

Topock Project Executive Abstract

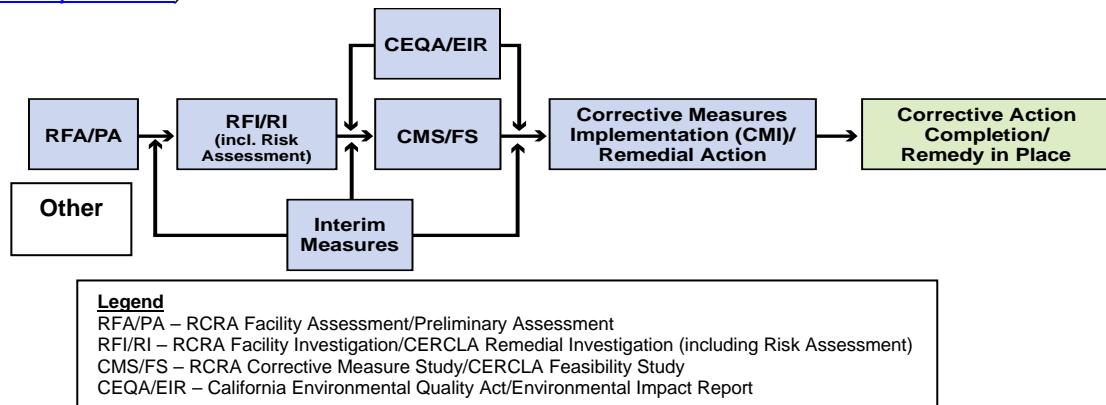
<p>Document Title:</p> <p>Topock Groundwater Remediation Revised Ethnobotany Survey Report (PGE20140115C)</p> <p>Submitting Agency: DTSC, DOI</p> <p>Final Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Date of Document: January 15, 2014</p> <p>Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) – PG&E</p>
<p>Priority Status: <input type="checkbox"/> HIGH <input type="checkbox"/> MED <input checked="" type="checkbox"/> LOW</p> <p>Is this time critical? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>Type of Document:</p> <p><input type="checkbox"/> Draft <input checked="" type="checkbox"/> Report <input type="checkbox"/> Letter <input type="checkbox"/> Memo</p> <p><input type="checkbox"/> Other / Explain:</p>	<p>Action Required:</p> <p><input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Review & Comment</p> <p>Return to: _____</p> <p>By Date: _____</p> <p><input type="checkbox"/> Other / Explain:</p>
<p>What does this information pertain to?</p> <p><input type="checkbox"/> Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA)</p> <p><input type="checkbox"/> RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment)</p> <p><input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS) Corrective Measures Implementation (CMI)/Remedial Action</p> <p>X California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR)</p> <p><input type="checkbox"/> Interim Measures</p> <p><input type="checkbox"/> Other / Explain:</p>	<p>Is this a Regulatory Requirement?</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>If no, why is the document needed?</p>
<p>What is the consequence of NOT doing this item? What is the consequence of DOING this item?</p> <p>This report presents data collected during surveys made in compliance with the EIR mitigation measure CUL-1a-5. If this work was not performed, it would constitute a non-compliance with the EIR mitigation measure.</p>	<p>Brief Summary of attached document:</p> <p>The Final Environmental Impact Report (EIR) for the Topock Compressor Station Groundwater Remediation Project prescribes mitigation measures to reduce impacts associated with the groundwater remedy design and cleanup. In compliance with EIR mitigation measure CUL-1a-5, PG&E conducted a comprehensive ethnobotanical survey for the presence of plants with cultural significance (plants listed in Appendix PLA of the EIR) in the Topock Groundwater Remediation Project Area, with field efforts in August, October and November 2011, March 2012, and March 2013. Incidental data to support this report was also collected during the February 2012 Wetlands surveys performed under mitigation measure BIO-1. On March 29, 2013, PG&E submitted a report that summarized the 2011 and 2012 ethnobotanical survey results. This revised final report includes the 2013 survey results, and detailed maps of the occurrence of plants of cultural significance, as well as appendices of photographs and GPS data. The data presented with this report have been considered in the groundwater remedy design.</p>
<p>Written by: PG&E</p> <p>Recommendations:</p> <p>This report is for your information only.</p> <p>How is this information related to the Final Remedy or Regulatory Requirements:</p> <p>This report presents data collected for use with the remedy design. The comprehensive Ethnobotanical Survey collected data for compliance with EIR mitigation measure CUL-1a-5.</p>	

Other requirements of this information?

None.

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site (www.dtsc-topock.com).



Version 9



Yvonne J. Meeks
Manager
Environmental Remediation

Mailing Address
4325 South Higuera Street
San Luis Obispo, CA 93401

Location
6588 Ontario Road
San Luis Obispo, CA 93405

805.234.2257
Fax: 805.773.8281
E-Mail: yjm1@pge.com

January 15, 2014

Mr. Aaron Yue
Project Manager
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

Subject: *Topock Groundwater Remediation Project Revised Ethnobotany Survey Report*
(Document ID: PGE20140115C)

Dear Mr. Yue:

Enclosed is the *Topock Groundwater Remediation Project Revised Ethnobotany Survey Report*. This revised report presents Ethnobotanical data that was collected in compliance with the requirements of EIR mitigation measure CUL-1a-5. This report expanded upon the last report published in March 2013, and includes the spring 2013 survey results as well as detailed maps of the occurrence of plants of cultural significance (those listed in Appendix PLA of the EIR) in the Project Area. This information has been used in the groundwater remedy design.

Please contact me at (805) 234-2257 or Virginia Strohl at (559) 263-7417 if you have any questions on this report.

Sincerely,

Yvonne Meeks
Topock Project Manager

Enclosure

Topock Groundwater Remediation Project Revised Ethnobotanical Survey Report

cc: Karen Baker/DTSC
Pam Innis/DOI
Carrie Marr/FWS

REVISED FINAL

Topock Groundwater Remediation Project Ethnobotany Survey Report

Document ID: PGE20140115C

Prepared for
Pacific Gas and Electric Company



January 2014

Prepared by:
Garcia and Associates (GANDA)

and

CH2M HILL



Contents

Section	Page
Acronyms and Abbreviations	v
1 Introduction	1-1
1.1 Project Location	1-1
1.2 Project Area	1-1
2 Vegetation Communities of the Project Area	2-1
2.1 Terrestrial Communities	2-1
2.1.1 Creosote Bush Scrub	2-1
2.1.2 Tamarisk Thicket	2-1
2.1.3 Arrow Weed Thicket	2-1
2.1.4 Blue Palo Verde Woodland	2-1
2.1.5 Catclaw Acacia Thorn Scrub	2-2
2.1.6 Hillside Palo Verde Scrub	2-2
2.1.7 Quailbush Scrub	2-2
2.1.8 Allscale Scrub	2-2
2.1.9 Western Honey Mesquite Bosque	2-2
2.1.10 Screwbean Mesquite Bosque	2-2
2.2 Wetland Communities	2-3
3 Survey Segments in the Project Area	3-1
4 Methodology	4-1
4.1 Culturally Significant Plants	4-1
4.2 Field Surveys	4-1
4.2.1 Survey Timing	4-2
4.2.2 Field Methodology	4-2
5 Results.....	5-1
5.1 Survey Summaries	5-1
5.2 Culturally Significant Plants Identified in the Project Area	5-1
5.2.1 Culturally Significant Trees	5-2
5.2.2 Culturally Significant Shrubs	5-3
5.2.3 Culturally Significant Herbs	5-3
5.3 Occurrence of Culturally Significant Plants in the Project Area	5-4
5.4 Probability of Missed Occurrences due to Below-average Rainfall	5-7
5.5 Culturally Significant versus Special-status Plants	5-7
6 References.....	6-1

Table

1 Plants from the Ethnobotany List in the Appendix PLA Found in the Project Area	5-2
---	-----

Figures

1 Site Location Map	1-2
2 Project Area with its Component Survey Segments	1-3
3 Vegetation Map of the Project Area	2-5

4	Culturally Significant Trees and Shrubs in the Project Area	5-5
5	Culturally Significant Herbs in the Project Area	5-9

Appendices

- A Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project Area
- B Vascular Plant Species Observed in the Project Area
- C Photographs from Survey Segments of the Project Area
- D Photographs of Plants of Cultural Significance Found in the Project Area
- E Locations for Culturally Significant Plants in the Project Area

Acronyms and Abbreviations

ADA	Arizona Department of Agriculture
BN&SF	Burlington Northern and Santa Fe
BLM	Bureau of Land Management
CDNPA	California Desert Native Plants Act
CEQA	California Environmental Quality Act
CDFW	California Department of Fish and Wildlife
DTSC	California Department of Toxic Substance Control
EIR	Environmental Impact Report
ethnoplants	culturally significant plants
GPS	Global Positioning System
I-40	Interstate 40
PG&E	Pacific Gas and Electric Company
Project Area	PG&E Topock Groundwater Remediation Project Area
TCS	Topock Compressor Station
USFWS	U.S. Fish and Wildlife Service

SECTION 1

Introduction

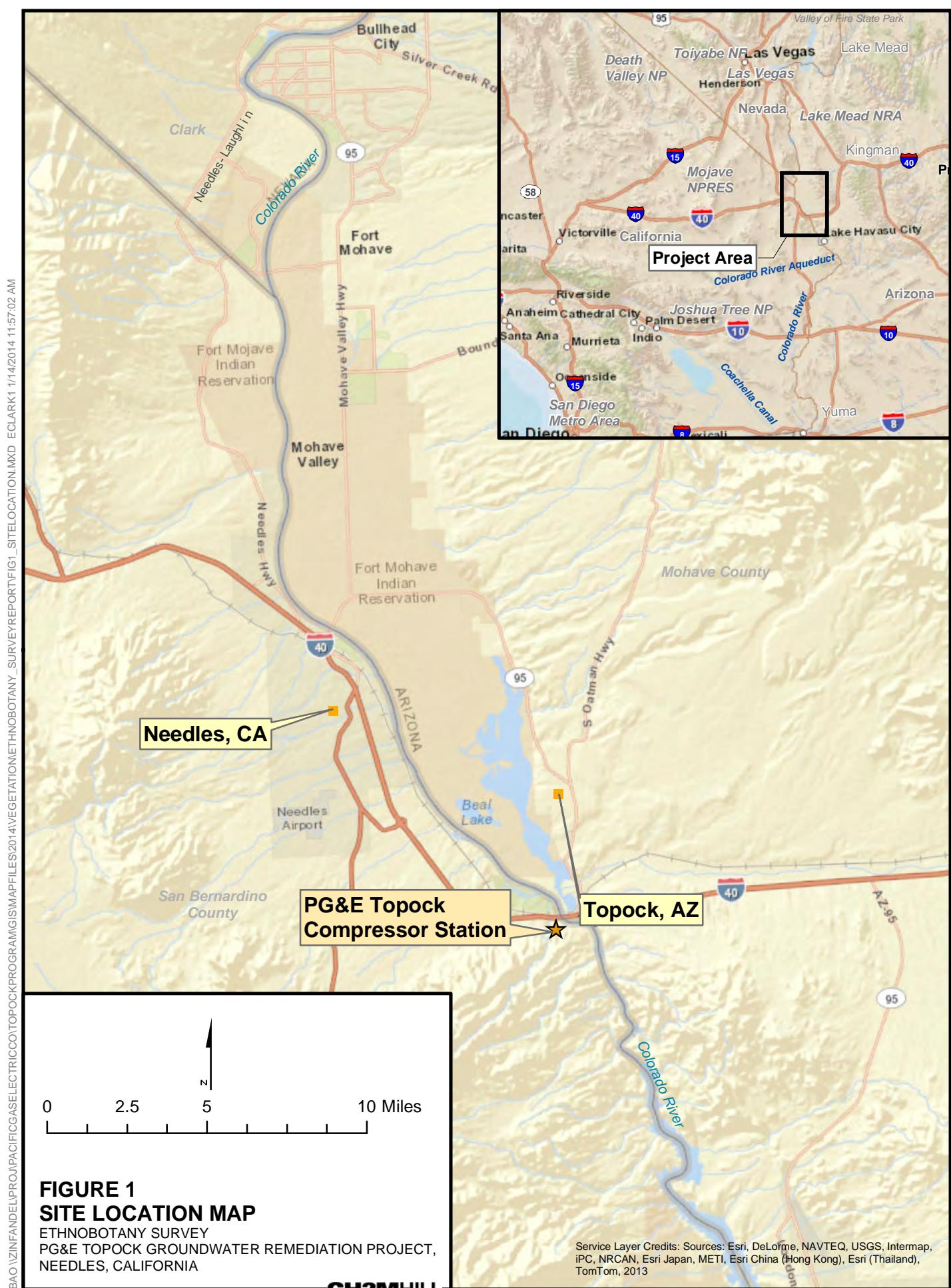
Pacific Gas and Electric Company (PG&E) is implementing the final groundwater remedy to address chromium in groundwater near the PG&E Topock Compressor Station, located in eastern San Bernardino County 12 miles southeast of the city of Needles, California. The California Department of Toxic Substance Control (DTSC) is the state lead agency overseeing corrective actions at the compressor station. Pursuant to the California Environmental Quality Act (CEQA), DTSC (2011) prepared and certified an Environmental Impact Report (EIR) that evaluated and prescribed mitigation measures to lessen the potential environmental impacts of the final groundwater remedy. The EIR Mitigation Measure CUL-1a-5 requires PG&E to avoid, protect, and encourage the regeneration of the culturally significant plants listed in Appendix PLA of the EIR. The purpose of this report is to establish a comprehensive list of potentially culturally significant plant species that occur in the PG&E Topock Groundwater Remediation Project Area (Project Area). The list of potential culturally significant plants or “ethnoplants” is derived from the Appendix PLA of the January 2011 EIR (DTSC, 2011), which in turn is derived principally from Castetter (1935) and Minnis (2000). According to those sources, these plants have played an important role in the lives of tribes, and it is therefore important to document their presence and distribution in the Project Area.

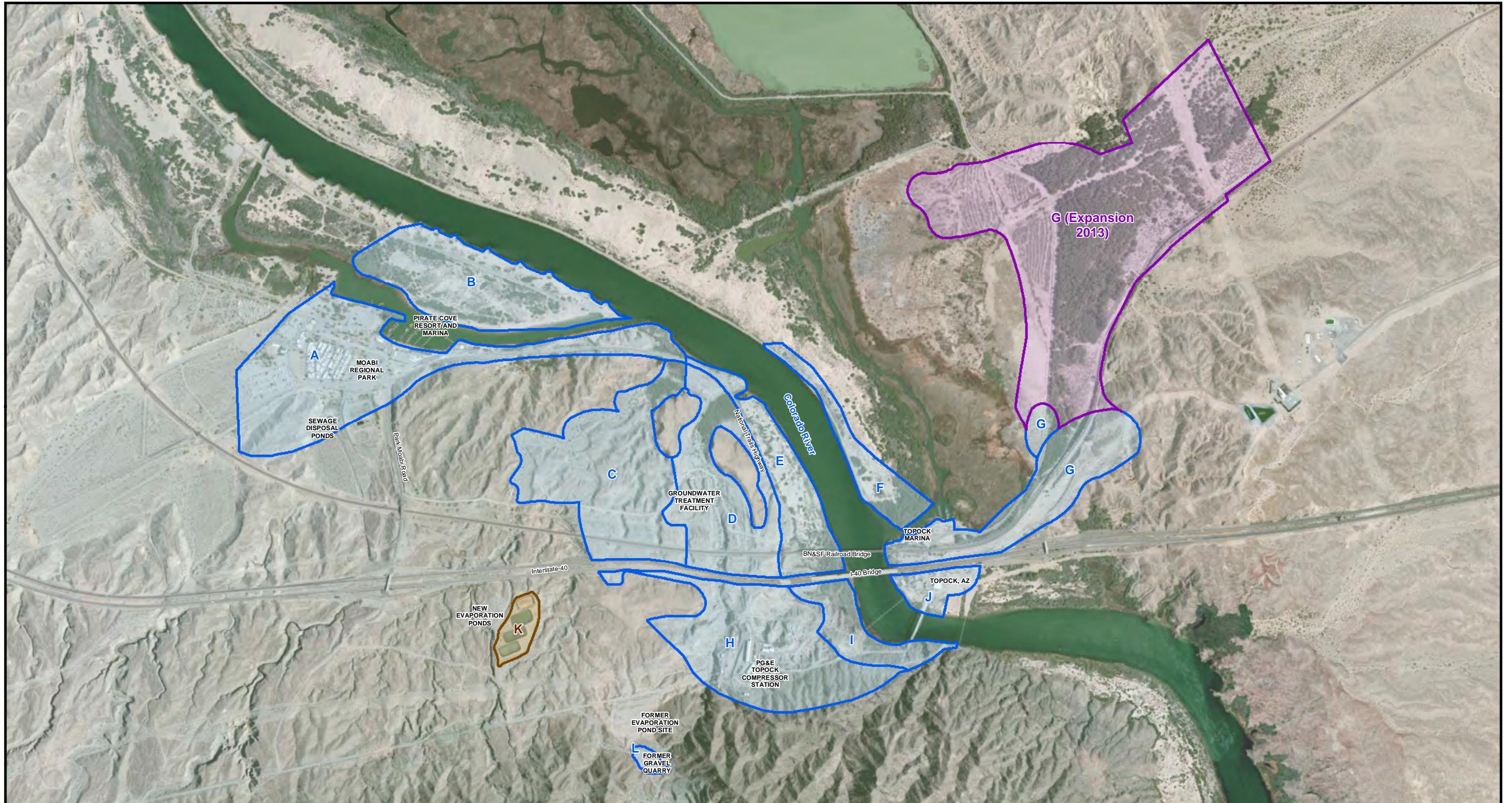
1.1 Project Location

The Topock Compressor Station (TCS) is located near the California and Arizona border in eastern San Bernardino County, approximately 12 miles southeast of the city of Needles, California (Figure 1). Topock, Arizona is located approximately one-half mile to the east. Access to the compressor station is from the Park Moabi Road exit off of Interstate 40 (I-40). At the entrance to Moabi Regional Park, the roadway connects to National Trails Highway, which extends eastward and then southward for approximately one mile along the Colorado River to the TCS.

1.2 Project Area

The approximately 1,057-acre Project Area includes the 780-acre Project Area covered in the EIR as well as an additional 277 acres associated with potential freshwater well locations along Oatman-Topock Highway in Arizona. Of the 277 acres surveyed for the freshwater well locations, only 74.5 acres were subsequently added to the EIR Project Area with the Freshwater EIR Addendum. Elevation ranges from approximately 400 to 700 feet above sea level. The survey team arbitrarily divided the Project Area into twelve survey segments designated A–L (Figure 2). One of these, Survey Segment K, contains the evaporation ponds for the TCS. While the existing evaporation ponds may be used for wastewater from the final remedy this survey segment was later excluded due to the limited existing vegetation within the fenced area. Of the remaining 11 survey segments, eight (A, B, C, D, E, H, I, and L) are located in San Bernardino County, California, and three (F, J, and G) are located in Mohave County, Arizona (Figure 2). Survey segments of the Project Area within California are primarily on land managed by the Bureau of Land Management (BLM) or the U.S. Fish and Wildlife Service (USFWS); with the exception of portions of Survey Segments C and D, which are owned by the Fort Mojave Indian Tribe; and a portion of Segment H, which is owned by PG&E. On the Arizona side of the Colorado River, Survey Segment F and most of Survey Segment G are part of the USFWS Havasu National Wildlife Refuge, and land in Survey Segment J and a portion of Survey Segment G are privately owned.





LEGEND

- Survey Segments
- Survey Segment G (Expansion)
- Survey Segment K (Removed From Project Study Area)

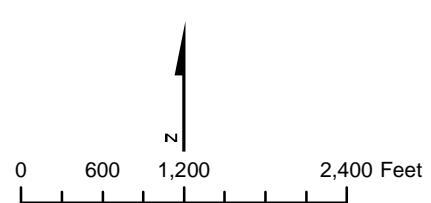


FIGURE 2
PROJECT AREA WITH BOTANICAL SURVEY SEGMENTS

ETHNOBOTANY SURVEY
PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT,
NEEDLES, CALIFORNIA

Vegetation Communities of the Project Area

There are ten primary terrestrial plant community types, and three major wetland communities in the Project Area. The primary terrestrial plant community types are creosote bush scrub, tamarisk thickets, arrow weed thickets, blue palo verde woodlands, catclaw acacia thorn scrub, foothill palo verde scrub, allscale scrub, quailbush scrub, western honey mesquite bosque, and screwbean mesquite bosque (Sawyer et al., 2009). The primary wetland communities include California bulrush marshes, cattail marshes, and common reed marshes. Descriptions of these primary plant communities are provided in the following sections. A detailed vegetation map with additional community types found in the Project Area is provided in Figure 3.

2.1 Terrestrial Communities

2.1.1 Creosote Bush Scrub

The most common and widespread plant community in the Project Area is creosote bush scrub. This vegetation type is characterized by widely-spaced creosote bush (*Larrea tridentata*) with associated species such as white bursage (*Ambrosia dumosa*), white rhatany (*Krameria bicolor*), brittlebush (*Encelia farinosa*), beavertail cactus (*Opuntia basilaris* var. *basilaris*), and silver cholla (*Cylindropuntia echinocarpa*). Creosote bush scrub occurs throughout the dissected alluvial terraces in the Project Area (Appendix C, Plate 5, G-5).

2.1.2 Tamarisk Thicket

Tamarisk thicket is found primarily on the east side of the Oatman-Topock Highway in Segment G and along the low sandy terraces adjacent to the Colorado River and the inlet to Pirate's Cove between Survey Segments A and B (Appendix C, Plate 3, E-1 and E-2, Plate 4, G-2). This vegetation type, characterized by the non-native and invasive salt cedar (*Tamarix ramosissima*), is also found near the terminus of the larger ephemeral washes associated with the dissected terraces south of the Colorado River in Survey Segments A, C, and D (Appendix C, Plate 3, D-2). In more upland locations (e.g. Survey Segment G) this vegetation type is characterized by dense stands of athel tamarisk (*Tamarix aphylla*). In many locations salt cedar or athel tamarisk occur as monospecific stands; in other areas associated trees and shrubs include western honey mesquite (*Prosopis glandulosa* var. *torreyana*), screwbean mesquite (*Prosopis pubescens*), blue palo verde (*Parkinsonia florida*) and arrow weed (*Pluchea sericea*). Herbaceous vegetation is absent within dense thickets of salt cedar and athel tamarisk, but scattered herbaceous species such as fanleaf crinklemat (*Tiquilia plicata*), Spanish needle (*Palafoxia arida*) and *Cryptantha* spp. are often present in the openings between the trees in some areas.

