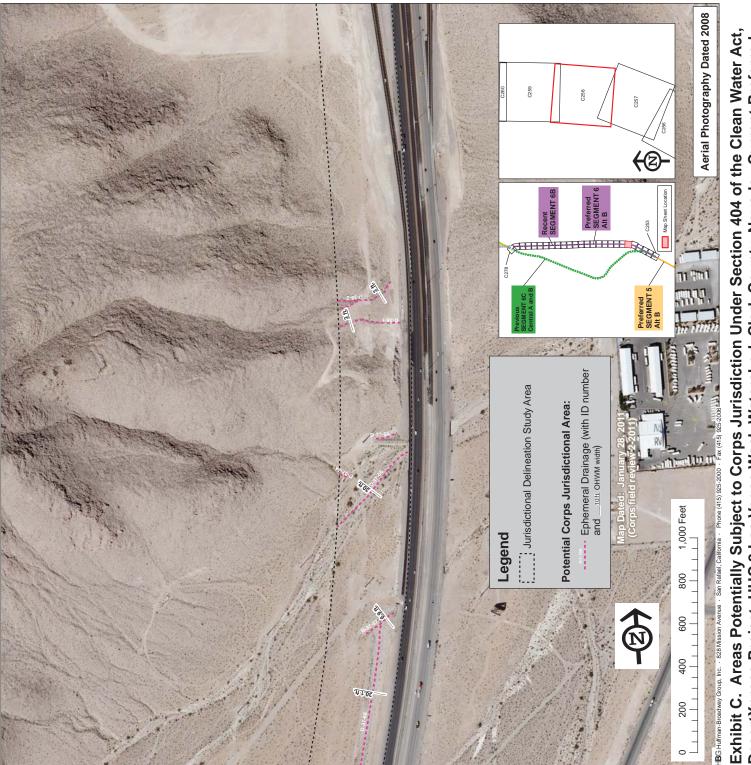
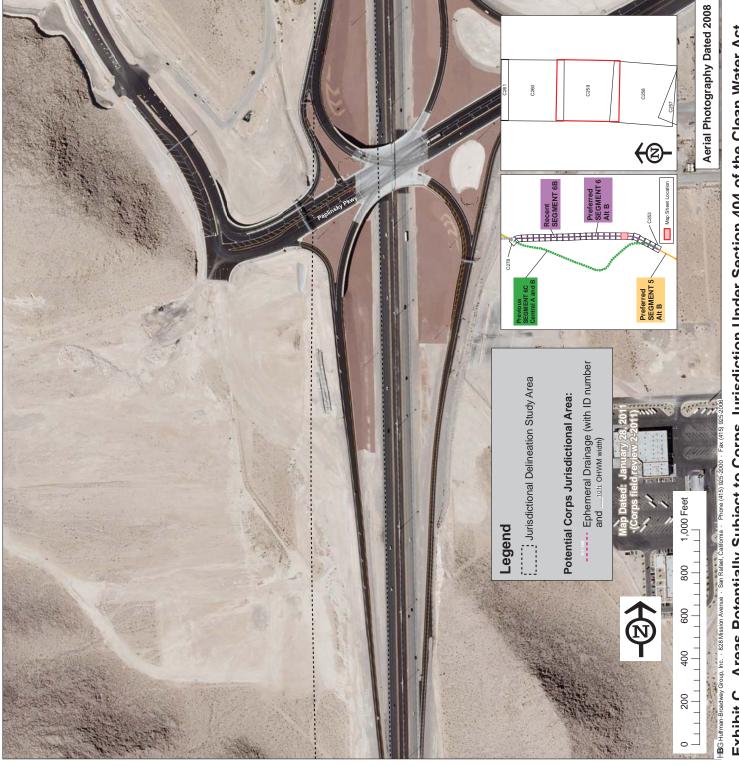


Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C256

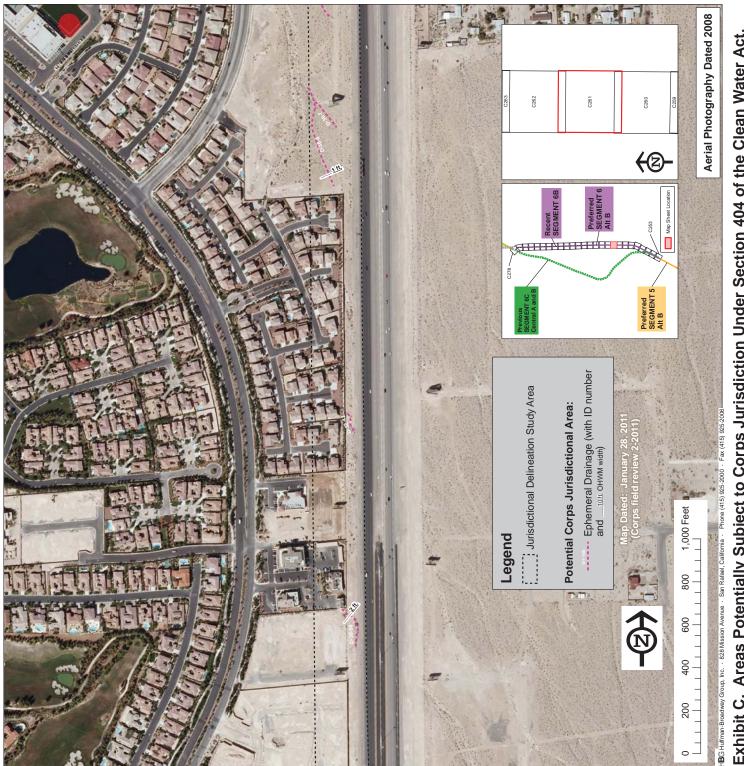




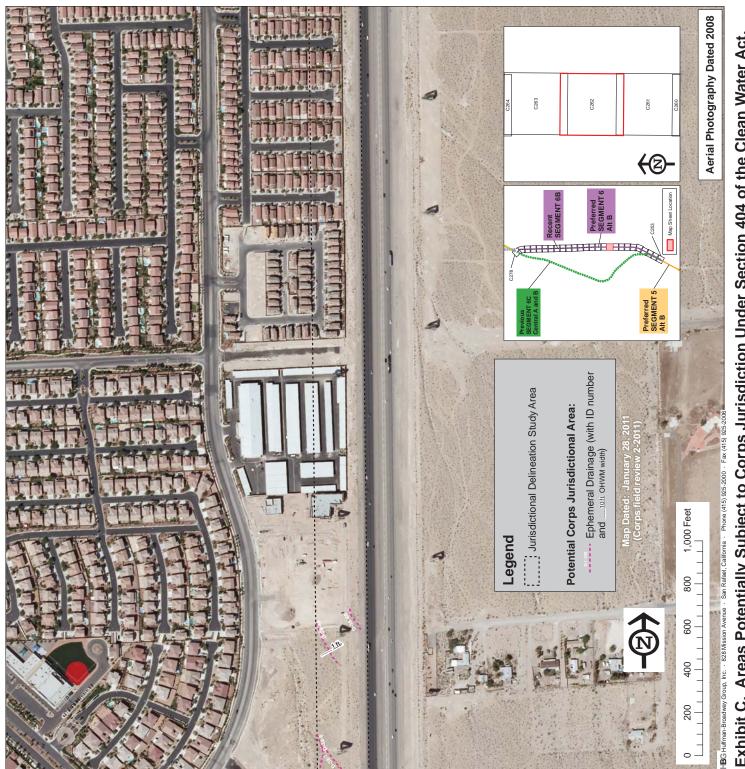
DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C258

