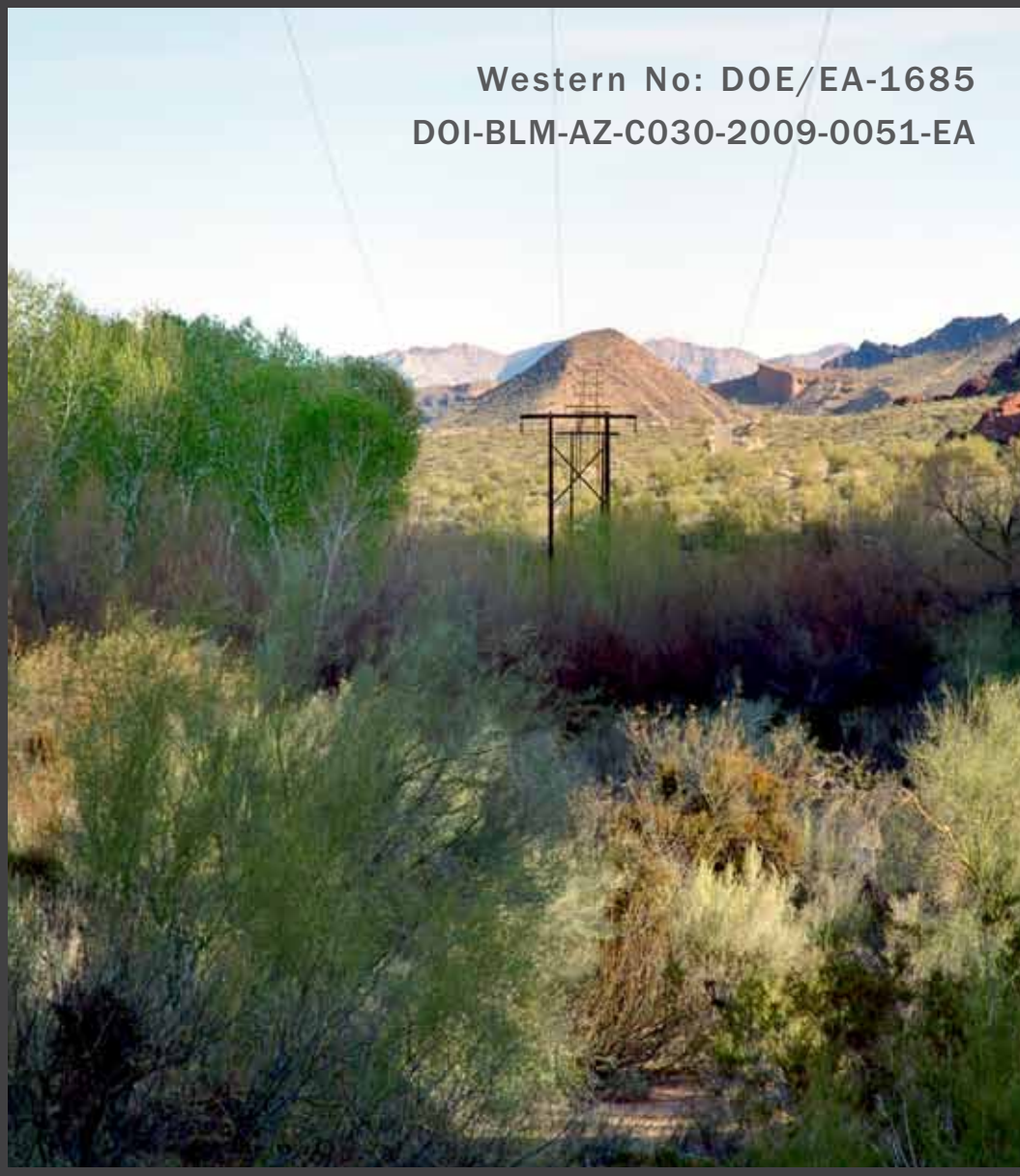
Final

ENVIRONMENTAL ASSESSMENT

FOR PARKER - PLANET TAP 69-KV TRANSMISSION LINE REBUILD, UPGRADE AND RIGHT-OF-WAY ACTION



Western No: DOE/EA-1685

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COOPERATING AGENCIES:

US Bureau of Land Management
US Fish and Wildlife Service

Prepared For:

Western AREA POWER ADMINISTRATION

US Department of Energy
Western Area Power Administration
615 South 43rd Avenue
Phoenix, AZ 85009

FINAL
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Parker–Planet Tap 69-kV Transmission Line Rebuild, Upgrade, and Right-of-Way Action

San Bernardino County, California
and Mohave and La Paz Counties, Arizona

LEAD AGENCY

US Department of Energy
Western Area Power Administration
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COOPERATING AGENCIES