2.1.3 Arrow Weed Thicket

Arrow weed thicket is found on the low sandy terraces along the Colorado River and Park Moabi Slough (Appendix C, Plate 4, and F-1). Arrow weed is the sole dominant shrub species occurring on the sandy terraces, with individuals widely scattered or aggregated into dense, nearly impenetrable stands. It is most common in Survey Segments A, B, E, and F and often inter-digitates with tamarisk thickets and mesquite bosque. Associated species include salt cedar, smoke tree (*Psorothamnus spinosus*), western honey mesquite, brittlebush, and desert broom (*Baccharis sarothroides*). Scattered herbaceous vegetation in the more open areas includes fanleaf crinklemat, Spanish needle, *Cryptantha* spp., and Mediterranean grass (*Schismus barbatus*).

2.1.4 Blue Palo Verde Woodland

Blue palo verde woodland occurs along the edges and throughout the channel bottoms of the larger ephemeral washes of the dissected alluvial terraces south of the Colorado River (Appendix C, Plate 3, and

D-1). This vegetation type is also present in the northern and eastern parts of Segment G on the Havasu National Wildlife Refuge. Total vegetation cover is generally low, but species diversity is relatively high, especially in the larger washes, as compared to the other vegetation types in the Project Area. Blue palo verde is the dominant tree with scattered individuals of salt cedar, athel tamarisk, and smoke tree also present in some areas. Associated shrubs include catclaw acacia (*Senegalia greggii*), Anderson's desert thorn (*Lycium andersonii*), brittlebush, sweetbush (*Bebbia juncea* var. *aspera*), cheesebush (*Ambrosia salsola*), climbing milkweed (*Funastrum hirtellum*), desert lavender (*Hyptis emoryi*), white bursage, white rhatany, and creosote bush. Common herbaceous species include small-seeded spurge (*Chamaesyce polycarpa*), small-flowered California poppy (*Eschscholzia minutiflora*), Emory rock daisy (*Perityle emoryi*), Spanish needle, and Arizona lupine (*Lupinus arizonicus*).

2.1.5 Catclaw Acacia Thorn Scrub

In the Project Area catclaw acacia thorn scrub is limited to the bottoms of moderate-sized ephemeral washes in the dissected terraces south of the National Trails Highway. This vegetation type is characterized by widely scattered shrubs dominated by catclaw acacia. Common associated species include Anderson's desert thorn, brittlebush, sweetbush, cheesebush, desert lavender, white bursage, white rhatany and creosote bush. Herbaceous species include small-seeded spurge, Arizona lupine, and Spanish needle.

2.1.6 Hillside Palo Verde Scrub

Hillside palo verde scrub is restricted to a small area east of the compressor station along the slopes of the Chemehuevi Mountains (Appendix C, Plate 6, I-3). Vegetation in this area is characterized by scattered hillside palo verde (*Parkinsonia microphylla*). Associated species in this area include creosote bush, pygmy-cedar (*Peucephyllum schottii*), brittlebush, white rhatany, beavertail cactus, buckhorn cholla (*Cylindropuntia acanthocarpa*), California barrel cactus (*Ferocactus cylindraceus* var. *cylindraceus*), and inflated desert trumpet (*Eriogonum inflatum* var. *inflatum*).

2.1.7 Quailbush Scrub

Quailbush scrub is dominated by big saltbush (*Atriplex lentiformis*) and occurs on low-lying alkaline or saline soils. This community is most common in Segment G, where it occurs on the Havasu National Wildlife Refuge west of the Oatman-Topock Highway (Appendix C, Plate 4, G-3). The only common associate at this site is bush seepweed (*Suaeda moquinii*). A small area of Quailbush scrub also occurs near the Colorado River in Segment J at the foot of the southernmost natural gas pipeline bridge (Appendix C, Plate 6, J-1).

2.1.8 Allscale Scrub

Allscale scrub is dominated by cattle saltbush (*Atriplex polycarpa*) and is the most common alkaline tolerant shrubland alliance in the Project Area. In the Project Area, allscale scrub occupies a portion of a broad flat wash in south of the National Trails Highway (Appendix C, Plate 2, C-1) where it occurs with creosote bush. This alliance also occurs at other scattered locations along the National Trails Highway south of the Colorado River.

2.1.9 Western Honey Mesquite Bosque

Western Honey Mesquite bosque is mostly found on the low sandy terraces along the Colorado River in Survey Segments A, B, E, and F, where it occurs intermixed with tamarisk thickets (Appendix C, Plate 4, F-2). This community also occurs in a few scattered locations on the Havasu National Wildlife Refuge on the east side of the Oatman-Topock Highway in Survey Segment G.

2.1.10 Screwbean Mesquite Bosque

Screwbean Mesquite bosque is largely restricted to the low terraces along the Colorado River where it is concentrated in three relatively small areas of Survey Segments A, B and E. It is most abundant in Survey Segment B across from the Topock Marina, along the southwestern shoreline of the Segment (Appendix C,

Plate 4, F-2). In Survey Segment E, it is common on the California side of the Colorado River near the BN&SF railroad bridge. In Survey Segment A, this community is most common in the panhandle shaped part of the survey segment along Park Moabi Slough. Screwbean mesquite was also planted in a portion of Survey Segment G on the Havasu National Wildlife Refuge following a 2008 wildfire.

2.2 Wetland Communities

Along the Colorado River and its inlets are patches of wetlands with various marsh plants forming three principal wetland communities, from the mostly submerged broad-leaved cattail (*Typha latifolia*) marshes and California bulrush (*Schoenoplectus californicus*) marshes, to the adjacent but somewhat drier common reed (*Phragmites australis*) marshes. The common reed marshes are concentrated and most extensive along the edges of the low terraces next to the Colorado River in Survey Segment I (Appendix C, Plate 6, I-1), whereas the bulrush marshes occur just offshore in standing water in all survey segments of the Project Area that include shoreline. California bulrush is also the sole dominant species in the portion of the Topock Marsh along the west side of the Oatman-Topock Highway in Survey Segment G. It is likely that the common reed species in the Project Area is an invasive, non-indigenous form of *Phragmites australis*.

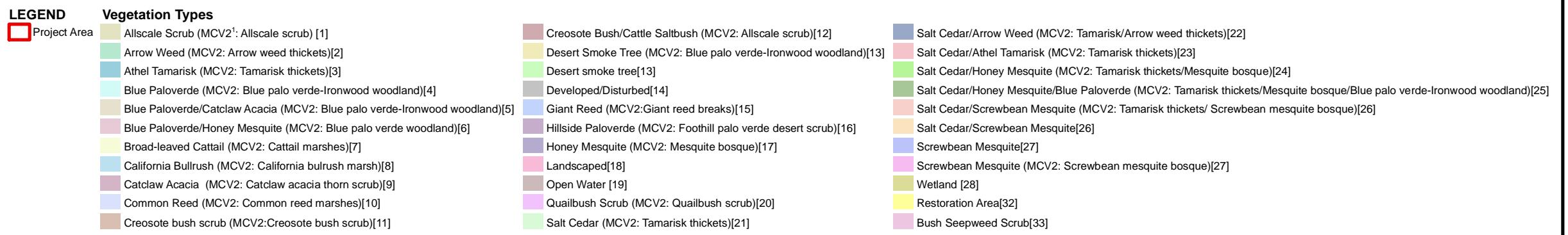
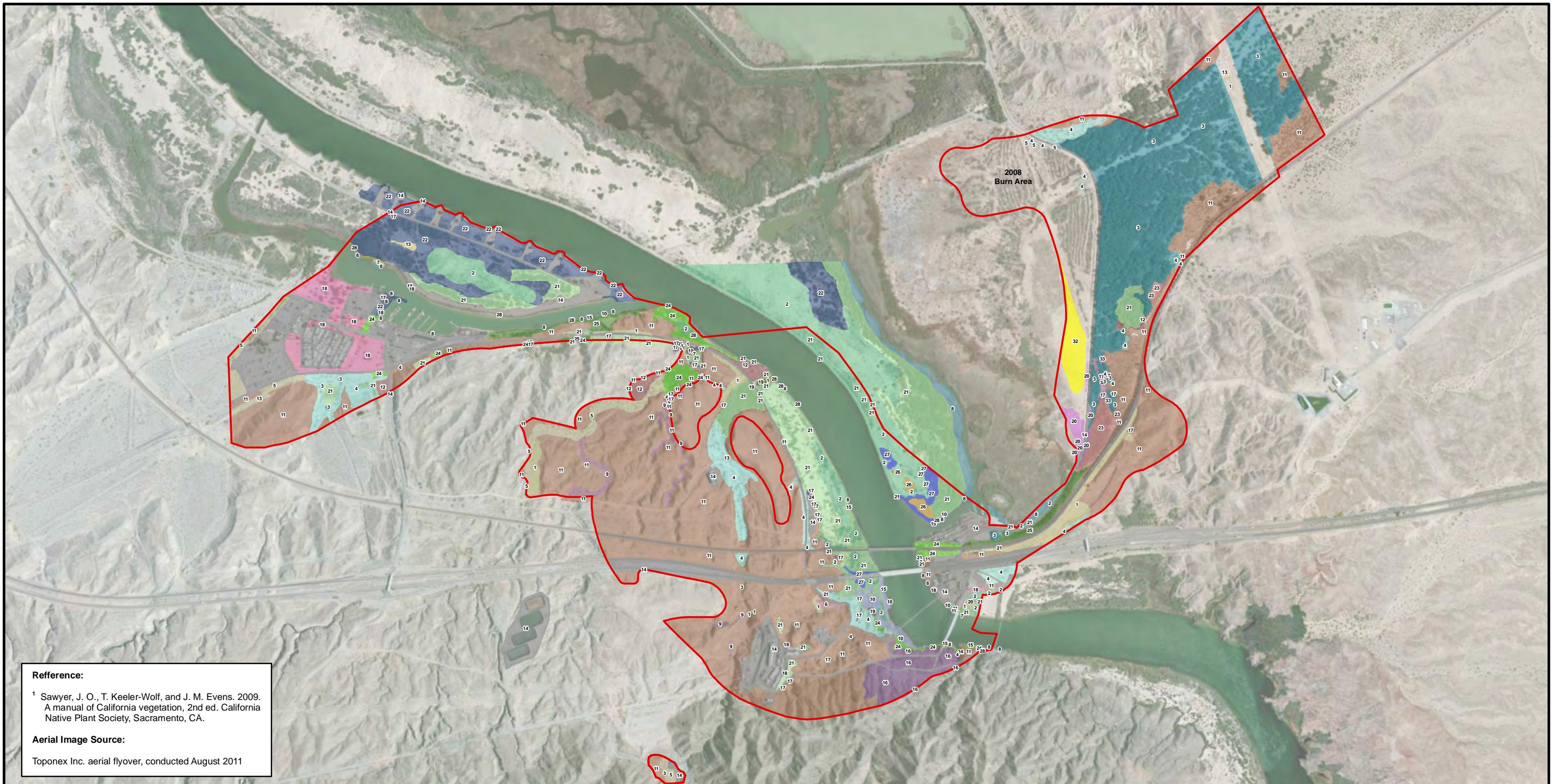


FIGURE 3
VEGETATION COMMUNITIES
IN PROJECT AREA

ETHNOBOTANY SURVEY
PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT,
NEEDLES, CALIFORNIA

CH2MHILL

SECTION 3

Survey Segments in the Project Area

The Project Area was divided into twelve Survey Segments designated A—L (Figure 2). Survey Segment K, which contains the evaporation ponds for the Topock Compressor Station, was later excluded from the survey due to the limited amount of vegetation present within the fenced area. Following the initial botanical surveys, an additional 277 acres, associated with potential freshwater well locations, were added onto Survey Segment G (Figure 2). The following sections provide a brief description of each of the survey segments in the Project Area. Representative photographs of the survey segments are provided in Appendix C.

Survey Segment A: The western portion of Survey Segment A, north of National Trails Highway, includes the developed and landscaped areas of Moabi Regional Park and Pirates Cove Resort and Marina (Appendix C, Plate 1, A-4 and A-5). The developed portion of Moabi Regional Park includes offices, a mobile home park, a recreational vehicle storage lot, parking areas, campgrounds, and a boat launch. Pirate's Cove Resort includes a marina, a store, a restaurant, vacation housing, and paved and unpaved parking lots. The landscaped areas of Moabi Regional Park and Pirate's Cove are planted primarily with Mexican fan palm (*Washingtonia robusta*), but they also include California fan palm (*Washingtonia filifera*), western honey mesquite, Fremont's cottonwood (*Populus fremontii*), eucalyptus (*Eucalyptus spp.*), and other native and exotic landscape plants. Undeveloped areas with natural vegetation are restricted primarily to areas to the south of National Trails Highway with the exception of the sewage disposal ponds on the southwest corner of Park Moabi Road and National Trails Highway (Appendix C, Plate 1, A-3). On the south side of National Trails Highway, there is a broad dry wash that is partially channelized and includes blue palo verde, smoke tree, and creosote bush (Appendix C, Plate 1, A-1). This wash drains into a low-lying area covered with blue palo verde woodland, and tamarisk thickets. The flat-topped hill to the south and west of the wash is covered with desert pavement on top and steep gravelly slopes on the sides (Appendix C, Plate 1, A-2). The top and steep side slopes of this hill are characterized by creosote bush and beavertail cactus.

The eastern portion of Survey Segment A resembles a pan handle (Figure 2) and is covered primarily in creosote bush scrub on the rocky hillslopes. On the adjacent flats are small patches of a variety of other vegetation types including wetlands with California bulrush, common reed and giant reed (*Arundo donax*) along the edge of the cove. Away from the water's edge are tamarisk thickets, mixed western honey mesquite/tamarisk thickets, screwbean mesquite thickets, arrow weed thickets, a cattail marsh, and creosote bush and allscale scrub. On the south side of National Trails Highway are hills covered in creosote bush scrub with the low areas characterized by tamarisk thickets or tamarisk/western honey mesquite thickets.

Survey Segment B: This survey segment is a peninsula that was partially created with dredge sands from the Colorado River and Park Moabi Slough during the late-1940s through the mid-1960s. The central portion of the peninsula is dominated by arrow weed thickets (Appendix C, Plate 1, B-1) and tamarisk thickets with scattered fanleaf crinklemat, and open sandy areas with scattered individuals of western honey mesquite, smoke tree, and creosote bush. The area along the edge of the Colorado River consists of a series of camping areas and restrooms (Appendix C, Plate 2, B-2). Landscape plantings in this area include Fremont's cottonwood, eucalyptus, and athel tamarisk. On the cove side is a small wetland area dominated by California bulrush, broad-leaved cattail, geniculate spike rush (*Eleocharis geniculata*), rough-glume bushy blue stem (*Andropogon glomeratus* ssp. *scabriglumis*) and other wetland plants. The majority of the cove side is characterized by a cleared and maintained public beach (Appendix C, Plate 2, B-3).

Survey Segment C: This survey segment consists of alluvial terraces dissected by small natural drainage channels that converge on a single broad sandy wash. The wash is characterized by blue palo verde

woodland with catclaw acacia scrub, and an area of creosote bush mixed with cattle salt bush (Appendix C, Plate 2, C-1, C-2, C-3). There is also a large area containing tamarisk thickets near the National Trails Highway. The surrounding rocky hills are mostly flat on the tops with desert pavement (Appendix C Plate 2, C-4). These areas are characterized by creosote bush and white bursage.

Survey Segment D: This survey segment is similar to Survey Segment C with rocky, dissected alluvial terraces characterized by creosote bush and white bursage that is bisected by a major wash system, (Bat Cave Wash). Most of this wash is characterized by blue palo verde woodland with occasional smoke trees (Appendix C, Plate 3, D-1), but it ends in an extensive tamarisk thicket with some western honey mesquite (Appendix C, Plate 3, D-2) before passing under the road and emptying into the Colorado River (Appendix C, Plate 3, E-3).

Survey Segment E: This survey segment is mostly a sandy flood plain extending northward from the I-40 Bridge to just beyond the outlet for Bat Cave Wash into the Colorado River. The sandy nature of the flood plain is due to dredge sands deposited during the channelization of the Colorado River during the late-1940s through the mid-1960s. The major vegetation types in this survey segment are arrow weed and tamarisk thickets (Appendix C, Plate 3, E-1 and E-2). There are also some rocky upland slopes dominated by creosote bush scrub, with scattered individuals of blue palo verde and western honey mesquite extending up to the National Trails Highway along the western edge of the survey segment. There is also a small area of creosote bush scrub on the northwest side of the Bat Cave Wash outlet to the Colorado River (Appendix C, Plate 3, E-4).

Survey Segment F: This survey segment is in Arizona, directly across the Colorado River from Survey Segment E. Similar to Survey Segment E, it consists mainly of dredge sands that are dominated by arrow weed thickets (Appendix C, Plate 4, F-1), tamarisk thickets or tamarisk thickets mixed with athel tamarisk or screwbean mesquite. However, unlike Survey Segment E, this entire survey segment is a low sandy terrace with no rocky hills or creosote bush scrub vegetation. There is a small wetland along the southern edge, across from the Topock Marina (Appendix C, Plate 4, F-2). This wetland is dominated by California bulrush, common reed, and sand-bar willow (*Salix exigua*), with some marsh fleabane (*Pluchea odorata*), geniculate spikerush and other wetland species (Appendix C, Plate 4, F-3).

Survey Segment G: This survey segment is in Arizona and is bisected by the BN&SF railroad tracks and the Topock-Oatman Highway. The Topock Marina with a mobile home park and associated parking areas is located north of the BN&SF railroad tracks at the western end of this survey segment. A small portion of the Topock marsh, dominated by California bulrush, is present in this survey segment on the northwest side of the Oatman-Topock Highway (Appendix C, Plate 4, G-1). Between the highway and the railroad tracks is a strip of tamarisk/western honey mesquite/blue palo verde thicket that grades into a denser stand of salt cedar and athel tamarisk as one progresses northeastward (Appendix C, Plate 4, G-2). Further along the highway there is a sandy alkaline/saline area dominated by big saltbush with scattered shrubs of bush seepweed (Appendix C, Plate 4, G-3). The areas of Survey Segment G on the east side of the railroad tracks consists of rocky hillslopes dominated by creosote bush scrub (Appendix C, Plate 5, G-5) and an open sandy area with numerous annuals and scattered cattle saltbush (Appendix C, Plate 5, G-4).

An additional 277 acres were added to this survey segment that included potential freshwater well locations. The additional area extends approximately one mile to the north along both sides of the Oatman-Topock Highway (Figure 2). The area on the west side of the highway was previously dense salt cedar and athel tamarisk that was burned during a wildfire in October of 2008. In early 2011, the USFWS initiated restoration activities in the burn area that included the removal of logs and woody debris, irrigation to leach salts form the soils and planting of native vegetation. At the time of the survey, 22 acres of the 240-acre burn area have been planted with native vegetation (Appendix C, Plate 5, G-6). Native species planted in this area include screwbean mesquite, blue paloverde, desert broom, four wing saltbush (*Atriplex canescens*), needle grama (*Bouteloua aristidoides*), alkali sacaton (*Sporobolus airoides*), James' galleta (*Pleuraphis jamesii*) and desert globe mallow (*Sphaeralcea ambigua*). The remaining areas are barren with

the exception of the occasional seedlings of athel tamarisk and Russian thistle (*Salsola tragus*). Some of these areas have been covered with wood chips and scattered logs and woody debris piles are also present in a few locations (Appendix C, Plate 5, G-7). The additional area on the east side of the highway is characterized by dense athel tamarisk with some creosote bush scrub along the northern side of the BN&SF railroad tracks and a small area of blue paloverde woodland at the northern end of the dense tamarisk scrub (Appendix C, Plate 5, G-8). A large section in the northeast corner of the added survey area has been cleared for a natural gas pipeline right-of-way (Appendix C, Plate 5, G-9).

Survey Segment H: This survey segment is botanically diverse because it encompasses two areas of different geologic history that influence soils and vegetation. The northern two-thirds of the survey segment consist of alluvial terraces primarily of tertiary origin, whereas the southern one-third consists of pre-tertiary metamorphic/igneous rock that forms the northernmost extension of the Chemehuevi Mountains. The Topock Compressor Station, its auxiliary structures and landscaping, are built on the alluvial terraces (Appendix C, Plate 6, H-1). The rocky hillslopes and dissected alluvial terraces are characterized by creosote bush scrub. Survey Segment H also includes part of Bat Cave Wash, a major dry wash system that starts in Survey Segment L and finishes in Survey Segment E (Appendix C, Plate 6, H-2). The rocky north-facing slopes of the Chemehuevi Mountains are characterized by a number of plant species that are largely restricted to this substrate including hillside palo verde, and Pima rhatany (*Krameria erecta*), California barrel cactus and buckhorn cholla.

Survey Segment I: Survey Segment I runs along the Colorado River from the I-40 bridge in the north to the southernmost gas transmission line bridge in the south. This survey segment is similar to Survey Segment H because it includes both the pre-tertiary rock of the Chemehuevi Mountains and the more recent tertiary alluvial terraces common in the more northerly survey segments (e.g., A, C, D, G and E). Unlike Survey Segment H, however, it includes a distinctive reddish Miocene conglomerate bedrock that is exposed below the Route 66 sign, as well as wetlands along the edge of the Colorado River on recent (Quaternary) alluvial deposits (Appendix C, Plate 7, I-1 and I-2). The Miocene conglomerate in this area includes the only known location for rock nettle (*Eucnide urens*) in the Project Area. The northern areas of this survey segment are characterized by scattered blue palo verde on the hillslopes east of the National Trails Highway and a large common reed wetland area adjacent to the Colorado River (Appendix C, Plate 7, I-3). The southeastern area is characterized by hillside palo verde along the slopes of the Chemehuevi Mountains with narrow strips of common reed and California bulrush along the edges of the river.

Survey Segment J: This survey segment is a small area in Arizona that includes a developed and landscaped parcel with private residences set back on the hills overlooking the Colorado River. The slopes above the river are variously terraced and landscaped, yet there are a few patches of native vegetation that remain near the river's edge. These patches include common reed marsh, arrow weed thickets, quailbush, and tamarisk thickets, as well as California bulrush and cattail marshes scrub (Appendix C, Plate 7, J-1). There is also landscaping with Mexican fan palms and a variety of other cultivated plants on the river's edge (Appendix C, Plate 7, J-2). Survey Segment J also contains a small area of partially degraded slopes at the east end of the survey segment south of I-40. These slopes are characterized by sparse creosote bush scrub and blue palo verde.

Survey Segment L: This survey segment is located next to a rock quarry site in a small valley that is approximately 0.3 miles southwest of the compressor station (Figure 2). This survey segment is flat with a gently sloping (to the northeast) dry wash that is a continuation of the Bat Cave Wash drainage system. The wash is characterized by scattered blue palo verde and catclaw acacia, whereas the surrounding rocky areas are creosote bush scrub. The eastern portion of Survey Segment L is covered by rocks from the gravel quarry and is devoid of vegetation (Appendix C, Plate 7, L-1).