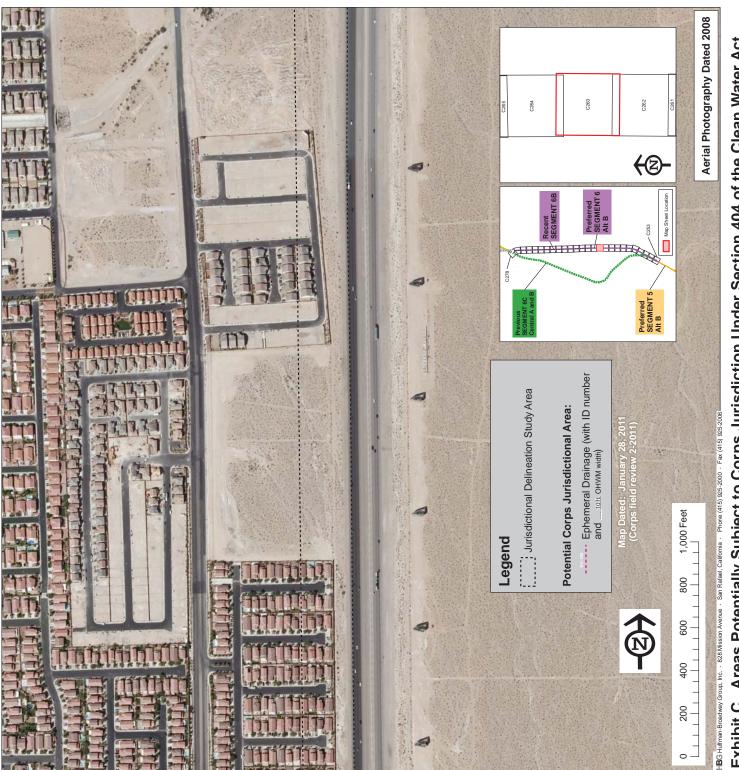


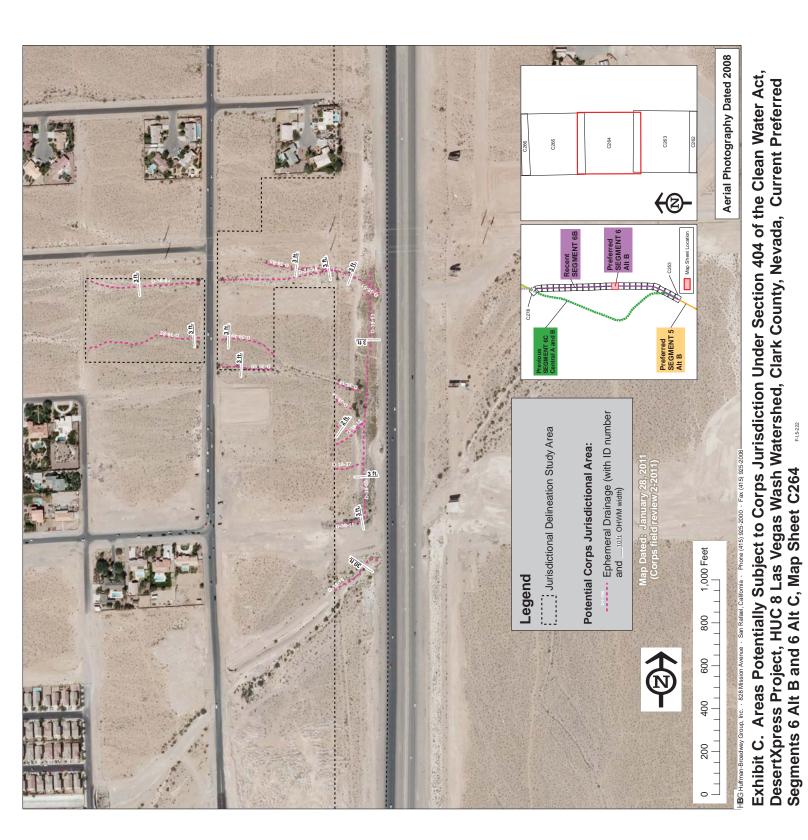
Aerial Photography Dated 2008 Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, C260 C259 C261 <del>(</del>2) Map Sheet Location Preferred Alt B C253 Preferred SEGMENT ( Alt B Jurisdictional Delineation Study Area Potential Corps Jurisdictional Area: San Rafael, California · Phone (415) 925-2000 · Fax (415) 925-200 (Corps field revie 1,000 Feet Legend 800 600  $\mathbf{k}$ Group, Inc. · 828 N 400 -BG Huffman-Broadway Grou 200 0 Yes.