SECTION 4

Methodology

4.1 Culturally Significant Plants

Pursuant to Mitigation Measure CUL-1a-5,

"Should any indigenous plants of traditional cultural significance and listed in Appendix PLA of this FEIR be identified within the project area, PG&E shall avoid, protect, and encourage the natural regeneration of the identified plants when developing the remediation design, final restoration plan, and IM-3 decommission plan...."

The purpose of the ethnobotany survey is to comply with Mitigation Measure CUL-1a-5, by compiling a comprehensive inventory of culturally significant plant species that occur in the Project Area, and to ensure that such plants are detected, mapped and recorded. A plant species was considered culturally significant if it occurred on the list of Colorado River Indian Ethnobotany in the Appendix PLA in the EIR (DTSC, 2011). Each species on the list of Colorado River Indian Ethnobotany in the Appendix PLA of the EIR was carefully considered with respect to potential to occur in the Project Area. For each of the plants identified in Appendix PLA the potential to occur was based on the plant's known distribution, its elevation range and its habitat preference based on information from the Jepson Online Interchange (2011), the database of the Consortium of California Herbaria (2011), and in the Southwest Environmental Information Network (2011). A species was determined to have potential to occur within the Project Area if it's known or expected geographic range included the Project Area or vicinity, and if it's known or expected habitat was found within the Project Area.

In Appendix PLA of the EIR, staghorn cholla is listed as *Cylindropuntia echinocarpa* (=*Opuntia echinocarpa*), however, according to the Jepson Online Interchange (2011); the name staghorn cholla is not associated with this species. Instead, it notes that this common name has been associated with a variety of cholla species. CalFlora (2012) lists staghorn cholla as a common name for *Cylindropuntia echinocarpa*, but only as a less preferred secondary name. Searches of the common name staghorn cholla indicate that this name is most commonly associated with *Cylindropuntia* (*Opuntia*) *versicolor*, a species that is common in Arizona, but does not occur in California. Its succulent fruits have been recorded as an important food source for the indigenous tribes in Arizona (Castetter 1935). *Cylindropuntia echinocarpa*, alternatively, has a dry fruit that is not commonly eaten and this species is not mentioned as a food source of indigenous tribes by Castetter (1935). Therefore, it was concluded that an error was made in associating staghorn cholla with *Cylindropuntia echinocarpa* in the list of culturally significant plants that is in the Appendix PLA. This error was corrected in Appendix A of this report.

Appendix PLA in the EIR lists 53 ethnoplants that presumably have the potential to occur in the Project Area. These species, along with data on flowering period, conservation status, habitat preferences, geographic distribution, and known locations in the vicinity of the Project Area, are presented in Appendix A.

4.2 Field Surveys

Surveys for culturally significant plant species were conducted during the protocol-level floristic surveys that conform to the established guidelines and standards of the California Department of Fish and Wildlife (CDFW, 2009), the USFWS (2000), and the California Native Plant Society (2001). Floristic surveys were conducted in the fall of 2011 (Oct. 31 – Nov. 8), in the spring of 2012 (Mar. 12-20), and the spring of 2013 (Mar. 11–15). The main goal for the ethnobotany surveys was to generate a comprehensive list of all culturally significant plant species listed in Appendix PLA that occur in the Project Area and to census, map, photograph, and record habitat data for these species.

Additional field surveys conducted for other purposes also contributed some data to this report, including: the Mature Plants survey completed August 18-25, 2011 and limited vegetation surveys conducted during the wetland delineation surveys (February 13-17, 2012 and July 16-17, 2012). Carrie Cannon, the Ethnobotanist with the Hualapi Department of Cultural Resources, was present for many of the site surveys and provided additional technical expertise on culturally significant plants.

4.2.1 Survey Timing

Rainfall in the eastern Mojave Desert exhibits a bimodal pattern, with most rainfall occurring in the winter and a significant proportion of annual rainfall occurring in the late-summer. To ensure the proper timing for both fall and spring surveys, Dr. Jim Andre, a desert botanical specialist, was contracted to review survey planning and timing and to review the target plant list (Appendix A). Dr. Andre also joined the field survey team for a pre-survey reconnaissance and orientation towards locally occurring plants. Based on late summer and early fall rainfall in 2011 and discussion with Dr. Andre, it was decided to conduct a fall survey at the beginning of November. The spring survey 2012 was planned for mid-March based on preliminary observations made during a wetland delineation conducted by CH2M HILL ecologist and botanist Russell Huddleston and Garcia and Associates senior botanist Kim Steiner in mid-February, and consultation with Dr. Andre. Generally, the most productive timing for a spring survey in this area is mid- to late- March (Jim Andre, pers. comm.) and 2012 and 2013 fit this pattern. In some cases later than normal rains (e.g., February or March) can stimulate later than normal flowering and warrant a late spring survey. However in 2012, rainfall occurred too late to warrant an additional later spring survey (Jim Andre, pers. comm.).

4.2.2 Field Methodology

The surveys used for determining the presence of culturally significant species were floristic and comprehensive in nature, meaning that all plants found in the Project Area were identified. Species that were not immediately recognizable to the surveyors were identified using the Jepson Manual (Baldwin et al., 2012) or the Arizona Flora (Kearney and Peebles, 1973).

The ability of surveyors to detect and identify plants efficiently and accurately in the field was enhanced by a field review of the common plant species in the Project Area prior to beginning the surveys. Surveyors also reviewed photographs of targeted plants on the Jepson Online Interchange (2011) prior to the floristic surveys. These materials supplemented the Jepson Manual (Baldwin et al., 2012) and Arizona Flora (Kearney and Peebles, 1973), the primary resources used to identify culturally significant plants.

Trimble GeoXT and GeoXH global positioning systems (GPS) units with sub-meter accuracy were used to collect location data on culturally significant plant species. The GPS units were also equipped with data files for navigation and with data dictionaries for data collection. For the fall 2011 and spring 2012 surveys of the 780-acre EIR project area, transect lines, spaced at 50 feet, were programmed into the GPS units and walked by surveyors. Surveyors walked meandering routes along each transect to ensure coverage of the entire Project Area, unless vegetation density or steep slopes precluded surveyors from accessing certain areas. To ensure that inaccessible areas were surveyed to the extent feasible, surveyors identified species by making observations from the margins of such areas or from nearby vantage points. In areas with dense vegetation, the lack of sunlight and/or high soil salinity invariably resulted in areas devoid of understory species.

Transect-based surveys were impractical for the additional 277 acres added to Survey Segment G due to the dense tamarisk thickets that characterize the west side of the Oatman-Topock Highway and the extensive barren areas on the east side of the road in the previously burned area. Surveys on the east side of the road were completed by walking through all accessible pathways and opening in the dense tamarisk thickets and walking meandering transects in the more open areas outside of these areas. Surveys of the barren areas on the west side of the highway were completed by walking widely-spaced meandering transects with more focused surveys in the few areas, such as within the channel of the Sacramento Wash, where vegetation was present.

A comprehensive list of all plant species observed was compiled for the Project Area during the surveys (Appendix B). Nomenclature for scientific names follows The Jepson Manual (Baldwin et al., 2012).

Results

5.1 Survey Summaries

Mature plant and vegetation mapping (Aug 18-26, 2011). A preliminary checklist of 84 vascular plant species was compiled by Kim Steiner and CH2M HILL ecologist Morgan King while mapping mature plants and vegetation in the EIR Project Area. During this survey a number of culturally significant plants including blue paloverde, western honey mesquite, screwbean mesquite, big salt bush, cattle saltbush, broadleaf cattail and common reed were identified and mapped as mature plants or as part of the vegetation mapping. Culturally significant spring annuals such as chia (*Salvia columbariae*) were observed only as dried skeletons at the time of this survey.

Fall plant survey (Oct 31-Nov 8, 2011). The fall plant survey was conducted by Kim Steiner and Russell Huddleston. An additional 44 plant species, not detected during the August survey, were recorded during this survey. During the survey the locations of additional ethnobotanical species including hillside paloverde and desert tobacco were also mapped.

Wetland delineation (Feb 13-17, 2012). During a wetland delineation of the Project Area by Russell Huddleston and Kim Steiner, notes on spring-flowering annual species were begun. Many of the spring annuals were already in flower including suncups (*Chylismia* spp.). During this survey a single desert lily (*Hesperocallis undulata*) plant was found in Survey Segment G.

Spring survey (March 12-20, 2012). This survey was conducted by Kim Steiner and Russell Huddleston. No significant rainfall occurred in the project area between the wetland delineation and the beginning of the spring survey. Although occurring only about 3-4 weeks after the wetland survey, the Project Area looked considerably drier. This survey added an additional 33 species to the checklist for the Project Area, but did not identify any new ethnobotanical species.

Wetland delineation and vegetation mapping – Additional 183 acres for Freshwater Evaluation added to Survey Segment G (July 16-17, 2012). This survey was conducted by Russell Huddleston and CH2M HILL biologist Melissa Fowler. Most of the spring annuals were dry and gone at the time of the survey. This added area includes a portion of burned area on the west side of the Oatman–Topock Highway where the USFWS has initiated native vegetation restoration. During the surveys one new ethnobotanical plant species, jimson weed (*Datura wrightii*), was observed in the previous burn area near the restoration site.

Spring plant survey – Additional 277 acres for Freshwater Evaluation for Survey Segment G and focused surveys with the EIR Project Area (March 11-15, 2013) This survey was conducted by Russell Huddleston and Michelle Balk. Many spring annuals were abundant and in flower at the time of the survey, and in general conditions appeared more favorable for herbaceous plants than the spring survey of 2012. A few culturally significant herbaceous plants that were present in low numbers in the spring of 2012, including golden suncup (*Chylismia brevipes* ssp. *brevipes*) and desert lily, were more widespread and abundant, while other plants such as chia remained uncommon.

5.2 Culturally Significant Plants Identified in the Project Area

Of the 53 plant species listed in Appendix PLA (Colorado River Culture Ethnobotany), only about one fourth (14 of 53) were found to occur in the Project Area (Table 1; Appendices A and D). One reason for this may be that the original source of the list is a book about ethnobotanical plants in the American Southwest, with an emphasis on plants from Arizona, New Mexico, and northern Mexico (Castetter, 1935). Many of the plants discussed by Castetter (1935) are from upland areas at higher elevations in northern or eastern Arizona and

do not occur in California or lowland western Arizona. The Appendix PLA list also includes a variety of cultivated food plants including beans, crookneck squash, field pumpkin, tepary beans, Sauwi, and Indian woodoats that would not be expected in uncultivated areas of vegetation such as those in the Project Area. The culturally significant plants identified in the Project Area included 5 trees, 3 shrubs and 6 herbaceous species (Table 1). Figure 4 shows the locations of the culturally significant trees and shrubs and Figure 5 shows the locations of the culturally significant herbaceous plants in the Project Area.

TABLE 1
Plants from the Ethnobotany List in the Appendix PLA Found in the Project Area

Common Name	Scientific Name	Flowering Period
Trees		
Blue palo verde	<i>Parkinsonia florida</i>	Apr–May
Hillside (Yellow) palo verde	<i>Parkinsonia microphylla</i>	Apr–May
Goodding's willow	<i>Salix gooddingii</i>	Mar–Apr
Screwbean mesquite	<i>Prosopis pubescens</i>	Apr–Sep
Western honey mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Apr–Aug
Shrubs		
Big Saltbush	<i>Atriplex lentiformis</i>	Jul–Oct
Cattle saltbush	<i>Atriplex polycarpa</i>	Jul–Oct
Desert tobacco	<i>Nicotiana obtusifolia</i> var. <i>obtusifolia</i>	Mar–Jun
Herbs		
Broadleaf cattail	<i>Typha latifolia</i>	Jun–Jul
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	Mar–May
Chia	<i>Salvia columbariae</i>	Mar–Jun
Common Reed	<i>Phragmites australis</i>	Jul–Nov
Desert lily	<i>Hesperocallis undulata</i>	Mar–May
Jimson Weed	<i>Datura wrightii</i>	May–Oct

5.2.1 Culturally Significant Trees

Five of the nine tree species listed in the PLA were found in the Project Area. These included hillside (yellow) palo verde, blue palo verde, western honey mesquite, screwbean mesquite and Goodding's willow (*Salix gooddingii*). Suitable habitat is present for the other two species, desert ironwood (*Olneya tessota*) and velvet mesquite (*Prosopis velutina*), but these species were not found during multiple surveys of the Project Area. The remaining two culturally significant trees were not expected to occur. Honey mesquite (*Prosopis glandulosa* var. *glandulosa*) doesn't occur in California or Arizona and singleleaf pinyon pine (*Pinus monophylla*) occurs at higher elevations than those present in the Project Area (Appendix A).

Hillside Palo Verde (*Parkinsonia microphylla*)

In the Project Area hillside palo verde is restricted to the pre-tertiary metamorphic/igneous bedrock along the slopes of the Chemehuevi Mountains (Figure 4). There are approximately 100 individuals within the limits of the Project Area, but the overall population in this area includes approximately 150 trees.

Blue Palo Verde (*Parkinsonia florida*)

Blue palo verde is common and widespread throughout the Project Area, where it frequently occurs within the large desert washes and on low terraces (Figure 4). This species is the most abundant native tree in the Project Area with a population of over 700 individuals.

Western honey mesquite (*Prosopis glandulosa* var. *torreyana*)

Western honey mesquite is most commonly found intermixed with salt cedar on the low terraces adjacent to the Colorado River (Figure 4). Around 200 individuals are estimated to occur in the Project Area.

Screwbean mesquite (*Prosopis pubescens*)

Screwbean mesquite occurs on the low terraces along the Colorado River and was also planted as part of the native vegetation restoration activities on the Havasu National Wildlife Refuge following the 2008 wildfire (Figure 4). Not including the restoration plantings, there are there are an estimated 150 or more individuals in the Project Area.

Black willow (*Salix gooddingii*)

Black willow is very uncommon in the Project Area and a total of three trees were found including two locations in Park Moabi and location in Bat Cave Wash (Figure 4).

5.2.2 Culturally Significant Shrubs

Three of the nineteen shrubs listed in the Appendix PLA occur in the Project Area: big saltbush, cattle saltbush and desert tobacco (*Nicotiana obtusifolia*). Suitable habitat is present for seven of the shrub species listed in Appendix PLA, including desert agave (*Agave deserti*), Fremont's desert thorn (*Lycium fremontii*), iodine bush (*Allenrolfea occidentalis*), lotebush (*Ziziphus obtusifolia* var. *canescens*), Mojave yucca (*Yucca schidigera*), mulefat (*Baccharis salicifolia*), and spiny chloracantha (*Chloracantha spinosa*). These seven species have reported occurrences in the regional vicinity but none of them were found in the Project Area during multiple surveys. Suitable habitat is also present for jojoba (*Simmondsia chinensis*) and Indian rushpean (*Hoffmannseggia glauca*), but there are no reported occurrences of these species within 50 miles of the Project Area. The remaining seven shrubs have distributional ranges far removed from the Project Area and were not expected to occur (Appendix A).

Big saltbush (*Atriplex lentiformis*)

Big saltbush is generally uncommon in the Project Area and is most abundant localized dense patches in along the sides the Oatman-Topock Highway on the sandy alkaline soils east of the Topock Marsh on the Havasu National Wildlife Refuge (Figure 4). Individual plants were not counted, but it is estimated that more than 100 plants occur in the Project Area.

Cattle saltbush (*Atriplex polycarpa*)

Cattle saltbush is locally abundant in a few areas and scattered plants also occur throughout the Project Area (Figure 4). This species is most common in scattered locations along the National Trails Highway and in the upper reaches of a large wash system in the dissected alluvial terraces south of the Colorado River. In Arizona, scattered individuals are also present on the Havasu National Wildlife Refuge and on the east and west sides of the BN&SF railroad tracks. Individual plants were not counted, but it is estimated that more than 100 plants occur in the Project Area.

Desert Tobacco (*Nicotiana obtusifolia* var. *obtusifolia*)

Desert tobacco is somewhat uncommon in the Project Area, with scattered individuals were observed throughout the Project Area (Figure 4). Fewer than 20 individuals were found during multiple surveys of the Project Area.

5.2.3 Culturally Significant Herbs

Six of the 25 herbs listed in the Appendix PLA were found in the Project Area including desert lily, Jimson weed, common reed, broadleaf cattail, chia and golden sun cup. Suitable habitat is present for fragrant

flatsedge (*Cyperus odoratus*) and common sunflower (*Helianthus annuus*), but neither of these species was found during multiple surveys of the Project Area. Suitable habitat is also present for Mexican panic grass (*Panicum hirticaule*) and sandfood (*Pholisma sonorae*), but these species were considered unlikely to occur as there are no reported occurrences in the vicinity of the Project Area; none were found during the surveys. The remaining 15 species are associated with habitats that are not present or have distributional ranges far removed from the Project Area and were not expected to occur (Appendix A).

Desert Lily (*Hesperocallis undulata*)

Desert lily occurs on the rocky dissected terraces north of the TCS and also occurs along the west side of the BN&SF railroad tracks on the Havasu National Wildlife Refuge (Figure 5). Over 250 individuals were identified in the Project Area, including around 200 plants in Arizona and approximately 50 plants in California. Numerous other individuals were observed scattered throughout the Topock Maze area that was excluded from the Project Area.

Jimson Weed (*Datura wrightii*)

Jimson weed is uncommon in the Project Area and was only observed in Arizona on the Havasu National Wildlife Refuge (Figure 5). All of the plants were found in the largely barren area that was burned in a 2008 wildfire on the west side of the Oatman-Topock Highway.

Common Reed (*Phragmites australis*)

Within the Project Area common reed occurs in locally dense patches along the Colorado River, with the largest area located just south of the I-40 bridge on the west side of the river (Figure 5). This species spreads by below-ground rhizomes can result in dense clones; it is therefore difficult to estimate the number of individual plants. However, 1,000s of stems are present in the Project Area.

Broadleaf cattail (*Typha latifolia*)

Broadleaf cattail is somewhat uncommon in the Project Area where it typically occurs in small patches along the Colorado River and in two wetland areas at the north end of a broad wash along the National Trails Highway (Figure 5). As with common reed, this species spreads by below-ground rhizomes and forms dense clones. It is estimated that 1000s of stems are present in the Project Area.

Chia (*Salvia columbariae*)

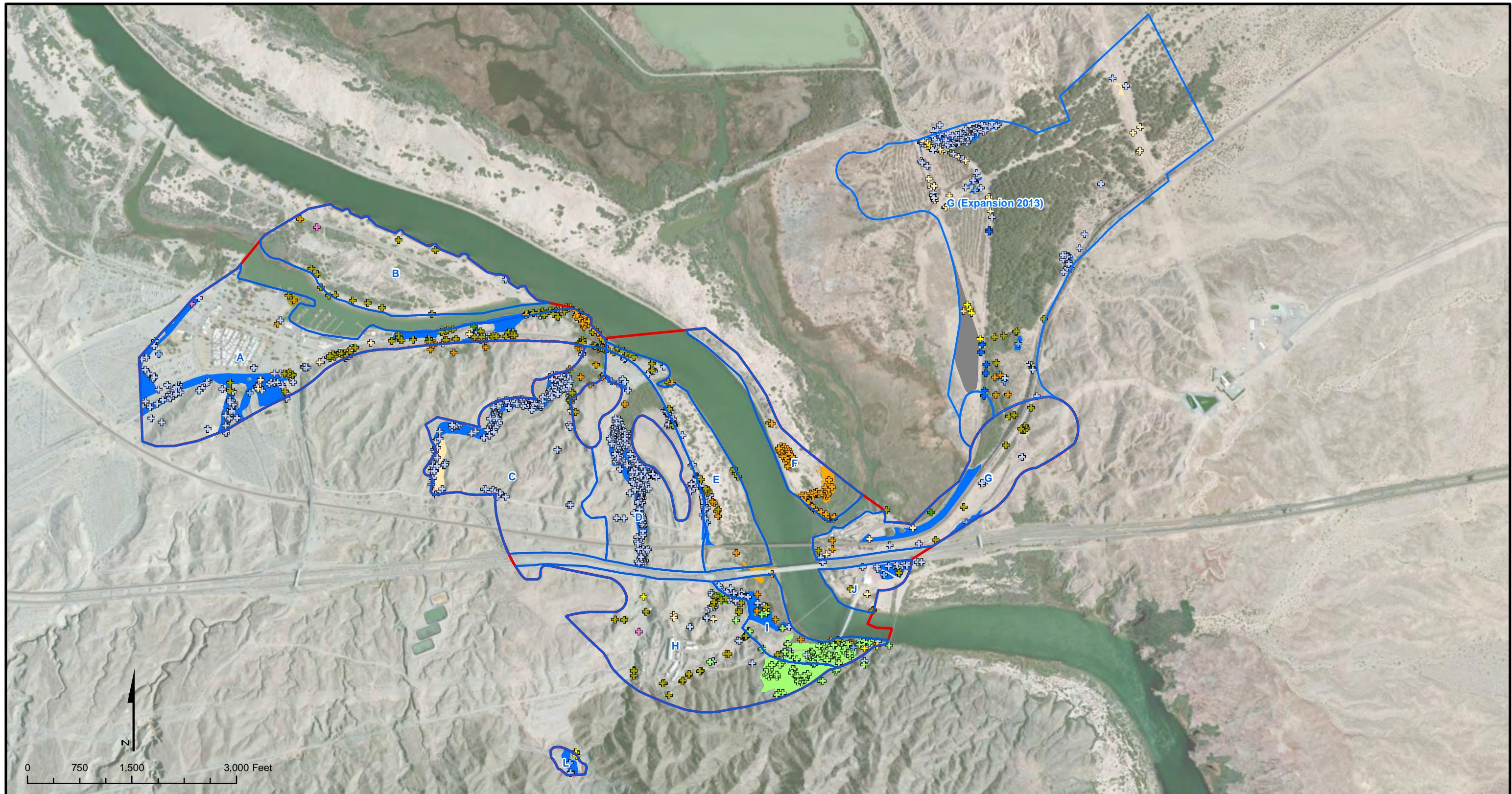
Chia is uncommon in the Project Area with scattered plants found mostly in the area along the Oatman-Topock Highway near the Sacramento Wash with a few scattered plants also found in Bat Cave Wash and in Park Moabi (Figure 5). Less than 20 individuals were found in the Project Area.

Golden Sun Cup (*Camissonia brevipes* ssp. *brevipes*)

During the spring 2013 plant surveys, golden sun cup was one of the most common and widespread annual plants in much of the Project Area (Figure 5). This species was particularly common on the rocky dissected terraces north of the TCS and south of Moabi Regional Park. This species is also common on the east side of the BN&SF railroad tracks in Arizona. Over 1000 individual plants are estimated to occur in the Project Area.

5.3 Occurrence of Culturally Significant Plants in the Project Area

The distributions of all ethnoplants in the Project Area are mapped in Figures 4 and 5 based either on point, polygon, or survey segment data. Tree species distributions, as well as distributions of desert tobacco chia, jimson weed and desert lily, are based on GPS point data. Distributions of the two saltbush shrubs, as well as cattail and common reed, are based on polygon data, whereas the distributions of the abundant annual species golden suncup is based on field observations and survey segment data from the Vascular Plant Checklist (Appendix B). Ethnoplants varied in their distribution across the survey segments in the Project Area. The average ethnoplant occurred in four different survey segments. Species such as blue palo verde,



LEGEND

- Survey Segments
- Project Area

- | Common Name - Scientific Name | |
|-------------------------------|---|
| | Big Saltbush - <i>Atriplex lentiformis</i> |
| | Blue Palo Verde - <i>Parkinsonia florida</i> |
| | Cattle Saltbush - <i>Atriplex polycarpa</i> |
| | Desert Tobacco - <i>Nicotiana obtusifolia</i> |

- | Common Name - Scientific Name | |
|-------------------------------|--|
| | Goodding's Willow - <i>Salix gooddingii</i> |
| | Hillside Palo Verde - <i>Parkinsonia microphylla</i> |
| | Honey Mesquite - <i>Prosopis glandulosa</i> |
| | Screwbean Mesquite - <i>Prosopis pubescens</i> |

- | Common Name - Scientific Name | |
|-------------------------------|--|
| | Blue Palo Verde - <i>Parkinsonia florida</i> |
| | Blue Paloverde/Honey Mesquite - Mixed |
| | Screwbean Mesquite - <i>Prosopis pubescens</i> |
| | Cattle Saltbush - <i>Atriplex polycarpa</i> |

- | | |
|--|--|
| | Hillside Palo Verde - <i>Parkinsonia florida</i> |
| | Honey Mesquite - <i>Prosopis glandulosa</i> |
| | Screwbean Mesquite - <i>Prosopis pubescens</i> |
| | Restoration Area |

FIGURE 4
**CULTURALLY SIGNIFICANT TREES
AND SHRUBS IN THE PROJECT AREA**

ETHNOBOTANY SURVEY
PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT,
NEEDLES, CALIFORNIA

western honey mesquite, cattle saltbush, and common reed were widespread and found in up to 72% (i.e., 8 of 11) of the survey segments. Location data for culturally significant plants are presented in Appendix E.

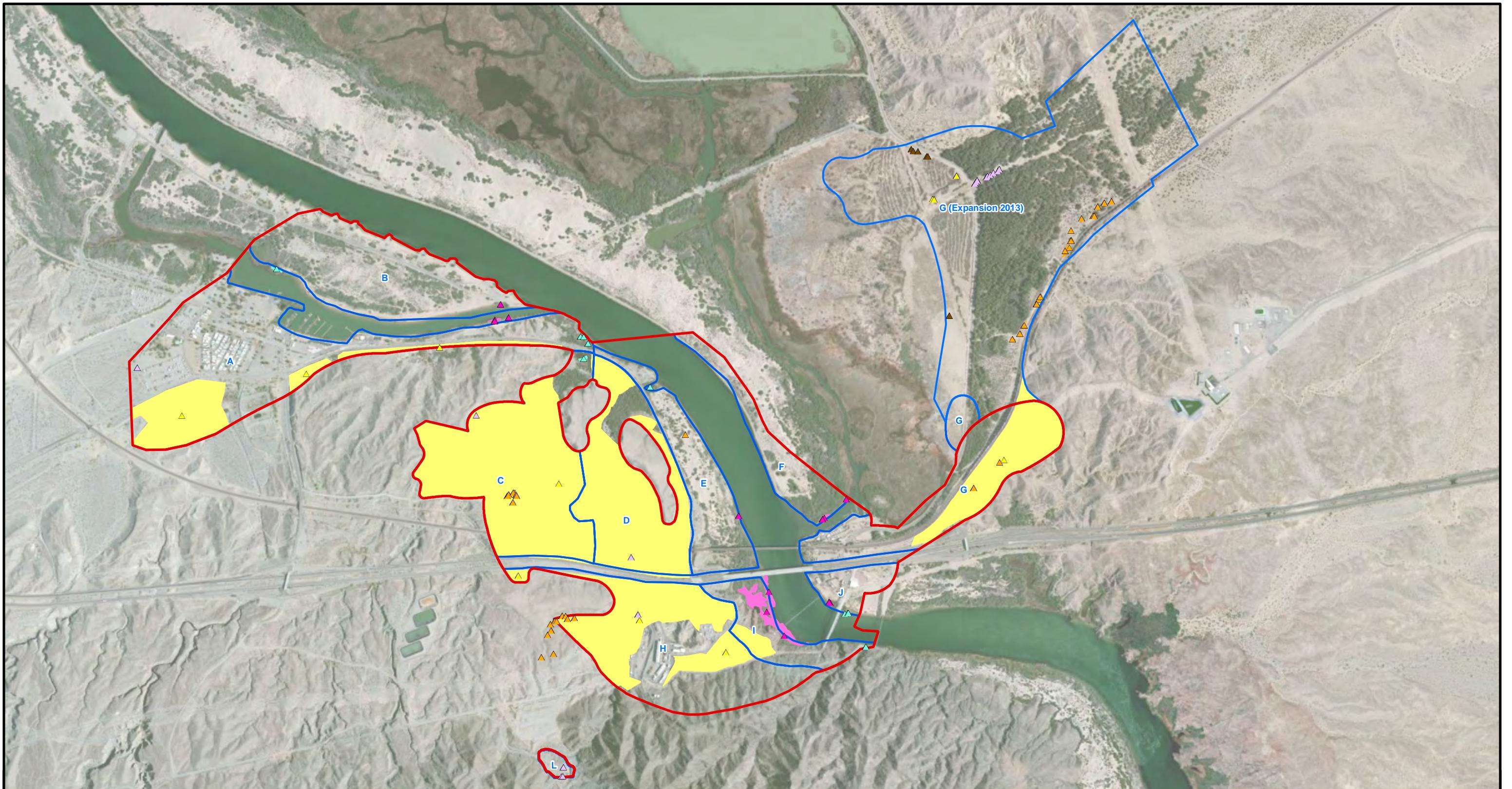
5.4 Probability of Missed Occurrences due to Below-average Rainfall

The 2011-2012 rainfall year (July through March), measured in the Project Area at IM-3 near Bat Cave Wash, was below average (2.75" versus 4.5") and this lack of precipitation affected the germination and growth of annuals and herbaceous perennials in the Project Area. However, there are only two annuals on the PLA list that had a reasonable potential to occur in the Project Area that were not identified during any of the numerous surveys. One of these annuals, fragrant flatsedge, is a wetland plant and would be relatively unaffected by rainfall, because of the buffering effects of the Colorado River and common sunflower is a weedy species and is probably less susceptible to below average rainfall conditions. Furthermore, their dried skeletons can persist in the environment for over a year and no such skeletons were observed during the August 2011 or any subsequent surveys, despite identifying skeletons from other ethnoplants (e.g., chia and golden suncups) that had persisted since the spring of 2011.

Additional floristic surveys were also completed in the spring of 2013 that focused on areas where culturally significant herbaceous plant species were most likely to be present within the Project Area. The purpose of these surveys was to obtain a better estimate on the size of and distribution of culturally significant annuals and herbaceous perennials plant populations during a more favorable rainfall year.

5.5 Culturally Significant Plants Compared to Special-status Plants

Plants on the list in Appendix PLA of the EIR are protected first and foremost by virtue of their cultural significance to the Native American tribes, whether or not they have protection under any federal or state legislation. Most (9 of 14) of the ethnoplant species occurring in the Project Area have no special status under California or Arizona statutes and are not considered to be rare, endangered or threatened under federal laws. However, the remaining four species, blue palo verde, hillside palo verde, western honey mesquite, and screwbean mesquite, are protected under the California Desert Native Plants Act (CDNPA, 1981) and are listed as category C (Salvage Assessed) by the Arizona Department of Agriculture (ADA, 2012). The primary intent of these regulations is to protect native desert plants from unlawful harvesting for commercial use on both publicly and privately owned lands.


LEGEND

Project Area
 Survey Segments

Herb	Common Name
	Broadleaf cattail
	Chia
	Common reed
	Desert lily
	Golden suncup
	Jimson weed

Scientific Name
<i>Typha latifolia</i>
<i>Salvia columbariae</i>
<i>Phragmites australis</i>
<i>Hesperocalis undulata</i>
<i>Camissonia brevipes</i> ssp. <i>brevipes</i>
<i>Datura wrightii</i>

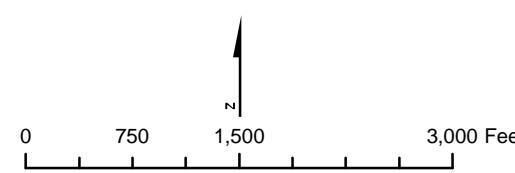


FIGURE 5
CULTURALLY SIGNIFICANT HERBS
IN THE PROJECT AREA

ETHNOBOTANY SURVEY
PG&E TOPOCK GROUNDWATER REMEDIATION PROJECT,
NEEDLES, CALIFORNIA

CH2MHILL

Appendix A

Target List of Culturally Significant Plant Species

from Appendix PLA of the EIR with the Potential to

Occur in the Project Area

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project AreaSpecies in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
TREES					
Blue palo verde	<i>Parkinsonia florida</i>	--/--/CDNPA/B	Apr–May	Creosote bush scrub; washes and floodplains	Present. This species is the most abundant native tree in the Project Area.
Desert ironwood	<i>Olneya tesota</i>	/--/--/CDNPA/--	Apr–May	Creosote bush scrub; desert washes	Possible. Suitable habitat for this tree occurs in the Project Area, but ironwood is not known to occur further north than the Whipple Mountains near Lake Havasu and it was not detected during the surveys.
Hillside (Yellow) palo verde	<i>Parkinsonia microphylla</i>	--/4.3/CDNPA/--	Apr–May	Creosote bush scrub; rocky or gravelly areas	Present. This woody shrub or small tree is locally common in the Project Area in Segments I and H.
Honey mesquite	<i>Prosopis glandulosa</i> var. <i>glandulosa</i>	NA	NA	NA	None. This variety of <i>Prosopis glandulosa</i> does not occur in California or Arizona.
Goodding's willow	<i>Salix gooddingii</i>	--/-/-/-	Mar–Apr	Streamside's, marshes, seepage areas, washes, meadows	Present. Uncommon large tree in Segment B of the Project Area.
Screwbean mesquite	<i>Prosopis pubescens</i>	--/--/CDNPA/C	Apr–Sep	Creosote bush scrub; creek, river bottoms, sandy or gravelly washes, ravines	Present. This medium to large tree is common under the highway and BN&SF bridges that cross the Colorado River, and on the Arizona side of the river opposite the Topock Marina.
Single leaf Pinyon (pinyon pine)	<i>Pinus monophylla</i>	--/-/-/-	Spring	Pinyon/juniper woodland	None. No suitable habitat in Project Area.
Velvet mesquite	<i>Prosopis velutina</i>	--/--/CDNPA/C-	Apr–Jun	Mojave desert scrub; sandy, rocky soils in canyons, washes; only naturalized in California, not native	Unlikely. A single occurrence of this tree is known from the Topock Marsh; however, it was not detected during multiple surveys of the Project Area.
Western honey mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	--/--/CDNPA/B	Apr–Aug	Creosote bush scrub and alkali sink scrub; grasslands, alkali flats, washes, sandy alluvial flats, mesas	Present. This medium to large tree is common in the Project Area especially on the low sandy terraces along the Colorado River.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project Area

Species in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
SHRUBS					
American agave	<i>Agave americana</i>	--/--/--/--	Jun–Aug	Original habitat unknown; grows wild in Mexico on cultivated lands and pine woodlands	None. Leaf succulent shrub, long cultivated by indigenous tribes, commonly occurs on agricultural lands. Not native to California or Arizona.
Arizona desert-thorn	<i>Lycium exsertum</i>	--/--/--/--	Jan–Feb	In washes and on mountain slopes	None. Does not occur in California or in western Arizona at low elevations
Big saltbush	<i>Atriplex lentiformis</i>	-/-/--/--	Jul–Oct	Alkaline or saline washes, dry lakes, scrub	Present. Occurs in Survey Segments A, G, I, and J
Cactus apple	<i>Opuntia engelmannii</i>	--/--/--/B	Apr–Jun	Desert scrub, dry oak woodland	None. Does not occur in California or western Arizona
Candy barrel cactus	<i>Ferocactus wislizeni</i>	--/--/-/B	May–Jun	Low hills, flats and grasslands	None. Not found in California and occurs in central and southern Arizona at elevations over 1,000 feet.
Cattle saltbush	<i>Atriplex polycarpa</i>	--/--/--/--	Jul–Oct	Creosote bush scrub, shadscale scrub, sagebrush scrub, and alkali sink scrub; dry lakes	Present. Locally common along the National Trails Highway and intermixed with creosote bush scrub in some of the larger washes in the Project Area.
Desert agave	<i>Agave deserti</i>	--/--/CDNPA/B	May–Jul	Rocky slopes, washes in desert scrub	Possible. Suitable habit present, but the nearest occurrence is in the Whipple Mts. near Copper Basin, approximately 30 miles southwest of the Project Area.
Desert tobacco	<i>Nicotiana obtusifolia</i> var. <i>obtusifolia</i>	--/--/--/--	Mar–Jun	Creosote bush scrub and Joshua tree woodland; gravelly or rocky washes, slopes	Present. Scattered plants found throughout the Project Area – generally uncommon.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project AreaSpecies in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
Fremont's desert thorn	<i>Lycium fremontii</i>	--/~/--/--	Mar–Apr	Alkaline soils, flats	Possible. Some suitable habitat present, but the nearest occurrences are in Whipple Mountains near Cupcake Butte and Parker, approximately 28 miles southwest of Project Area.
Jojoba	<i>Simmondsia chinensis</i>	--/~/--/--	Mar–May	Creosote bush scrub, Joshua tree woodland, chaparral	Unlikely. Suitable habitat present, but there are no reported occurrences within 75 miles of the Project Area.
Indian rushpea	<i>Hoffmannseggia glauca</i>	--/~/--/--	Apr–Jun	Dry, alkaline flats in deserts and disturbed areas	Unlikely. Some suitable habitat is present, but the nearest reported occurrences are approximately 52 miles northwest of Project Area.
Iodine bush	<i>Allenrolfea occidentalis</i>	--/~/--/--	Jun–Aug	Alkali sink scrub (saline soils), flats, bluffs.	Possible. Suitable habitat is present, but the nearest reported occurrence is near Earp, 40 miles south of Topock.
Lotebush	<i>Ziziphus obtusifolia</i> var. <i>canescens</i>	--/~/--/--	Apr–Jun	Desert scrub	Possible. Occurrences known from Chemehuevi Wash in the Whipple Mountains 14 miles SW of Project Area.
Mojave yucca	<i>Yucca schidigera</i>	--/~/CDNPA/B	Apr–May	Chaparral, creosote bush scrub	Possible. Nearest known occurrence is 10 miles south of Needles.
Mulefat	<i>Baccharis salicifolia</i>	--/~/--/--	All year	Coastal sage scrub, foothill woodland, valley grassland, moist stream sides, canyon bottoms, irrigation ditches	Possible. Known to occur in the Topock Marsh.
Parry's agave	<i>Agave parryi</i>	--/~/CDNPA/B	Jun–Aug	Rocky slopes, grasslands, oak woodland, pine forests, and chaparral	None. Not known from California or Mohave County, Arizona.
Scrub live oak	<i>Quercus turbinella</i>	--/~/--/--	Apr–Jun	Pinyon/juniper woodland	None. No suitable habitat; known only from higher elevations.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project Area

Species in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
Spiny chloracantha	<i>Chloracantha spinosa</i>	--/--/--	Jun–Dec	Creosote bush scrub and alkali sink scrub; seeps, moist stream sides, ditches, sometimes saline or drier areas	Possible. Suitable habitat is present, but nearest reported occurrence is near Big River, approximately 40 miles south of the project area. .
Staghorn cholla	<i>Cylindropuntia versicolor</i> ³	--/--/B	May–Jun	Creosote bush scrub; gravelly or rocky places	None. This species does not occur in California or in western Mojave County, Arizona.
HERBACEOUS PLANTS					
Bearded cupgrass	<i>Eriochloa aristata</i>	--/--/--	Jun–Nov	Wetlands; seasonal streams, riverbanks	None. Suitable habitat is present, but the nearest reported occurrence is over100 miles from the Project Area.
Beans	<i>Phaseolus vulgaris</i>	--/--/--	Summer	Cultivated lands	None. No suitable habitat, known only from cultivated lands.
Blunt tastymustard	<i>Descurainia obtusa</i>	--/--/--	May–Jun	Gravelly flats, open woods, lake margins	None. No suitable habitat
Broadleaf arrowhead	<i>Sagittaria latifolia</i>	--/--/--	Jul–Aug	Freshwater wetlands ponds, slow streams, ditches	None. Suitable habitat is present, but there are no reported occurrences in western Riverside or San Bernardino counties in California and is not reported from Mojave County, Arizona
Broadleaf cattail	<i>Typha latifolia</i>	--/--/--	Jun–Jul	Freshwater wetlands and marshes	Present. Perennial herb, known to occur in Segments A, C, E, and I of the Project Area.
Careless weed	<i>Amaranthus palmeri</i>	--/--/--	Aug–Nov	Creosote bush scrub, roadside ditches, fields, arroyos	None. Suitable habitat present, but there are no known occurrences within 90 miles of the Project Area.
Chia	<i>Salvia columbariae</i>	--/--/--	Mar–Jun	Creosote bush scrub chaparral, coastal sage scrub; dry, disturbed sites	Present. Annual herb that is present in Segments A and D (Bat Cave Wash) of the Project Area.
Common reed	<i>Phragmites australis</i>	--/--/--	Jul–Nov	Wetlands along rivers	Present. Along Colorado River in Segments A, E, I, F.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project AreaSpecies in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
Common sunflower	<i>Helianthus annuus</i>	--/--/--	Jul–Oct	Disturbed areas in shrublands and many habitats	Possible. Suitable habitat is present, known occurrences from Parker Dam Road 18 miles south of the Project Area.
Crookneck squash	<i>Cucurbita moschata</i>	--/--/--	Jun–Aug	Cultivated lands	None. No suitable habitat, known only from cultivated lands.
Jimson weed (Datura)	<i>Datura wrightii</i>	--/--/--	Apr–Oct	Creosote bush scrub, coastal sage scrub, valley grassland, Joshua tree woodland, pinyon/juniper woodland; sandy or gravelly open areas	Present. Found in barren areas following 2008 wildfire and on the Havasu National Wildlife Refuge in Segment G
Desert lily	<i>Hesperocallis undulata</i>	--/--/B	Mar–May	Desert shrublands; sandy flats and washes	Present. Bulbous perennial, known to occur in sandy areas of Section G.
Fendler's ground cherry	<i>Physalis hederifolia</i> var. <i>fendleri</i>	--/--/--	May–Jul	Gravelly to rocky slopes	None. Not known to occur below 2900 feet elevation.
Field pumpkin	<i>Cucurbita pepo</i>	--/--/--	June–Aug	Cultivated lands	None. No suitable habitat, known only from cultivated lands.
Fragrant flatsedge	<i>Cyperus odoratus</i>	--/--/--	Jul–Oct	Wetlands; disturbed soils	Possible. Suitable habitat present, nearest occurrence reported occurrence is approximately 12 miles northwest of the Project Area near Needles.
Fremont's goosefoot	<i>Chenopodium fremontii</i>	--/--/--	Jun–Oct	Shaded places, shrubland, coniferous forests	None. No suitable habitat; Project Area considerably below elevation range of the species.
Golden suncup	<i>Chylismia brevipes</i> subsp. <i>brevipes</i>	--/--/--	Mar–May	Sandy slopes, washes, alluvial fans	Present. Very common and widespread in Segments A,C,D, G and H.
Indian woodoats	<i>Chasmanthium latifolium</i>	--/--/--	Jun–Aug	Woodlands; moist, fertile soils along creek and river banks	None. Very limited suitable habitat; no known occurrences in California or Mojave County, Arizona.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project Area

Species in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
Mexican lovegrass	<i>Eragrostis mexicana</i> ssp. <i>mexicana</i>	--/--/--/--	Jul–Oct	Disturbed areas; generally open sites	None. Species occurs in more mountainous areas at elevations between 4,000 and 8,500 feet...
Mexican panic grass	<i>Panicum hirticaule</i>	--/--/--/--	Jul–Oct	Creosote bush scrub; sandy soils, open sites	Unlikely. Suitable habitat present; however, typically occurs at higher elevations (>1,000 feet), nearest reported occurrence is over 50 miles northwest of the Project Area near Nipton, California.
New Mexico giant hyssop	<i>Agastache pallidiflora</i> ssp. <i>neomexicana</i> var. <i>neomexicana</i>	--/--/--/--	Jul–Oct	Moist canyons at middle elevations	None. No suitable habitat; not known from California or Mohave County, Arizona.
Valley redstem	<i>Ammannia coccinea</i>	--/--/--/--	Jun–Aug	Many plant communities; wet places, drying ponds, lake and creek margins	None. Some suitable habitat present, but there are no occurrences known within 100 miles of the Project Area.
Sandfood	<i>Pholisma sonorae</i>	S/1B.2/--/A	Apr–May	Dunes, sandy areas	Unlikely. Suitable sandy habitat present; nearest known location is dunes near Parker, Arizona, approximately 40 miles south of the Project Area
Sauwi	<i>Panicum sonorum</i> (syn. <i>P. hirticaule</i> ssp. <i>hirticaule</i>)	--/--/--/--	Jun–Aug	Domesticated, river flood plains	None. Cultivar of <i>P. hirticaule</i> ; no known occurrences near the Project Area. Reported only from Yuma County in Arizona, nearest reported location is over 70 miles southwest of the Project Area near Clark's Pass along Highway 62.
Tepary bean	<i>Phaseolus acutifolius</i> var. <i>latifolius</i>	--/--/--/--	Jun–Aug	Cultivated lands	None. No suitable habitat, known only from cultivated lands.

APPENDIX A

Target List of Culturally Significant Plant Species from Appendix PLA of the EIR with the Potential to Occur in the Project Area

Species in **bold** are present in one or more of the survey segments of the Project Area

See below Table 1 for Sources, Conservation status abbreviations, and Occurrence potential definitions.

Common Name	Scientific Name	Status ¹ BLM/CRPR/CDNPA/ADA	Flowering Period	Habitat	Presence or Potential to Occur ²
-------------	-----------------	---	---------------------	---------	---

¹ Conservation status abbreviations:

BLM designations

S - The California State Director has also conferred sensitive status on California State Endangered, Threatened, and Rare species, or species on List 1B (plants rare and endangered in California and elsewhere) of the CNPS' Inventory of Rare and Endangered Plants of California

CPRP (California Rare Plant Ranks - formerly CNPS Lists)

1B.2 Plants rare, threatened or endangered in California and elsewhere and are considered to be fairly endangered in California.