F-1.5-219

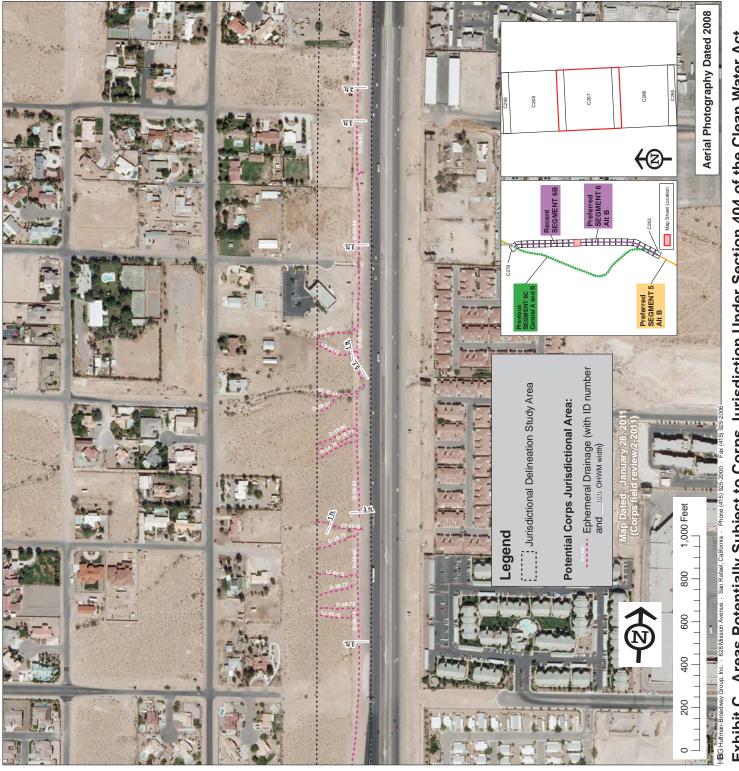


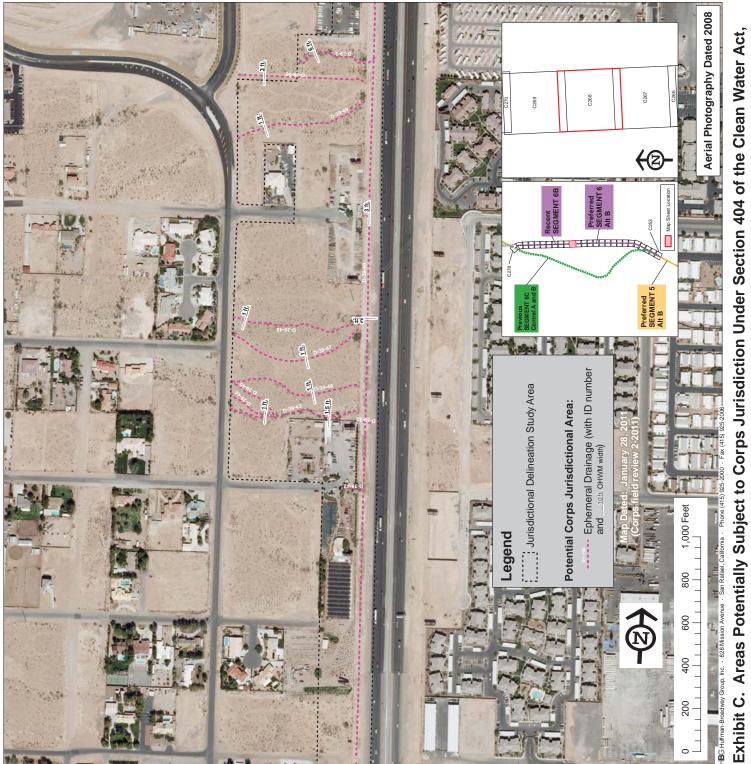




Aerial Photography Dated 2008 Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, W Silverado Ranch IT HAT STE again the way C264 C265 C266 AUTURA UNIT **(**2 Preferred SEGMENT ( Alt B Recent SEGMENT 6 Map Shee C253 [ i/Alli GMENT Preferred Ephemeral Drainage (with ID number and 10th OHVM width) Jurisdictional Delineation Study Area Potential Corps Jurisdictional Area: San Rafael, California · Phone (415) 925-2000 · Fax (415) 925-200 1,000 Feet Legend \_ 400 600 800 HBG Huffman-Broadway Group, Inc. · 828 Mission Avenue · 200 \_ 0