4.3 Plants of limited distribution – a watch list; Not very endangered in California.

Department of Food and Agriculture designations:

CDNPA Plants that are protected by the California Desert Native Plants Act

ADA (Arizona Department of Agriculture) designations:

B. Salvage Restricted Protected Native Plants

C. Salvage Assessed Protected Native Plants

² Potential to occur definitions:

Present: Species observed in one or more of the survey segments of the Project Area.

Possible: Species not observed on the site, however conditions suitable for occurrence.

Unlikely: Species not observed on the site, conditions marginal for occurrence.

None: Species or suitable habitat not observed on the site during protocol-level surveys

Sources:

California Native Plant Society 2011; California Natural Diversity Database 2011; Consortium of California Herbaria 2011; Jepson Online Interchange 2011; Calflora 2012.

Appendix B

Vascular Plant Species Observed in the

Project Area

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
GYMNOSPERMS		
EPHEDRACEAE	ephedra family	
<i>Ephedra nevadensis</i>	joint fir	H, I
ANGIOSPERMS-DICOTS		
AIZOACEAE	ice plant family	
<i>Sesuvium verrucosum</i>	<i>verrucose sea purslane</i>	G
<i>Trianthema portulacastrum</i>	horse-purslane	G
AMARANTHACEAE	amaranth family	
<i>Amaranthus fimbriatus</i>	fringed amaranth	A, C, I
<i>Tidestromia oblongifolia</i>	honeysweet	A, B, C, D, E, F, G, H, I, J, K
APIACEAE	carrot family	
<i>Bowlesia incana</i>	hoary bowlesia	G
<i>Hydrocotyle verticillata</i>	marsh pennywort	A, B, E, F
APOCYNACEAE	milkweed family	
<i>Asclepias albicans</i>	white-stemmed milkweed	C, H, L
<i>Asclepias subulata</i>	rush milkweed	C, D, H, L
<i>Funastrum hirtellum</i>	climbing milkweed	A, C, D, E, G, H, I
<i>Nerium oleander*</i>	oleander	A, B, H
ASTERACEAE	sunflower family	
<i>Adenophyllum porophylloides</i>	San Felipe dyssodia	A, C, H, I
<i>Ambrosia dumosa</i>	white bursage	A, C, D, E, F, G, H, I, J, L
<i>Ambrosia salsola</i>	cheesebush	A, B, C, D, E, F, G, H, I, J, L
<i>Atrichoseris platyphylla</i>	gravel-ghost	A, C, D, F, G, H, I, L
<i>Baccharis sarothroides</i>	desert broom	A, B, E, F, I
<i>Bebbia juncea</i> var. <i>aspera</i>	sweetbush	A, C, D, E, G, H, I, J, L
<i>Calycoseris wrightii</i>	white tackstem	A, C, D, E, G, H, I, L
<i>Chaenactis carphoclinia</i>	pebble pincushion	A, C, D, E, G, H, I, J, L
<i>Chaenactis fremontii</i>	Freemont pincushion	G
<i>Chaenactis stevioides</i>	stevia pincushion	G, J
<i>Cirsium</i> sp.	thistle	G
<i>Encelia farinosa</i>	brittlebush	A, B, C, D, E, F, G, H, J, L
<i>Encelia farinosa</i> x <i>frutescens</i>	brittlebush hybrid	E

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
<i>Encelia frutescens</i>	button brittlebush	E, G
<i>Eriophyllum lanosum</i>	white woolly eriophyllum	C, G, L
<i>Eriophyllum wallacei</i>	Wallace's woolly daisy	G
<i>Geraea canescens</i>	desert sunflower	A, C, D, E, G, H, I, J
<i>Lactuca serriola</i>	prickly lettuce	A
<i>Logfia depressa</i>	dwarf cottonrose	G
<i>Malacothrix glabrata</i>	smooth desert dandelion	A, C, D, G, H, L
<i>Monoptilon bellidoides</i>	desert star	A, C, H, L
<i>Palafoxia arida</i>	Spanish needle	A, B, C, D, E, F, G, H, I, J
<i>Pectis papposa</i> var. <i>papposa</i>	chinch-weed	A, C, D, E, G, H
<i>Perityle emoryi</i>	Emory rock daisy	A, C, D, E, H, I, L
<i>Peucephyllum schottii</i>	pygmy-cedar	D, H, I
<i>Pluchea odorata</i>	marsh fleabane	A, B, F, G, I
<i>Pluchea sericea</i>	arrow weed	B, C, D, E, F, G, H, I, J
<i>Porophyllum gracile</i>	slender poreleaf	C, D, H, I
<i>Pseudognaphalium luteoalbum</i>	cudweed	I
<i>Pulicaria paludosa</i>	Spanish false-fleabane	B
<i>Rafinesquia neomexicana</i>	New Mexico desert chicory	C, G
<i>Senecio mohavensis</i>	Mojave groundsel	D, H, I
<i>Sonchus asper</i>	prickly sow-thistle	A, I
<i>Sonchus oleraceus</i>	common sow-thistle	C, H
<i>Stephanomeria pauciflora</i>	skeletonweed	A, B, C, D, E, F, G, H, I, J
<i>Stylocline micropoides</i>	woolly-head nest straw	C, D, G, H
<i>Trichoptilium incisum</i>	yellowdome	D
<i>Xanthisma spinulosum</i> var. <i>gooddingii</i>	goldenweed	H, I
<i>Xanthium strumarium</i>	common cocklebur	B
<hr/>		
BORAGINACEAE	borage family	
<i>Amsinckia menziesii</i>	common fiddleneck	G
<i>Amsinckia tessellata</i>	devil's lettuce	A, C, D, E, G, H, J, L
<i>Cryptantha angustifolia</i>	narrow-leaved cryptantha	A, C, D, E, F, G, H, J, L
<i>Cryptantha barbigera</i> var. <i>barbigera</i>	bearded cryptantha	C, D, E, F, G, H, I, J, L
<i>Cryptantha inaequata</i>	Panamint cryptantha	D
<i>Cryptantha maritima</i>	Guadalupe cryptantha	A, C, D, E, F, G, H, I, J, L

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
<i>Cryptantha micrantha</i>	red-root cryptantha	A, B, E, F, G
<i>Cryptantha nevadensis</i> var. <i>rigida</i>	rigid cryptantha	C, D, G, H
<i>Cryptantha pterocarya</i>	winged-nut cryptantha	A, C, D, E, G, H, I, L
<i>Cryptantha racemosa</i>	shrubby cryptantha	H
<i>Heliotropium curassavicum</i>	alkali heliotrope	A, B, I, G
<i>Nama demissum</i> var. <i>demissum</i>	purple mat	G
<i>Pectocarya heterocarpa</i>	chuckwalla combseed	B, C, E, F, G
<i>Pectocarya platycarpa</i>	broadfruited combseed	C, D, E, F, G, H, I, L
<i>Pectocarya recurvata</i>	curvednut combseed	A, C, D, G, H, I
<i>Phacelia crenulata</i> ssp. <i>ambigua</i>	notch-leaved phacelia	A, C, D, E, F, G, H, I, J, L
<i>Phacelia distans</i>	distant phacelia	C, D, G
<i>Phacelia ivesiana</i>	Ives' phacelia	D, G
<i>Phacelia pedicillata</i>	pedicellate phacelia	D, L
<i>Plagiobothrys jonesii</i>	Mojave popcorn flower	C, H
<i>Tiquilia plicata</i>	fanleaf crinklemat	A, B, E, F, G, H, J
BRASSICACEAE		
	mustard family	
<i>Brassica tournefortii</i>	Saharan mustard	A, B, C, D, E, F, G, H, I, J, L
<i>Descurainia pinnata</i>	pinnate tansy mustard	A, G
<i>Dithyrea californica</i>	California spectacle pod	D
<i>Draba cuneifolia</i>	wedge-leaved draba	C, D, H
<i>Guillenia lasiophylla</i>	California mustard	C, D
<i>Lepidium lasiocarpum</i>	pepperweed	C, D, E, G, H, I, L
<i>Physaria tenella</i>	Moapa bladderpod	G
<i>Raphanus raphanistrum</i>	jointed charlock	G
<i>Sisymbrium altissimum</i>	tumble mustard	G
<i>Sisymbrium orientale</i>	Oriental hedge-mustard	A, B, E, F, G
<i>Thysanocarpus curvipes</i>	fringepod	G
CACTACEAE		
	cactus family	
<i>Cylindropuntia acanthocarpa</i>	buckhorn cholla	C, D, H, I
<i>Cylindropuntia bigelovii</i>	teddy-bear cholla	H
<i>Cylindropuntia echinocarpa</i>	silver cholla	A, C, D, E, G, H
<i>Ferocactus cylindraceus</i> var. <i>cylindraceus</i>	California barrel cactus	C, D, H, I

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
<i>Opuntia basilaris</i> var. <i>basilaris</i>	beavertail cactus	A, C, D, E, G, H, I, L
<i>Mammillaria tetrancistra</i>	corkseed mammillaria	A, E, C, D, H
CAMpanulaceae	bellflower family	
<i>Nemacladus ramosissimus</i>	smallflower threadplant	D, G, H, L
Caryophyllaceae	carnation family	
<i>Achyronychia cooperi</i>	onyx flower	B, E, F, G
Chenopodiaceae	goosefoot family	
<i>Atriplex elegans</i> var. <i>elegans</i>	wheelscale	A
<i>Atriplex fruticulosa</i>	ball saltbush	A
<i>Atriplex hymenelytra</i>	desert holly	A
<i>Atriplex canescens</i>	four-wing saltbush	G
<i>Atriplex lentiformis</i>	big saltbush	A, G, I, J
<i>Atriplex polycarpa</i>	cattle saltbush	A, B, C, D, G, H, I, J
<i>Chenopodium album</i>	white goosefoot	A, E, L
<i>Chenopodium murale</i>	nettle-leaf goosefoot	G
<i>Dysphania ambrosioides</i>	Mexican-tea goosefoot	A, G, L
<i>Salsola tragus</i>	Russian thistle	A, B, C, E, F, G, J
<i>Suaeda moquinii</i>	bush seepweed	A, G
Cucurbitaceae	gourd family	
<i>Cucurbita palmata</i>	coyote gourd	G
Euphorbiaceae	spurge family	
<i>Chamaesyce micromera</i>	desert spurge	A, B, C, D, E, H, I
<i>Chamaesyce polycarpa</i>	small-seeded spurge	A, B, C, D, E, F, G, H, I, J, L
<i>Chamaesyce setiloba</i>	Yuma spurge	A, C, D, H, I, L
<i>Croton californicus</i>	California croton	G
<i>Ditaxis neomexicana</i>	common ditaxis	A, H, L
<i>Stillingia paucidentata</i>	Mojave toothleaf	G, I
Fabaceae	legume family	
<i>Acmsipon maritimus</i> var. <i>maritimus</i>	coastal bird's foot trefoil	D, H
<i>Acmsipon strigosus</i>	strigose bird's foot trefoil	D, G, H, I, L
<i>Astragalus nuttallianus</i> var. <i>imperfectus</i>	turkeypeas	G
<i>Astragalus sabulonum</i>	gravel milkvetch	G
<i>Dalea mollis</i>	hairy indigo-pea	A, C, D, E, G, H, I, L

**APPENDIX B
Vascular Plant Species Observed in the Project Area**

Scientific name	Common name	Survey Segments
<i>Dalea mollissima</i>	downy dalea	D, F, G, I
<i>Lupinus arizonicus</i>	Arizona lupine	A, C, D, E, G, H, J, L
<i>Marina parryi</i>	Parry's marina	A, G
<i>Parkinsonia aculeata</i>	Mexican palo verde	A
<i>Parkinsonia florida</i>	blue palo verde	A, C, D, E, G, H, I, J, L
<i>Parkinsonia microphylla</i>	hillside palo verde	H, I
<i>Prosopis glandulosa</i> var. <i>torreyana</i>	western honey mesquite	A, C, E, G, H, I, J
<i>Prosopis pubescens</i>	screwbean mesquite	A, E, F, G
<i>Psorothamnus spinosus</i>	smoke tree	A, B, C, D, G, J
<i>Senegalia greggii</i>	catclaw acacia	A, B, C, D, G, H, I
FOUQUIERIACEAE	ocotillo family	
<i>Fouquieria splendens</i> ssp. <i>splendens</i>	ocotillo	C, D, H, I
GENTIANACEAE	gentian family	
<i>Eustoma exaltatum</i>	catchfly gentian	B, F
GERANIACEAE	geranium family	
<i>Erodium cicutarium</i>	red-stemmed filaree	A, C, D, E, F, G, H, L
<i>Erodium texanum</i>	Texas filaree	C, G, I
KRAMERIACEAE	rhatany family	
<i>Krameria bicolor</i>	white rhatany	A, C, D, G, H, I, L
<i>Krameria erecta</i>	Pima rhatany	H, I
LAMIACEAE	mint family	
<i>Hyptis emoryi</i>	desert lavender	A, C, D, H, I, L
<i>Salazaria mexicana</i>	bladder sage	C
<i>Salvia columbariae</i>	chia	A, D, G, H, L
LOASACEAE	Blazing star family	
<i>Eucnide urens</i>	rock nettle	I
<i>Mentzelia albicaulis</i>	white-stemmed blazing star	D, E, G, H, L
<i>Mentzelia involucrata</i>	white-bracted mentzelia	A, C, D
<i>Mentzelia tricuspid</i>	spiny-haired blazing star	G
MALVACEAE	mallow family	
<i>Eremalche exilis</i>	white mallow	G
<i>Eremalche rotundifolia</i>	desert fivespot	G
<i>Hibiscus denudatus</i>	paleface hibiscus	I

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
<i>Malva parviflora</i>	small-flowered cheeseweed	A, G
<i>Sphaeralcea ambigua</i> var. <i>ambigua</i>	apicot mallow	C, G, H, L
<i>Sphaeralcea emoryi</i>	Emory's globe mallow	G
MYRTACEAE	myrtle family	
<i>Eucalyptus</i> sp.*	eucalyptus	A, B
NYCTAGINACEAE	four-o'clock family	
<i>Abronia villosa</i> var. <i>villosa</i>	sand verbena	E, F, G, H, J
<i>Allionia incarnata</i> var. <i>incarnata</i>	trailing windmills	A, C, D, G, H, I, L
<i>Boerhavia coccinea</i>	spiderling	A, B, D, E
<i>Boerhavia wrightii</i>	Wright's spiderling	A, C, D, G, H, I, J, L
<i>Mirabilis laevis</i> var. <i>retrorsa</i>	retrorse desert four-o'clock	A, C, D, H, I, L
ONAGRACEAE	evening primrose family	
<i>Chylismia arenaria</i> var. <i>arenaria</i>	mousetail suncup	C, D
<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	golden suncup	A, C, D, E, G, H
<i>Chylismia claviformis</i>	brown-eyed evening primrose	C, D, G, H
<i>Chylismia multijuga</i>	multi-paired suncup	F, G
<i>Eremothera boothii</i> ssp. <i>condensata</i>	Booth's shreading suncup	C, G, H
<i>Eremothera refracta</i>	narrow-leaf suncup	C, D, G
<i>Eulobus californicus</i>	California suncup	G
<i>Oenothera deltoides</i> ssp. <i>deltoides</i>	bird-cage evening primrose	G
<i>Oenothera primiveris</i> ssp. <i>bufonis</i>	desert evening primrose	G
OROBANCHACEAE	broomrape family	
<i>Orobanche cooperi</i>	Cooper's broomrape	G, H
PAPAVERACEAE	poppy family	
<i>Eschscholzia californica</i>	California poppy	G
<i>Eschscholzia glyptosperma</i>	desert golden poppy	A, D, G
<i>Eschscholzia minutiflora</i>	small-flowered California poppy	A, C, D, E, I, L
PHRYMACEAE	lopseed family	
<i>Mimulus bigelovii</i>	Bigelow's monkeyflower	D, H
PLANTAGINACEAE	plantain family	
<i>Antirrhinum filipes</i>	twining snapdragon	D, G
<i>Mohavea confertiflora</i>	Mojave ghost-flower	C, D, H, I
<i>Plantago ovata</i>	ovate plantain	A, B, C, D, E, F, G, H, I, L

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
POLEMONIACEAE	phlox family	
<i>Eriastrum diffusum</i>	miniature woollystar	G
<i>Gilia scopulorum</i>	rock gilia	D, F, I
<i>Langloisia setosissima</i> ssp. <i>setosissima</i>	bristly calico	D
<i>Linanthus jonesii</i>	Jones' linanthus	D, G
<i>Loeseliastrum schottii</i>	Schott's calico	G
POLYGONACEAE	buckwheat family	
<i>Chorizanthe corrugata</i>	wrinkled spineflower	A, C, E, H, I,
<i>Chorizanthe brevicornu</i> var. <i>brevicornu</i>	brittle spineflower	A, C, D, E, G, H, I, L
<i>Chorizanthe rigida</i>	rigid spineflower	A, C, D, E, G, H, I, L
<i>Eriogonum deflexum</i> var. <i>deflexum</i>	flat-crown buckwheat	A, B, F, G, H, I
<i>Eriogonum inflatum</i> var. <i>inflatum</i>	inflated desert trumpet	A, C, D, E, H, I, L
<i>Eriogonum thomasii</i>	Thomas's wild buckwheat	C, D, G, H, I, L
<i>Eriogonum trichopes</i>	little desert buckwheat	A, C, D, G, H, I, L
<i>Polygonum argyrocoleon</i>	silver-sheathed knotweed	H
<i>Pterostegia drymariooides</i>	woodland threadstem	D, H
RESEDACEAE	mignonette family	
<i>Oligomeris linifolia</i>	linear-leaved oligomeris	A, B
RUBIACEAE	coffee family	
<i>Galium angustifolia</i>	narrow-leaved bedstraw	I
SALICACEAE	willow family	
<i>Salix exigua</i>	sand-bar willow	B, E, F, G, I
<i>Salix gooddingii</i>	Goodding's willow	B
<i>Populus fremontii</i>	Fremont's cottonwood	A, B
SOLANACEAE	nightshade family	
<i>Datura wrightii</i>	Jimson weed	G
<i>Lycium andersonii</i>	Anderson's desert-thorn	C, D, H, I
<i>Lycium cooperi</i>	peach thorn	G
<i>Nicotiana obtusifolia</i>	desert tobacco	C, G, H, I, L
<i>Physalis crassifolia</i>	thick-leaf ground cherry	A, C, H, L
TAMARICACEAE	tamarisk family	
<i>Tamarix ramosissima</i>	salt cedar	A, B, C, D, E, F, G, H, I, J
<i>Tamarix aphylla</i>	athel tamarisk	A, B, D, F, G, L

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
URTICACEAE	nettle family	
<i>Parietaria hespera</i> var. <i>hespera</i>	western pellitory	D, I
VERBENACEAE	verbena family	
<i>Phyla nodiflora</i>	turkey-tangle frog-fruit	F
VISCACEAE	mistletoe family	
<i>Phoradendron californicum</i>	desert mistletoe	A, B, C, E, F, G, J
ZYGOPHYLLACEAE	caltrop family	
<i>Fagonia laevis</i>	smooth-stemmed fagonia	I
<i>Kallstroemia californica</i>	California kallstroemia	A, D, G
<i>Larrea tridentata</i>	creosote bush	A, C, D, E, G, —H, L
<i>Tribulus terrestris</i>	puncture vine	A, C, D, G, H, J
MONOCOTS		
AGAVACEAE	century-plant family	
<i>Hesperocallis undulata</i>	desert lily	C, E, G, H
ARECACEAE	palm family	
<i>Washingtonia filifera</i> *	California fan palm	A
<i>Washingtonia robusta</i>	Mexican fan palm	A, B, E, H, J
CYPERACEAE	sedge family	
<i>Cyperus eragrostis</i>	tall flat sedge	A
<i>Eleocharis geniculata</i>	geniculate spikerush	A, B, E, F
<i>Schoenoplectus californicus</i>	California bulrush	A, B, E, F, G, I, J
JUNCACEAE	rush family	
<i>Juncus xiphiooides</i>	iris-leaved rush	B
<i>Juncus</i> sp.	rush	B, F
POACEAE	grass family	
<i>Andropogon glomeratus</i> ssp. <i>scabriglumis</i>	rough-glume bushy blue stem	A, B, G
<i>Aristida adscensionis</i>	six-weeks three awn	A, C, D, E, G, H, I, J, L
<i>Aristida purpurea</i> var. <i>wrightii</i>	purple three-awn	C, E, I
<i>Arundo donax</i>	giant reed	A, E, F, I, J
<i>Avena fatua</i>	wild oat	G
<i>Bouteloua aristidoides</i>	needle grama	A, C, D, E, G, H, I, L
<i>Bouteloua barbata</i> ssp. <i>barbata</i>	six weeks grama	A, C, D, G, H, I, L

APPENDIX B
Vascular Plant Species Observed in the Project Area

Scientific name	Common name	Survey Segments
<i>Bromus arizonicus</i>	Arizona brome	A, C, D, G, H, I
<i>Bromus catharticus</i>	rescue brome	C, D, H
<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome	A, C, D, E, G, H, I, L
<i>Cynodon dactylon</i>	Bermuda grass	A, B, D, E, G, H, J, I
<i>Distichlis spicata</i>	saltgrass	A, E, H
<i>Erioneuron pulchellum</i>	fluff grass	H, I
<i>Festuca myuros</i>	rat-tail fescue	C, D, E, G
<i>Festuca octoflora</i>	six weeks fescue	C, D
<i>Hordeum murinum</i> ssp. <i>glaucum</i>	glaucus barley	A, B, C, E, G, H, I, J
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	hare barley	G
<i>Muhlenbergia microsperma</i>	small seeded muhlenbergia	F
<i>Paspalum dilatatum</i>	dallis grass	A, B, F, I
<i>Pennisetum setaceum</i>	feathertop	A, B, E, I
<i>Phalaris minor</i>	lesser canary grass	A, C, H
<i>Phragmites australis</i>	common reed	A, B, E, F, G, I, J
<i>Pleuraphis jamesii</i>	James' galleta	G
<i>Pleuraphis rigida</i>	big galeta	A, G, H
<i>Schismus barbatus</i>	Mediterranean grass	A, C, D, G, H, I, J, L
<i>Setaria gracilis</i>	knotroot bristlegrass	B
<i>Sporobolus airoides</i>	alkali sacaton	G
<i>Triticum aestivum</i>	wheat	G
THEMIDACEAE		
<i>Androstaphyllum breviflorum</i>	brodiaea family small-flowered androstaphyllum	G
TYPHACEAE		
<i>Typha latifolia</i>	cattail family broad-leaved cattail	A, C, E, G, I, J
<i>Typha domingensis</i>	southern cattail	A

*cultivated

Appendix C

Photographs from Survey Segments of the

Project Area

Photographs from Survey Segments of the Project Area

Plate 1. Segments A and B. (A- 1) Dry wash south of the Park Moabi and the National Trails Highway with rocky hillside on south side; facing west. A-2) Rocky hills on the south side of National Trails Highway looking west with creosote bush scrub and big galeta grass in small valley between slopes. (A-3) Sewage disposal ponds SW of the intersection of Park Moabi Road and National Trails Highway. (A-4) Landscaped and developed camping areas in Park Moabi. (A-5) Pirate's Cove Resort development. (B-1) Arrow weed thickets in central portion of peninsula; tamarisk thicket in background.