ales. Aerial Photography Dated 2008 C265 C266 C267 <del>(</del>2) 113 Preferred SEGMENT Alt B Map Sheet C253 Preferred SEGMENT Ephemeral Drainage (with ID number and \_\_\_\_\_\_0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 0110, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, 000, Jurisdictional Delineation Study Area Potential Corps Jurisdictional Area: -San Rafael, California · Phone (415) 1,000 Feet Legend 800 Group. Inc. · 828 Mission Avenue · 600 0.0 400 200 -HBG Huffman-Br 0





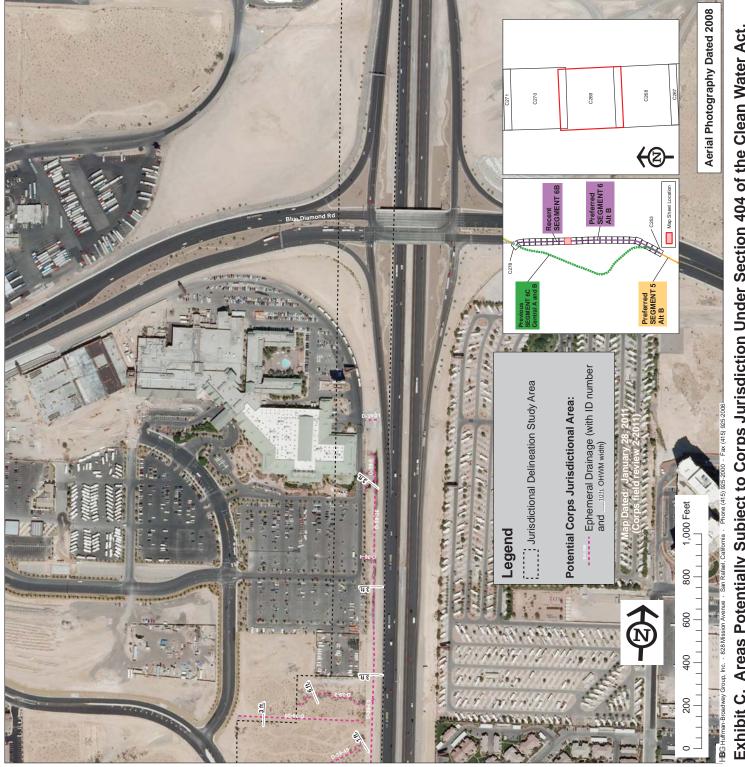


Exhibit C. Areas Potentially Subject to Corps Jurisdiction Under Section 404 of the Clean Water Act, DesertXpress Project, HUC 8 Las Vegas Wash Watershed, Clark County, Nevada, Current Preferred Segments 6 Alt B and 6 Alt C, Map Sheet C270 San Rafael, California · Phone (415) 925-2000 · Fax (415) 925-200