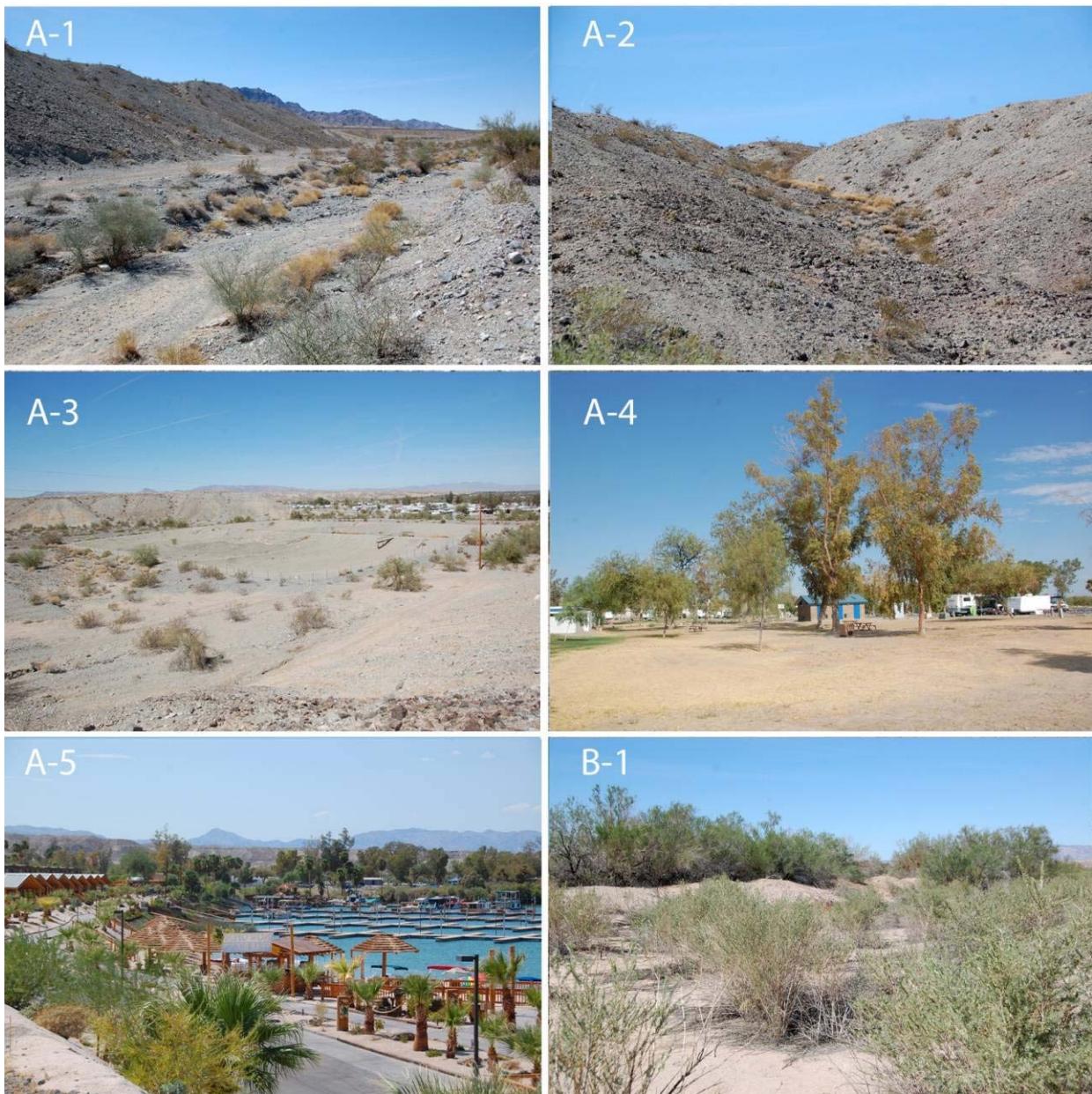


Plate 2. Segments B and C. (B-2) Camping pad on peninsula adjacent to Colorado River. (B-3) Maintained beach opposite Pirate's Cove Resort with western honey mesquite and salt cedar in background. (C-1) Broad wash at north end of Segment C with cattle saltbush and creosote bush. (C-2) Rocky slopes above wash with scattered creosote bush. (C-3) Broad wash at south end of Segment C with blue palo verde woodland and creosote bush scrub. C-4) Desert pavement on hills above washes with creosote bush scrub.



Plate 3. Segments D and E. D-1) Bat Cave Wash with blue palo verde woodland. (D-2). Tamarisk thicket mixed with western honey mesquite at north end of Bat Cave Wash south of National Trails Highway. (E-1) Colorado River and low terrace of dredged sands with tamarisk and arrow weed thickets. (E-2) Close-up of tamarisk thickets on dredged sands. (E-3) National Trails Highway bridge and wetland where Bat Cave Wash enters the Colorado River. (E-4) Upland area of Segment E with creosote bush scrub.

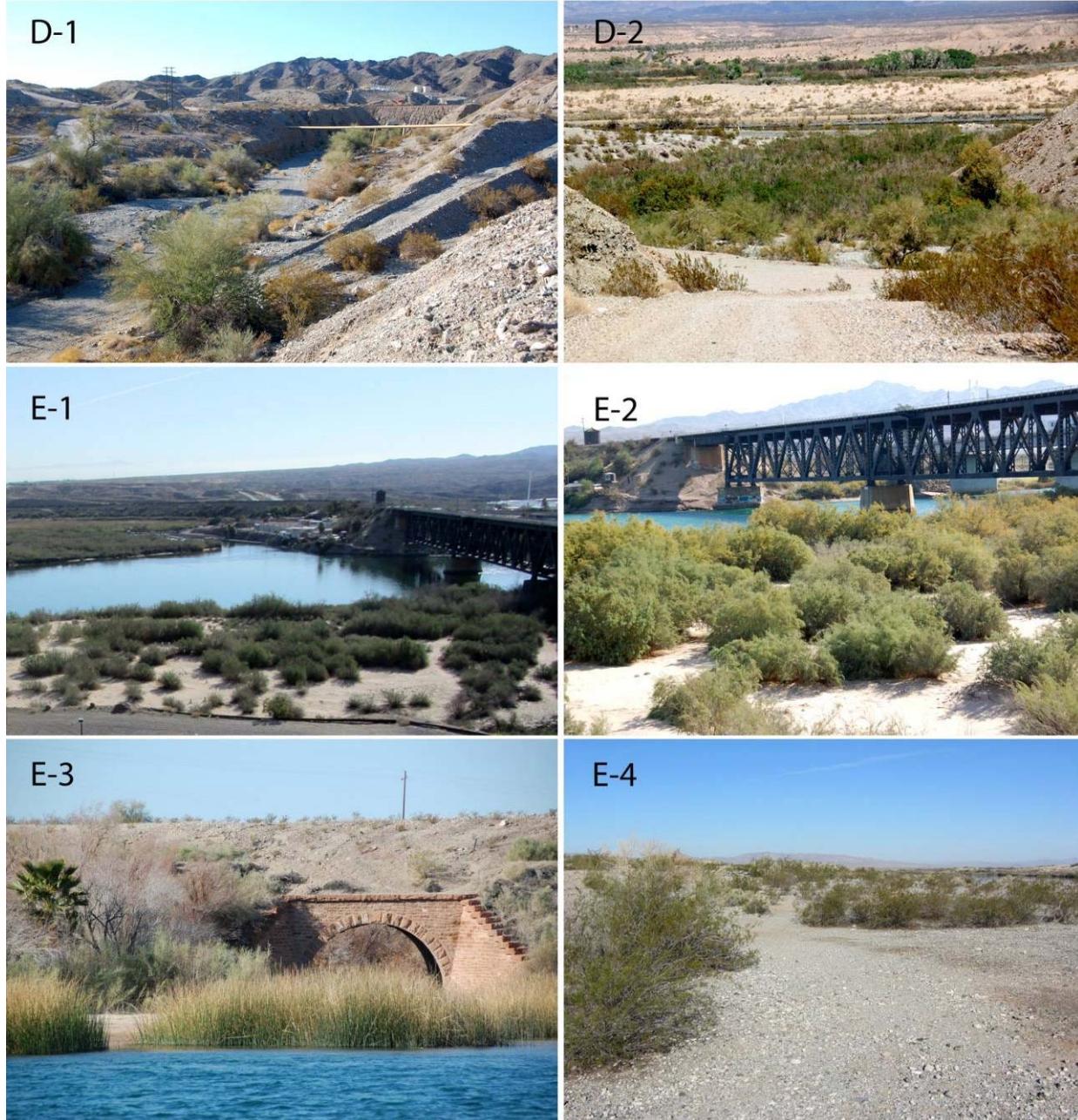


Plate 4. Segments F and G. (F-1) Arrow weed thicket on dredge sands looking north. (F-2) Western honey mesquite, screwbean and tamarisk thickets at southern end of Segment F with small wetland in the southeast corner of photo. (F-3) Close-up of wetland with common reed and sand-bar willow on drier land and California bulrush standing in water. (G-1) Edge of Topock Marsh next to Route 66; big saltbush and salt cedar on higher ground to the left and California bulrush in lower ground to the right. (G-2) Dense tamarisk thicket between BN&SF railroad tracks and Route 66. (G-3) Big saltbush on alkaline soils north of the Topock Marsh, west of County Road 10.

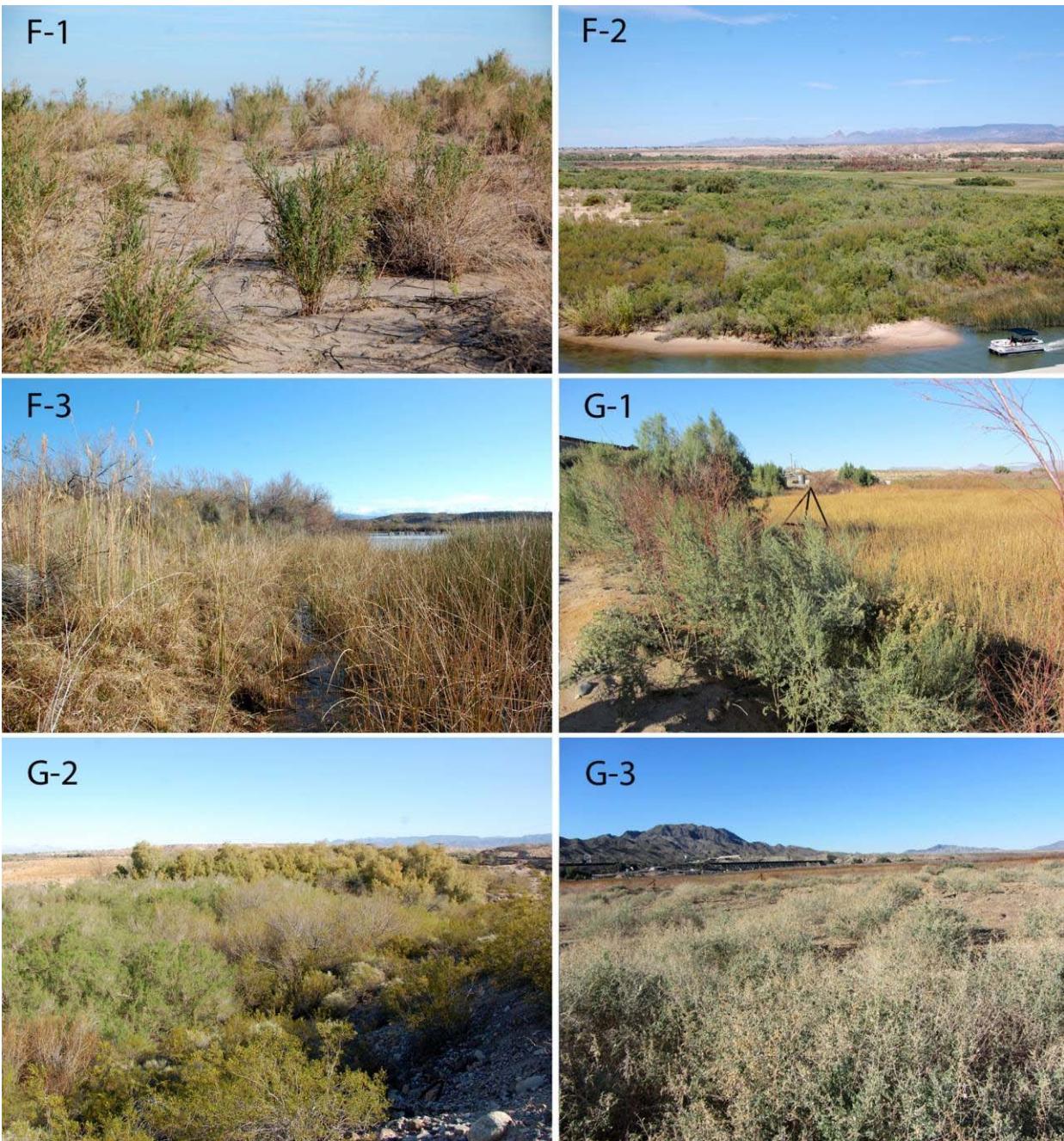


Plate 5. Segment G. (G-6) Native vegetation planting (screwbean mesquite) in burn area on the Havasu National Wildlife Refuge. (G-7) Barren area on west side of Oatman-Topock Highway in 2008 burn area on the Havasu National Wildlife Refuge. (G-8) Dense athel tamarix thicket and southern edge of blue palo verde woodland in the northern part of the Segment, east of the Oatman-Topock Highway. (G-9) Cleared pipeline right-of-way in northeast part of the Survey Segment.



Plate 6. Segments G and H. (G-4) Sandy area with spring annuals including multi-paired suncup, stevia pincushion, brittle spineflower, *Cryptantha* spp., Spanish needles, and desert sunflower. (G-5) Upland rocky area dominated by creosote bush scrub. (H-1) Steep, disturbed, and eroded alluvial terraces below Topock Compressor Station. (H-2) Upper reaches of Bat Cave Wash below the compressor station. (H-3) Decomposing granitic bedrock of the Chemehuevi Mountains next to dissected alluvial terraces in Segment H. (H-4) Metamorphic rocks of the Chemehuevi Mountains in the eastern part of Segment H.

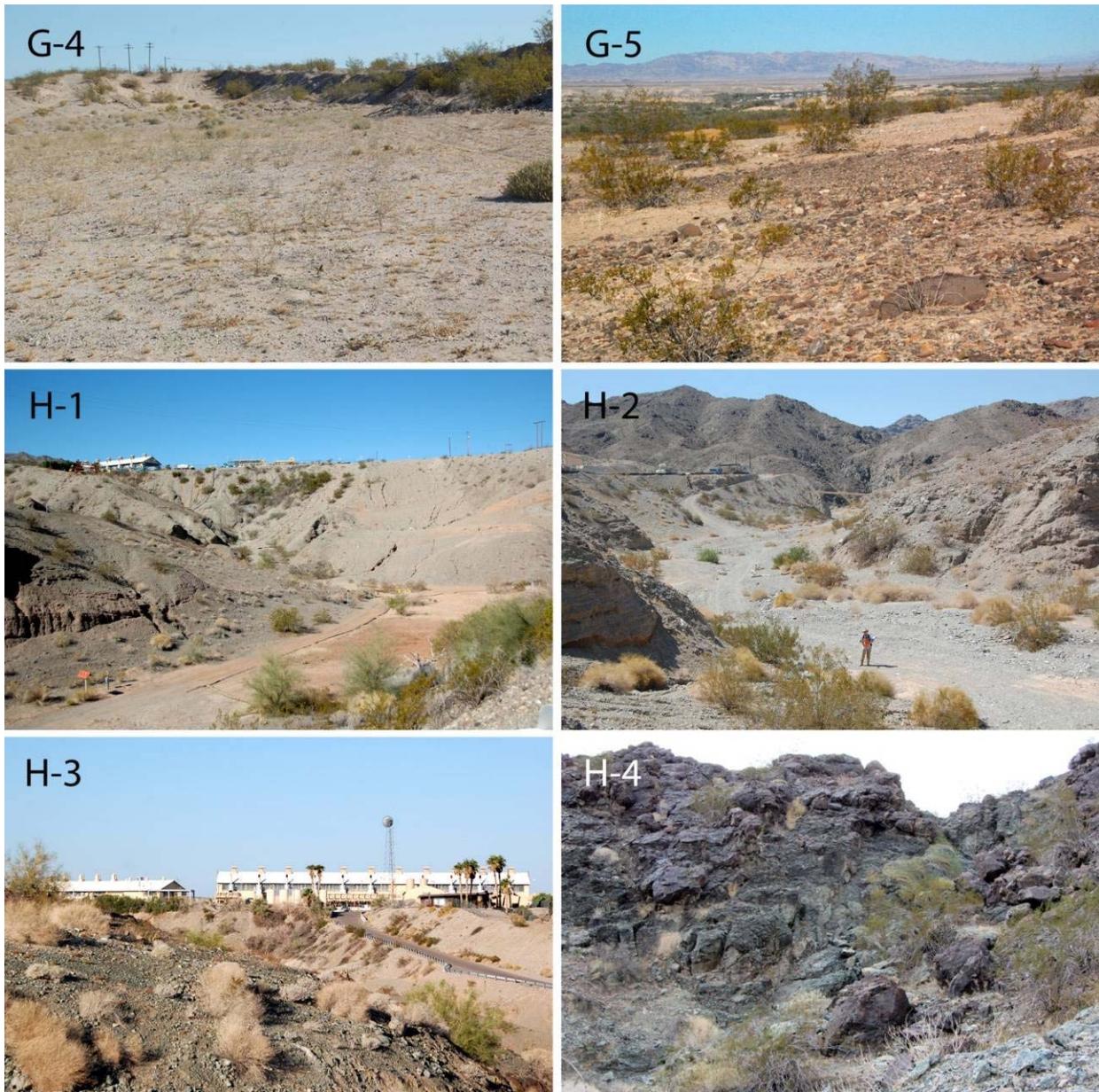
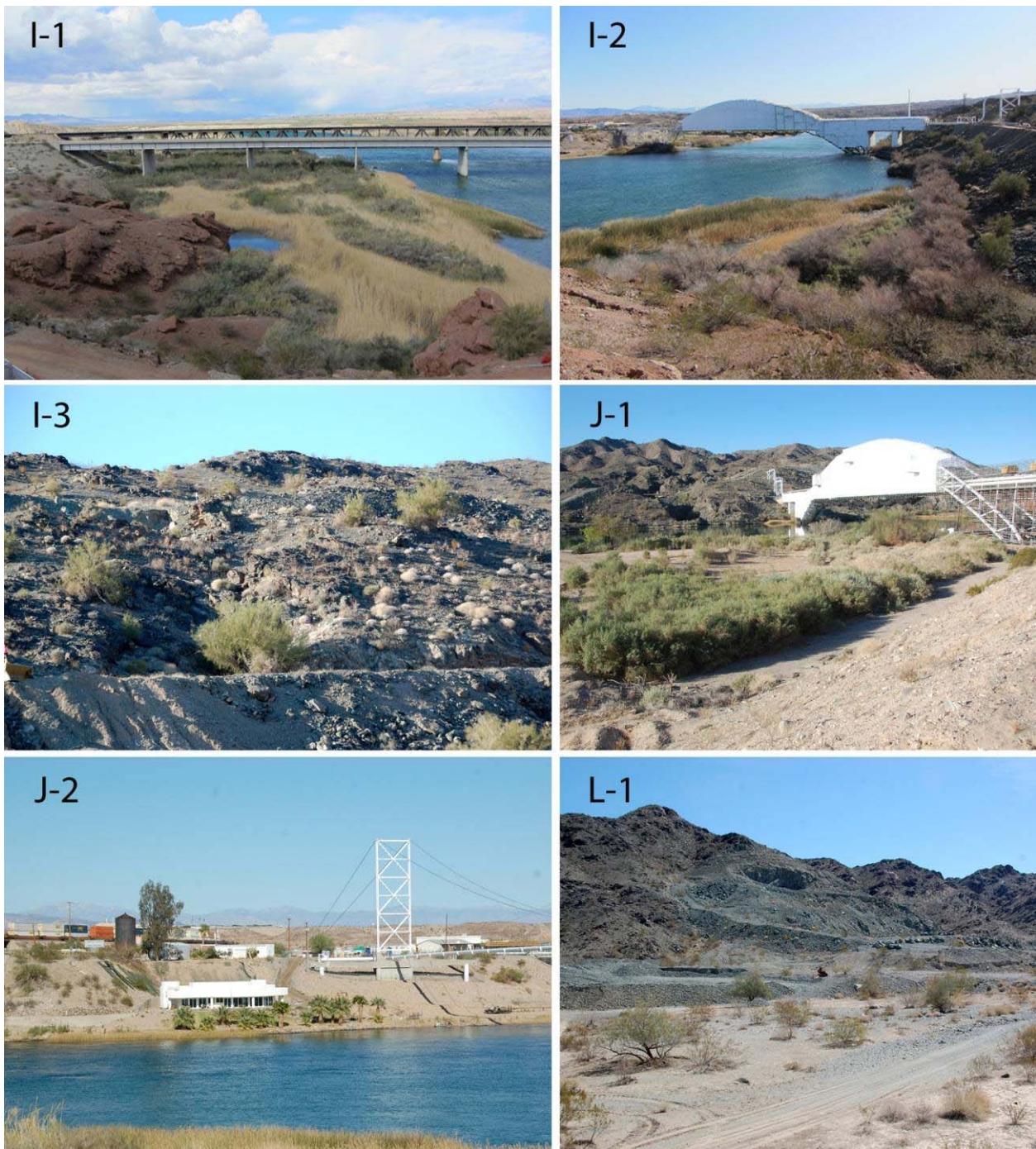


Plate 7. Segments I, J and L. (I-1) Common reed and California bulrush marshes at north end of Segment I with Miocene conglomerate outcrop in lower left of picture. (I-2) California bulrush marsh in river, honey mesquite at base of upland slope and hillside palo verde slightly higher up slope. (I-3) Hillside palo verde on slopes of Segment I above the Colorado River with white bursage and brittle bush. (J-1) Arrow weed and big saltbush in area below private residence along the Colorado River. (J-2) Private residence with landscaped areas (Mexican fan palms) and creosote bush scrub on slopes. (L-1) Blue palo verde woodland in sandy wash at quarry site; gravel piles visible at foot of Chemehuevi Mountains in background.



Appendix D

Photographs of Plants of Cultural Significance

Found in the Project Area

Photographs of Plants of Cultural Significance Found in the Project Area

Plate 1. Palo verde. (1) Blue palo verde (*Parkinsonia florida*) showing characteristic growth habit. (2) Blue paloverde leaves with few, large bluish leaflets. (3) Close-up of blue palo verde flower. (4) Hillside palo verde (*Parkinsonia microphylla*) growth habit (5) Hillside palo verde leaves with many, small green leaflets. (6) Close-up of hillside palo verde flower.

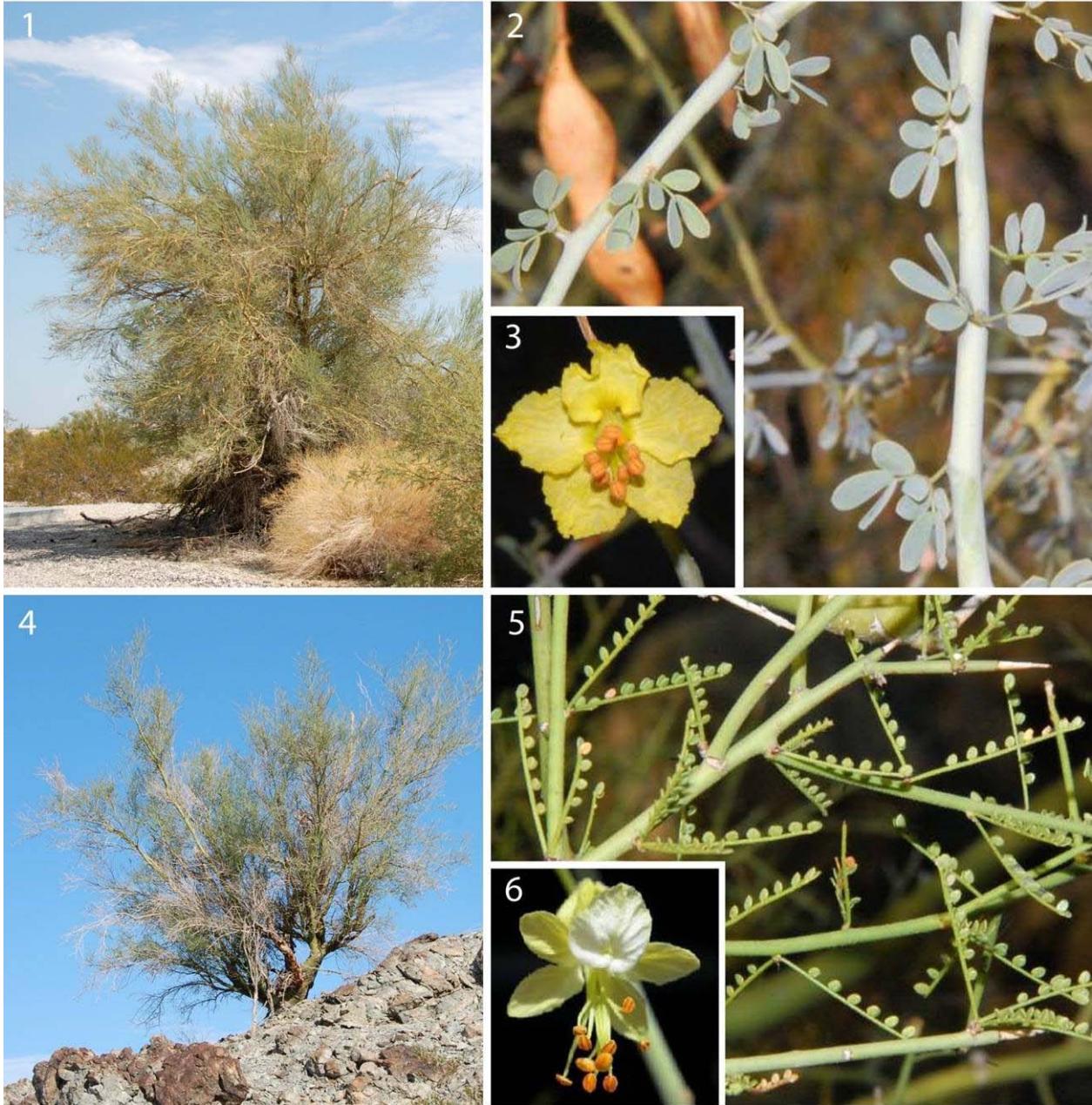


Plate 2. Ethnotrees: Mesquites and willow. 1) Western honey mesquite (*Prosopis glandulosa* var. *torreyana*) branches. (2) Close-up of western honey mesquite fruit. (3) Screwbean mesquite (*Prosopis pubescens*) branches, leaves and fruit. (4) Fruiting branch of Gooodding's willow (*Salix gooddingii*). (5) Leaves of Gooodding's willow.

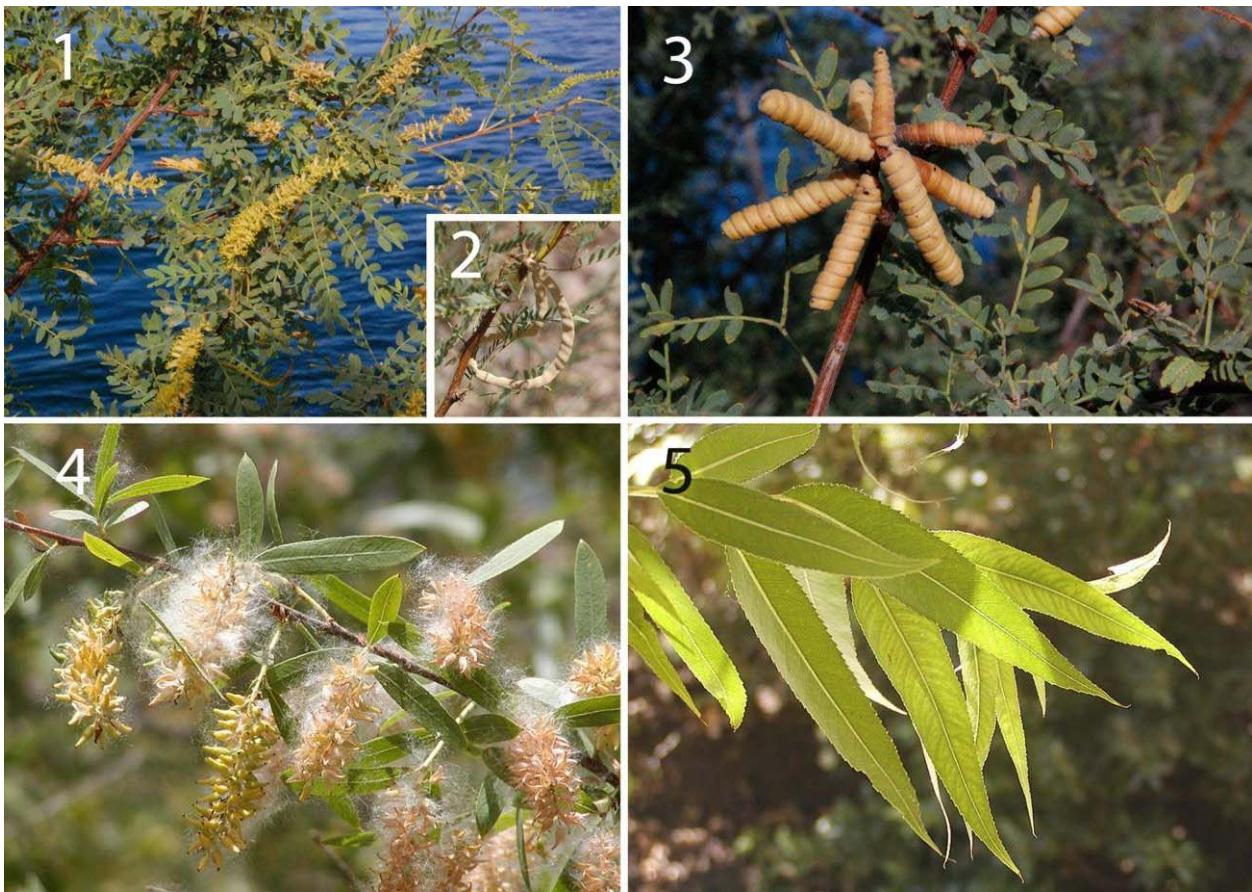


Plate 3. Ethnoshrubs. (1) Big saltbush (*Atriplex lentiformis*) population in Segment G. (2) Close-up of male big saltbush plant. (3) Habit of cattle saltbush (*Atriplex polycarpa*) in Segment G. (4) Close-up of branch of female cattle saltbush plant.

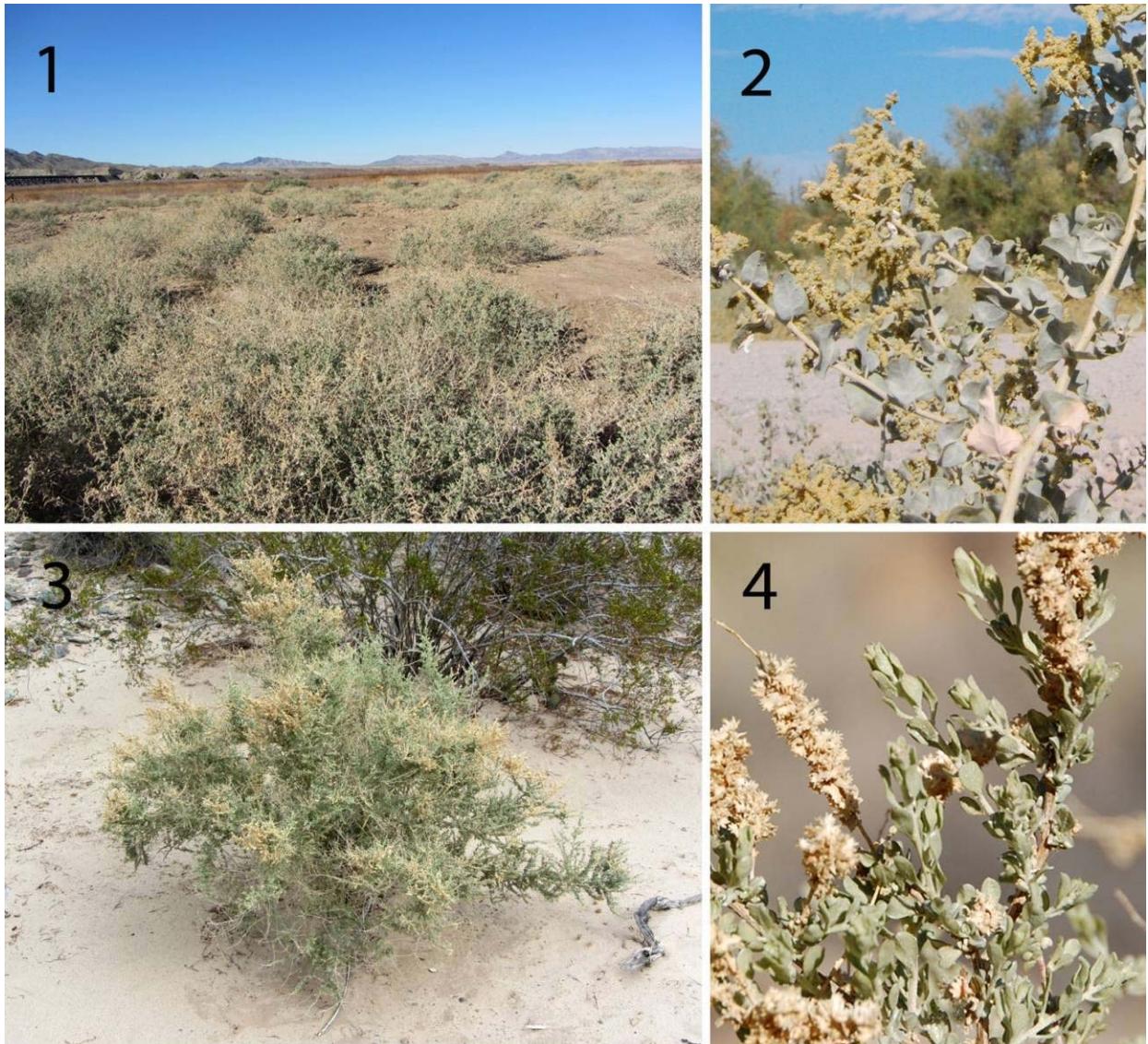


Plate 4. Herbs (1) Dry skeletons of chia (*Salvia columbariae*) from spring 2011. (2) Chia flowers. (3) Desert tobacco (*Nicotiana obtusifolia*). (4) Desert lily (*Hesperocallis undulata*) flowers. (5) Desert lily flower close-up. (6) Golden suncup (*Chylismia brevipes* subsp. *brevipes*).

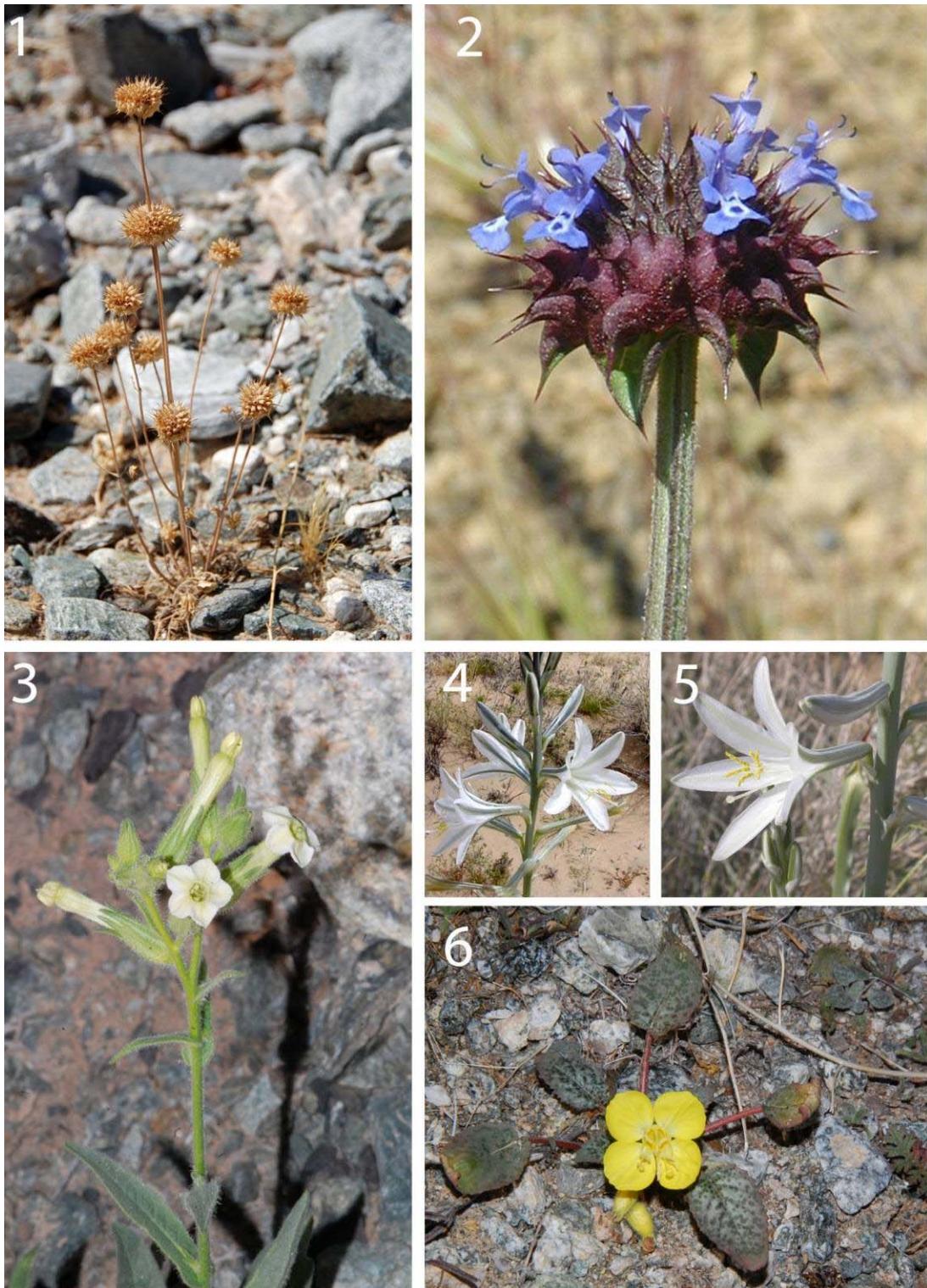


Plate 5. Herbs (1) Hill slopes north of the Topock Compressor Station with abundant golden sun cup in March 2013. (2) Jimson weed (*Datura wrightii*) near revegetation planting area on Havasu National Wildlife Refuge (3) Hill slopes north of the Topock Compressor Station with abundant golden sun cup in March 2013.



Plate 6. Wetland plants. (1) Broadleaf cattail (*Typha latifolia*) marsh in survey Segment C. (2) Close-up of broad-leaved cattail. (3) Common reed (*Phragmites australis*) marsh. (4) Close-up of common reed.



Appendix E

Locations for Culturally Significant Plants in the Project Area

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Trees				
Blue Palo Verde	<i>Parkinsonia florida</i>	7607704	2104843	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607751	2104691	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607756	2104238	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607757	2104226	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607766	2104868	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607800	2104636	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607820	2104151	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607838	2103994	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607859	2104564	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607875	2105036	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607877	2104582	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607877	2104596	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607892	2105104	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607925	2104207	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607943	2104408	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7607986	2103935	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608003	2104259	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608068	2104472	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608092	2104332	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608110	2104284	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608130	2104339	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608155	2104318	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608159	2104405	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608162	2104359	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608172	2104428	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608195	2104348	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608200	2104449	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608227	2104453	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608236	2104477	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608238	2104402	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608255	2104367	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608523	2105721	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608526	2104396	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608570	2104430	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608571	2104431	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608636	2104506	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608649	2103840	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608660	2104519	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608858	2104415	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608903	2103893	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608905	2104034	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7608911	2103783	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608914	2103806	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608916	2103882	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608949	2103979	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608960	2103993	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608969	2104413	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608969	2104257	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608970	2104225	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608972	2104117	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608975	2104373	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608985	2104085	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608995	2104101	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7608997	2104075	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609012	2104376	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609018	2104193	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609023	2104183	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609033	2104211	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609071	2104001	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609310	2104719	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609351	2104446	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609354	2104438	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609386	2104491	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609405	2104435	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609425	2104396	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609534	2104485	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609561	2104511	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609608	2104637	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609608	2104504	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609650	2104513	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609693	2104638	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609693	2105403	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609712	2104477	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609725	2104449	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609772	2104346	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609780	2104276	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609784	2104353	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609830	2104633	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609843	2104592	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609847	2104627	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609869	2104620	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7609876	2104513	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610026	2104734	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7610033	2104726	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610040	2104727	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610068	2104722	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610307	2104837	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610447	2104910	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610534	2104931	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610541	2104935	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610553	2104935	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610632	2104857	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610677	2104886	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610707	2104991	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610715	2105000	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610726	2104995	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7610740	2105005	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611865	2103366	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611866	2103238	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611872	2103243	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611879	2103314	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611881	2103135	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611897	2102945	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611902	2103238	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611911	2103517	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611917	2103245	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611918	2103654	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611921	2103446	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611923	2103669	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611925	2102900	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611944	2103309	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611946	2103571	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611946	2103431	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611977	2103703	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611979	2103807	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7611989	2102944	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612020	2102983	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612041	2103320	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612057	2103330	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612059	2103349	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612064	2103355	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612159	2103898	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612163	2103860	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612187	2103884	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612231	2103895	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7612254	2103889	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612427	2105196	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612437	2103780	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612497	2103806	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612500	2105196	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612505	2105153	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612527	2105155	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612615	2103715	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612619	2102976	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612622	2105162	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612639	2102979	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612667	2103826	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612676	2103829	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612687	2105167	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612694	2103745	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612703	2103868	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612705	2103843	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612705	2103988	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612708	2102938	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612722	2103894	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612747	2102970	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612753	2104153	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612756	2103830	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612759	2103803	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612766	2105180	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612771	2104038	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612774	2102931	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612778	2104073	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612780	2104060	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612782	2102951	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612785	2103871	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612785	2104016	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612794	2103969	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612800	2102872	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612810	2105163	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612813	2103891	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612814	2104040	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612814	2104003	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612814	2104168	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612821	2102876	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612822	2103990	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612824	2104046	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7612827	2104067	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612835	2104239	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612835	2103928	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612836	2104216	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612838	2102932	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612846	2102922	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612847	2104180	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612928	2105987	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612930	2102871	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612934	2104251	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612957	2104260	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612973	2104145	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612979	2104241	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613012	2104241	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613062	2104260	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613063	2104244	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613074	2104259	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613102	2104208	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613120	2104267	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613152	2104208	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613166	2104272	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613174	2104221	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613179	2104236	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613180	2104173	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613193	2104228	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613210	2104221	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613220	2104222	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613220	2104186	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613232	2104214	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613282	2104158	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613286	2104241	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613303	2104117	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613303	2104243	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613318	2104147	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613344	2104204	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613365	2104197	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613368	2104229	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613383	2104185	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613414	2105481	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613421	2105471	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613427	2104183	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613432	2104159	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7613461	2104236	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613461	2104299	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613553	2104379	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613564	2104323	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613568	2104399	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613571	2104358	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613583	2104357	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613587	2104297	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613593	2104558	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613594	2104618	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613599	2104439	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613641	2104544	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613650	2104398	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613652	2104364	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613652	2104483	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613655	2104617	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613667	2104355	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613669	2104444	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613671	2103544	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613674	2103542	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613680	2104389	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613681	2104345	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613683	2104518	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613702	2104487	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613728	2104399	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613728	2104580	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613734	2104620	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613737	2104513	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613745	2104514	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613765	2104418	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613780	2104533	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613786	2104544	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613812	2104519	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613830	2104586	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613834	2104394	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613835	2104458	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613839	2103901	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613841	2102751	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613850	2104260	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613851	2104397	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613853	2104386	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613854	2104367	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7613854	2103871	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613857	2104527	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613859	2104245	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613861	2098901	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613861	2102754	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613866	2104269	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613870	2098911	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613874	2104278	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613889	2104292	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613894	2104089	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613900	2104094	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613910	2104090	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614027	2104911	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614031	2104922	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614423	2103700	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614423	2103700	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614448	2103631	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614448	2103631	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614471	2103625	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614471	2103625	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614474	2103846	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614474	2103846	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614485	2103777	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614485	2103777	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614486	2103736	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614486	2103736	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614487	2103616	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614487	2103616	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614495	2103872	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614495	2103872	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614496	2103866	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614496	2103866	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614497	2103760	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614497	2103760	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614498	2103721	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614498	2103721	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614499	2103803	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614499	2103803	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614500	2103784	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614500	2103784	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614500	2103485	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614500	2103485	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614502	2103436	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614502	2103436	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614503	2103751	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614503	2103751	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614505	2103602	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614505	2103602	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614505	2103948	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614505	2103994	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614506	2103373	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614506	2103373	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614508	2103765	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614508	2103765	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614509	2103681	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614509	2103681	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614510	2103827	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614510	2103827	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614515	2103573	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614515	2103573	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614516	2103698	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614516	2103698	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614518	2103663	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614518	2103663	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614519	2103925	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614519	2103925	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614519	2102563	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614520	2103695	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614520	2103695	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614524	2103713	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614524	2103713	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614525	2103408	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614525	2103408	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614527	2103851	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614527	2103851	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614528	2103904	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614528	2103904	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614528	2103894	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614528	2103894	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614531	2103873	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614531	2103873	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614535	2103387	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614535	2103387	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614540	2103433	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614540	2103433	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614544	2103673	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614544	2103673	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614555	2103731	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614558	2103975	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614563	2103452	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614565	2103714	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614570	2103266	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614571	2103435	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614572	2103931	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614575	2103895	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614576	2103597	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614578	2103817	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614581	2103846	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614587	2103881	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614589	2103581	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614591	2103639	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614592	2103420	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614594	2103537	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614604	2104556	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614605	2103830	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614613	2103579	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614618	2103363	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614623	2103359	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614623	2102557	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614628	2103713	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614629	2104845	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614636	2103746	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614637	2103647	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614640	2103701	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614643	2104521	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614643	2104858	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614664	2103614	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614666	2103346	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614667	2103744	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614674	2103318	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614683	2103745	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614684	2104395	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614697	2103769	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614710	2102921	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614717	2103480	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614717	2103480	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614742	2103219	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614742	2103219	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614744	2103087	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614744	2103087	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614746	2103412	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614746	2103412	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614747	2103079	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614747	2103079	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614750	2103152	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614750	2103152	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614751	2103404	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614760	2103106	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614760	2103106	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614769	2103270	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614769	2103270	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614770	2103052	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614770	2103052	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614773	2103397	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614775	2102634	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614775	2102634	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614775	2103097	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614775	2103097	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614777	2103357	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614777	2103357	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614786	2102969	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614786	2102969	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614791	2103321	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614792	2103004	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614792	2103004	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614798	2103155	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614798	2103155	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614800	2103139	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614800	2103139	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614804	2103126	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614804	2103126	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614805	2103389	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614805	2103389	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614813	2103228	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614813	2103228	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614814	2103388	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614817	2102288	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614817	2102288	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614817	2102225	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614817	2102225	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614823	2101942	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614823	2103337	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614823	2103337	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614825	2102798	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614825	2102798	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614828	2102195	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614828	2102195	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614828	2103327	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614828	2102782	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614828	2102782	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614830	2103034	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614830	2103034	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614832	2103023	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614832	2103023	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614835	2101900	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614836	2103042	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614836	2103042	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614836	2101899	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614837	2102114	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614837	2103068	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614837	2103068	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614841	2101911	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614848	2102688	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614848	2102688	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614856	2102106	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614856	2102997	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614856	2102997	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614857	2102847	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614857	2102847	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614859	2102632	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614859	2102632	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614865	2102211	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614866	2103021	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614866	2103021	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614866	2102890	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614866	2102890	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614868	2102537	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614868	2102537	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614871	2102852	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614871	2102852	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614871	2102273	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614872	2103040	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614872	2103040	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614873	2102000	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614874	2102315	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614874	2102315	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614874	2103173	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614876	2102883	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614876	2102883	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614878	2103161	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614880	2102928	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614880	2102928	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614881	2102917	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614881	2102917	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614882	2103302	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614882	2103003	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614882	2103003	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614883	2102993	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614883	2102993	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614884	2101978	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614885	2102611	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614885	2102788	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614886	2102903	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614886	2102903	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614886	2102920	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614886	2102920	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614886	2103133	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614887	2102001	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614889	2102966	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614889	2102966	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614890	2102476	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614890	2102476	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614890	2102595	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614893	2102547	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614893	2102547	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614893	2102854	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614894	2103088	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614895	2101973	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614896	2102526	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614896	2102526	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614898	2102318	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614898	2102318	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7614898	2102453	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614898	2102453	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614899	2102038	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614901	2102380	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614901	2102380	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614901	2102500	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614901	2102500	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614901	2102114	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614902	2101948	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614902	2102569	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614904	2102063	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614904	2103015	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614904	2101952	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614907	2101927	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614908	2102463	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614908	2102463	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614911	2102950	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614913	2102992	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614923	2102047	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614927	2103229	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614929	2101951	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614935	2103103	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614941	2103016	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614947	2103046	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614954	2102111	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614959	2103147	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614973	2104629	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614974	2102114	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7614980	2102981	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615013	2103199	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615014	2103224	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615014	2103224	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615020	2103247	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615020	2103247	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615031	2103208	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615031	2103208	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615033	2103181	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615037	2104691	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615040	2103198	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615040	2103198	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615054	2103224	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615055	2104674	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7615056	2103166	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615094	2103150	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615094	2103150	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615201	2104737	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615209	2104102	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615229	2104102	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615231	2104094	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615243	2104064	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615246	2104095	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615259	2104070	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615261	2103893	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615270	2103909	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615281	2103965	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615297	2104083	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615312	2103945	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615317	2103936	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615329	2103928	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615331	2103919	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615337	2103983	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615346	2103890	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615466	2103752	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615563	2102968	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615563	2103025	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615575	2100999	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615580	2102948	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615596	2103049	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615598	2103317	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615598	2103052	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615613	2103330	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615631	2102995	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615654	2103109	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615656	2103121	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615668	2103123	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615668	2103156	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615670	2103167	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615676	2103023	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615676	2103150	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615677	2103152	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615680	2103137	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615692	2103057	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615721	2103024	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615754	2102894	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7615763	2102866	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615768	2102834	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615770	2102794	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615772	2102818	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615778	2102775	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615780	2102718	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615780	2102733	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615784	2102689	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615794	2102555	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615795	2102903	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615800	2102855	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615809	2101128	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615814	2101142	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615815	2101122	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615821	2102713	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615838	2101260	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615863	2102887	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615868	2102895	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615882	2101277	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615883	2101487	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615890	2101460	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615905	2100508	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615922	2101285	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615930	2101300	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7615990	2101598	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616002	2101575	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616105	2101505	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616125	2101420	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616132	2101490	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616138	2101389	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616157	2101554	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616200	2101466	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616206	2101482	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616213	2101481	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616218	2101464	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616232	2101370	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616238	2101359	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616251	2101468	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616262	2101393	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616268	2100805	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616283	2100802	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616317	2101497	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7616318	2101443	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616319	2101488	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616408	2101432	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616470	2100475	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616546	2101342	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616600	2100673	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616635	2101305	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616886	2100605	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616894	2100979	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616923	2100647	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616961	2100619	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616971	2100757	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616995	2100997	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616997	2100635	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617012	2100596	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617014	2100645	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617250	2100596	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617294	2100507	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617355	2100465	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617454	2101997	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617484	2101930	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617649	2100762	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617740	2100771	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7617860	2100620	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618052	2101860	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618079	2100511	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618083	2100713	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618261	2101865	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618271	2101833	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618273	2100790	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618427	2101872	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618440	2102174	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618546	2101898	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618560	2101856	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618591	2101846	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618625	2101878	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618652	2101912	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618687	2101919	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618690	2101883	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618843	2101930	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618863	2102193	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618890	2107959	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7618894	2107689	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618901	2101929	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618904	2107967	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618910	2107667	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618917	2107951	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7618986	2107621	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619070	2107240	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619088	2107160	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619477	2107726	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619498	2107716	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619767	2103063	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619795	2103071	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7619910	2106884	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7620342	2103440	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7621645	2108877	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7621837	2108768	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7616544	2101247	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7617924	2100706	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7616422	2100943	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7614540	2104495	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7614727	2103216	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7614890	2102037	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7615594	2103057	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7613842	2104317	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7610082	2104728	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7609252	2104359	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7619542	2102499	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7618538	2101846	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7618361	2101749	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7615755	2102608	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7615821	2102500	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7614321	2104602	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7614444	2104525	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7613863	2104225	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7613870	2104257	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7620094	2104522	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7619996	2104614	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7620255	2105236	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7620291	2105065	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7621015	2106247	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7621042	2106144	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7619384	2108013	Polygon

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Blue Palo Verde	<i>Parkinsonia florida</i>	7619667	2107394	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7619671	2107270	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7607873	2105035	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612796	2103996	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7613087	2104206	Point
Blue Palo Verde	<i>Parkinsonia florida</i>	7612777	2103979	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7607948	2104917	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7608220	2104375	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7613852	2099045	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7611860	2103045	Polygon
Blue Palo Verde	<i>Parkinsonia florida</i>	7611896	2103547	Polygon
Blue Palo Verde/ W. Honey Mesquite	<i>P. florida/P. glandulosa var. torreyana</i>	7612541	2105131	Polygon
Blue Palo Verde/ W. Honey Mesquite	<i>P. florida/P. glandulosa var. torreyana</i>	7612474	2105319	Polygon
Blue Palo Verde/ W. Honey Mesquite	<i>P. florida/P. glandulosa var. torreyana</i>	7619036	2102646	Polygon
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7615864	2100498	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616236	2101093	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616432	2100933	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616606	2101178	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616612	2100688	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616669	2101198	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616672	2100310	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616681	2100386	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616698	2100321	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616705	2100369	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616707	2100287	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616718	2100416	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616721	2100387	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616747	2100452	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616822	2100019	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616822	2100315	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616826	2100289	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616841	2100053	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616867	2100457	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616883	2100485	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616894	2100485	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616901	2100515	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616905	2100049	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616908	2100979	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616930	2100648	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616936	2100640	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7616976	2100753	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617013	2100605	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617041	2100339	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617048	2100394	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617064	2100393	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617065	2100395	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617091	2100302	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617104	2100527	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617110	2100536	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617110	2100283	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617119	2100290	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617125	2100215	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617182	2100202	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617192	2100243	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617214	2100298	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617228	2100245	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617241	2100277	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617267	2100324	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617309	2100511	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617311	2100608	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617316	2100646	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617321	2100573	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617324	2100634	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617327	2100551	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617336	2100494	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617337	2100495	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617342	2100530	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617349	2100546	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617351	2100538	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617366	2100478	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617409	2100544	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617431	2100725	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617460	2100218	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617473	2100584	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617476	2100716	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617476	2100589	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617483	2100224	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617491	2100619	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617502	2100724	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617503	2100547	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617538	2100739	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617540	2100732	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617543	2100521	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617544	2100523	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617568	2100557	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617571	2100559	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617572	2100600	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617576	2100560	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617607	2100588	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617621	2100587	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617635	2100738	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617642	2100733	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617652	2100752	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617665	2100360	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617679	2100380	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617680	2100571	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617680	2100579	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617713	2100478	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617722	2100794	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617750	2100774	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617777	2100662	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617801	2100699	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617804	2100631	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617815	2100654	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617827	2100748	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617846	2100751	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617870	2100619	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7617872	2100579	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618008	2100748	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618021	2100794	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618075	2100783	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618077	2100457	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618154	2100773	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618174	2100800	Point
Hillside Palo Verde	<i>Parkinsonia microphylla</i>	7618435	2100732	Point
Screw Bean Mesquite	<i>Prosopis pubescens</i>	7618950	2107938	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617243	2103078	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617083	2103253	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617431	2102765	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613219	2105485	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613718	2105560	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613936	2105542	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613939	2105455	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613954	2105483	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7613988	2105421	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614031	2105359	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614058	2105397	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614067	2105381	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614077	2105473	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614110	2105393	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614112	2105360	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614115	2105345	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614120	2105389	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614215	2105262	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614250	2105227	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7614293	2105157	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7615318	2104496	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616747	2103919	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616754	2101759	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616926	2103583	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616978	2103549	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616989	2103517	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616997	2103480	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617043	2103441	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617066	2103410	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617187	2102889	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617503	2102886	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617628	2102554	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617641	2102561	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617650	2102579	Point
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616566	2101699	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616527	2101851	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7616950	2103451	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617448	2103299	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617479	2102944	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617482	2103083	Polygon
Screwbean Mesquite	<i>Prosopis pubescens</i>	7617408	2103237	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7608969	2104393	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7608974	2104506	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609760	2104381	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609808	2105761	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610139	2106144	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610222	2106064	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610273	2105876	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610390	2105757	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610401	2104892	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610404	2104861	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610450	2104913	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610469	2104883	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610478	2105763	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610686	2104941	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610733	2105689	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610758	2105002	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610769	2105013	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610948	2105652	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611149	2105582	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611288	2105106	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611388	2106556	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611391	2105199	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611394	2105155	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611418	2105116	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611432	2105115	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611600	2105125	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611818	2105091	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611825	2105137	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611833	2105099	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611871	2105493	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611919	2106412	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612010	2105238	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612056	2105116	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612061	2105112	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612065	2105246	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612078	2105120	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612096	2105259	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612167	2105273	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612205	2105124	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612213	2105133	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612482	2105160	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612566	2105125	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612567	2105247	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612582	2105159	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612721	2105166	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612738	2105170	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612746	2105151	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612795	2105175	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612934	2105174	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612974	2105232	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613033	2105232	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613052	2105189	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613237	2105496	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613322	2105506	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613406	2105509	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613452	2105528	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613483	2105475	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613496	2105513	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613518	2105512	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613562	2105539	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613587	2105541	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613612	2105498	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613676	2105563	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613846	2104251	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613931	2104086	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614010	2105089	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614026	2105084	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614032	2105123	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614034	2105080	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614179	2105234	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614190	2105044	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614210	2105036	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614268	2105023	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614305	2105009	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614331	2104999	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614360	2104978	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614380	2104991	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614479	2104945	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614497	2101108	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614630	2101103	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614766	2100299	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614770	2100369	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614770	2100379	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614943	2101216	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615023	2104781	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615027	2104684	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615030	2104776	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615181	2100186	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615199	2100192	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615264	2104510	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615274	2100015	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615275	2104128	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615332	2103901	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615719	2100361	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615733	2100373	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615734	2103118	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615802	2102982	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615905	2101308	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615921	2101353	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615936	2101424	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615944	2101448	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615983	2102683	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616023	2101380	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616086	2101419	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616125	2100611	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616199	2103241	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616207	2103267	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616262	2103160	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616276	2101215	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616282	2101244	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616310	2101345	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616362	2100854	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616379	2100863	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616380	2100871	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616673	2101286	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616711	2103926	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616835	2100595	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617697	2100808	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617884	2101549	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7618195	2101234	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7618207	2101246	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7618394	2102676	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7618575	2101778	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7619103	2102250	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7619507	2102719	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620112	2103610	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620156	2104022	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620231	2104041	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620384	2103882	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620408	2103852	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620474	2104149	Point
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616242	2102060	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616541	2101466	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616535	2101232	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615463	2100217	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615558	2100306	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616098	2100609	Polygon

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615977	2102590	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615963	2102664	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615921	2102778	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615900	2102800	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614638	2104197	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613891	2104347	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614259	2104994	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614230	2104766	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613971	2105011	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613017	2105164	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611902	2105076	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609973	2106859	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609886	2105693	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620359	2103845	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615841	2102964	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613970	2105066	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613894	2104280	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611889	2105048	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7619968	2104331	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620142	2104339	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7620034	2104615	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7619953	2104583	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7616804	2101107	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617165	2100816	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617597	2100804	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617870	2100774	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7615858	2102901	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614002	2104590	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614051	2105310	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7610616	2104930	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612179	2104939	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611848	2104986	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612639	2105015	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609658	2105355	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7609787	2104632	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617617	2102239	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7617621	2102117	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7618233	2100775	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7611850	2105059	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7612639	2105106	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613847	2104700	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614310	2104586	Polygon

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7614144	2104482	Polygon
Western Honey Mesquite	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	7613856	2105590	Polygon
Goodding's Willow	<i>Salix gooddingii</i>	2386756	12617249	Point
Goodding's Willow	<i>Salix gooddingii</i>	2388562	12618329	Point
Goodding's Willow	<i>Salix gooddingii</i>	2393133	12612472	Point
Shrubs				
Big Saltbush	<i>Atriplex lentiformis</i>	7612512	2105240	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619753	2104945	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619773	2105057	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619795	2104318	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619802	2104395	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619821	2104645	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619830	2104770	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619873	2106701	point
Big Saltbush	<i>Atriplex lentiformis</i>	7619873	2106677	point
Cattle Saltbush	<i>Atriplex polycarpa</i>	7621749	2108720	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7615006	2101254	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7612380	2103368	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7613484	2104454	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7614976	2104733	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7609838	2104453	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7613493	2104577	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7613308	2104412	polygon
Cattle Saltbush	<i>Atriplex polycarpa</i>	7620387	2105328	polygon
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7613934	2099201	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7613938	2099193	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7613944	2099150	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7614910	2101436	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7616665	2101247	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7616665	2101190	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7616667	2101192	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7618082	2100693	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7618262	2100734	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7619017	2107920	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7619042	2107879	point
Desert Tobacco	<i>Nicotiana obtusifolia</i>	7619088	2107136	point
Herbs				
Broad-leaved Cattail	<i>Typha latifolia</i>	7617995	2101230	Polygon
Broad-leaved Cattail	<i>Typha latifolia</i>	7609791	2106207	Polygon
Broad-leaved Cattail	<i>Typha latifolia</i>	7614223	2104914	Polygon
Broad-leaved Cattail	<i>Typha latifolia</i>	7614180	2105232	Point
Broad-leaved Cattail	<i>Typha latifolia</i>	7614225	2105228	Point

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Broad-leaved Cattail	<i>Typha latifolia</i>	7614287	2105132	Point
Broad-leaved Cattail	<i>Typha latifolia</i>	7615181	2104503	Point
Broad-leaved Cattail	<i>Typha latifolia</i>	7618034	2101240	Point
Broad-leaved Cattail	<i>Typha latifolia</i>	7618044	2101242	Point
Broad-leaved Cattail	<i>Typha latifolia</i>	7618297	2100757	Point
Chia	<i>Salvia columbariae</i>	7607781	2104781	Point
Chia	<i>Salvia columbariae</i>	7612669	2104092	Point
Chia	<i>Salvia columbariae</i>	7613901	2098879	Point
Chia	<i>Salvia columbariae</i>	7613923	2098883	Point
Chia	<i>Salvia columbariae</i>	7613930	2099013	Point
Chia	<i>Salvia columbariae</i>	7614906	2102045	Point
Chia	<i>Salvia columbariae</i>	7615006	2101218	Point
Chia	<i>Salvia columbariae</i>	7619872	2107440	Point
Chia	<i>Salvia columbariae</i>	7619885	2107465	Point
Chia	<i>Salvia columbariae</i>	7619901	2107487	Point
Chia	<i>Salvia columbariae</i>	7620034	2107533	Point
Chia	<i>Salvia columbariae</i>	7620046	2107543	Point
Chia	<i>Salvia columbariae</i>	7620049	2107549	Point
Chia	<i>Salvia columbariae</i>	7620092	2107569	Point
Chia	<i>Salvia columbariae</i>	7620134	2107601	Point
Chia	<i>Salvia columbariae</i>	7620198	2107622	Point
Chia	<i>Salvia columbariae</i>	7620220	2107651	Point
Common Reed	<i>Phragmites australis</i>	7617118	2100913	Polygon
Common Reed	<i>Phragmites australis</i>	7616865	2101260	Polygon
Common Reed	<i>Phragmites australis</i>	7612942	2105474	Polygon
Common Reed	<i>Phragmites australis</i>	7616897	2101545	Polygon
Common Reed	<i>Phragmites australis</i>	7617696	2102615	Polygon
Common Reed	<i>Phragmites australis</i>	7617781	2101388	Polygon
Common Reed	<i>Phragmites australis</i>	7612936	2105455	Point
Common Reed	<i>Phragmites australis</i>	7613024	2105694	Point
Common Reed	<i>Phragmites australis</i>	7613139	2105507	Point
Common Reed	<i>Phragmites australis</i>	7616458	2102646	Point
Common Reed	<i>Phragmites australis</i>	7617672	2102594	Point
Common Reed	<i>Phragmites australis</i>	7617765	2101401	Point
Common Reed	<i>Phragmites australis</i>	7618011	2102884	Point
Desert Lilly	<i>Hesperocallis undulata</i>	7620416	2105191	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7620583	2105392	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7620766	2105699	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7620790	2105763	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7620819	2105810	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7621177	2106465	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7621248	2106618	Polygon

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Desert Lilly	<i>Hesperocallis undulata</i>	7621234	2106513	Polygon
Desert Lilly	<i>Hesperocallis undulata</i>	7613228	2102976	Polygon
Desert lilly	<i>Hesperocallis undulata</i>	7613121	2102931	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613141	2102949	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613202	2102838	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613207	2102978	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613245	2102948	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613255	2102933	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613609	2100603	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613703	2100925	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613740	2101077	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613753	2100988	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613788	2100650	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613794	2101119	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613809	2101125	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613832	2101124	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613913	2101201	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613964	2101196	Point
Desert lilly	<i>Hesperocallis undulata</i>	7613988	2101154	Point
Desert lilly	<i>Hesperocallis undulata</i>	7614089	2101168	Point
Desert lilly	<i>Hesperocallis undulata</i>	7615692	2103817	Point
Desert lilly	<i>Hesperocallis undulata</i>	7619851	2103045	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620228	2103414	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620521	2105272	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621257	2106764	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621262	2106625	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621410	2106936	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621576	2106973	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621594	2106973	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621644	2107108	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621736	2107163	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621841	2107187	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620759	2105701	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620813	2105802	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621170	2106470	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620583	2105395	Point
Desert lilly	<i>Hesperocallis undulata</i>	7620412	2105194	Point
Desert lilly	<i>Hesperocallis undulata</i>	7621256	2106616	Point
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7608421	2104089	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7610218	2104691	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7612146	2105074	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7613861	2103110	Polygon

APPENDIX E

Locations for Culturally Significant Plants in the Survey Area

Common Name	Scientific Name	UTM Easting	UTM Northing	Data Type
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7613279	2101780	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7615029	2101138	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7616277	2100676	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7620290	2103450	Polygon
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7619604	2107554	Point
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7619258	2107217	Point
Golden suncup	<i>Chylismia brevipes</i> ssp. <i>brevipes</i>	7619280	2107213	Point
Jimson Weed	<i>Datura wrightii</i>	7618979	2107912	Point
Jimson Weed	<i>Datura wrightii</i>	7619049	2107906	Point
Jimson Weed	<i>Datura wrightii</i>	7619173	2107832	Point
Jimson Weed	<i>Datura wrightii</i>	7619190	2107835	Point
Jimson Weed	<i>Datura wrightii</i>	7619502	2105534	Point
Jimson Weed	<i>Datura wrightii</i>	7618950	2107938	Point