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June 2010

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF PHOTOGRAPHS

LIST OF ABBREVIATIONS AND ACRONYMS

ACSR	aluminum conductor steel reinforced
ADEQ	Arizona Department of Environmental Quality
AGFD	Arizona Game and Fish Department
ADOT	Arizona Department of Transportation
ADWR	Arizona Department of Water Resources
ALRIS	Arizona Land Resources Information System
APE	Area of Potential Effects
APS	Arizona Public Service
ASLD	Arizona State Land Department
ASM	Arizona State Museum
ATIS	Arizona Transportation Information System
ATV(s)	all-terrain vehicle(s)
AZ	Arizona
AZPDES	Arizona Pollutant Discharge Elimination Systems
BLM	US Bureau of Land Management
BMPs	Best Management Practices
BWRNWR	Bill Williams River National Wildlife Refuge
CA	California
CAP	Central Arizona Project
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Corps	US Army Corps of Engineers
CMP	corrugated metal pipe
CWA	Clean Water Act
dBA	decibel "A"-weighted
DOE	US Department of Energy
DOI	US Department of the Interior
DSWR	Desert Southwest Region
EA	Environmental Assessment
EMF	electric and magnetic fields
EPA	US Environmental Protection Agency
ESA	Endangered Species Act of 1973 as amended
ESRI	Environmental Systems Research Institute
FLPMA	Federal Land Policy and Management Act of 1976
flycatcher	Southwestern willow flycatcher
g-force	acceleration of gravity
GIS	Geographic Information System
GLO	General Land Office

HMA	Herd Management Area
IP(s)	Individual Permit(s)
kcmil	thousands of circular mils
kV	kilovolt
kV/m	kilovolts per meter
LCR	Lower Colorado River
LHFO	Lake Havasu Field Office
LHFORMP	Lake Havasu Field Office Resource Management Plan
MEC	Mohave Electric Cooperative, Inc.
mG	milligauss
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NAIP	National Agricultural Imagery Program
NED	National Elevation Dataset
NEPA	National Environmental Policy Act
NESC	National Electrical Safety Code
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWP(s)	Nationwide Permit(s)
NWR	National Wildlife Refuge
OSHA	Occupational Safety and Health Administration
Reclamation	US Bureau of Reclamation
ROW	Rights-of-Way
RMP	Resource Management Plan
RMZ	Recreation Management Zones
SHPO	State Historic Preservation Office
SBEMC	Southwestern Bald Eagle Management Committee
SR	State Route
SRMA	Special Recreation Management Areas
SWPPP	Stormwater Pollution Prevention Plan
SWTC	Southwest Transmission Cooperative, Inc.
US	United States
USDA	US Department of Agriculture
USCB	US Census Bureau
USGS	US Geological Survey
USFWS	US Fish and Wildlife Service
VRM	Visual Resource Management
Western	Western Area Power Administration
WHO	World Health Organization

1.0 INTRODUCTION

This Environmental Assessment (EA) for the Parker–Planet Tap 69-kilovolt (kV) Transmission Line Rebuild, Upgrade, and Right-of-Way Action Project was prepared in compliance with the Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) regulations published in the Code of Federal Regulations (CFR) 40 CFR §1500 – 1508 and the United States (US) Department of Energy (DOE) implementing procedures described in 10 CFR §1021. The EA incorporates information needed by the US Department of Interior's (DOI) Bureau of Land Management (BLM) as described in the BLM Handbook (H-1790-1) to make decisions regarding Rights-of-Way (ROW) shall be in conformance to the *Lake Havasu Field Office Record of Decision and Approved Resource Management Plan (RMP)*.

The potential impacts to the environment are discussed in detail within this document. This EA provides the basis for decisions on whether the effects to land, visual, water, biological, and cultural resources, as well as socioeconomic conditions, would be significant.

The Western Area Power Administration (Western) is the lead Federal agency responsible for preparing the EA. Should the Proposed Action be selected, Western would be the Federal agency responsible for funding, design review, and project management; the Arizona Public Service Company (APS) would design and construct the selected alternative.

Project Location

The Parker–Planet Tap 69-kV Transmission Line crosses lands under the jurisdiction of the BLM (Lake Havasu and Kingman Field Offices), the US Fish and Wildlife Service (USFWS) (Bill Williams River National Wildlife Refuge [BWRNWR]), and US Bureau of Reclamation (Reclamation), as well as through the Arizona State Trust Land managed by the Arizona State Land Department (ASLD). BLM would issue a FLPMA ROW for all lands under the jurisdiction of the BLM and USFWS would issue ROW for lands under the jurisdiction of the USFWS. The cooperating agencies for this EA include the BLM and USFWS.

1.1 PROJECT BACKGROUND

Western's statutory mission as an agency is to market and deliver low-cost hydroelectric power and related services to its customers. Over 10,000 megawatts (MW) of power from 57 power plants are marketed and delivered by Western in a 15-state service area that covers approximately 1.3 million square miles and is divided into four regions. Western operates and maintains 17,474 miles of transmission lines, 268 substations, and other related facilities.

The Desert Southwest Region (DSWR), located in Phoenix, Arizona, is one of Western's four regions. The DSWR markets and delivers power in portions of Arizona, California, and Nevada, to wholesale customers such as towns, rural electric cooperatives, public and private utilities, irrigation districts, Federal and state agencies, the military, Native American Tribes, and power marketers.

Specific to the Proposed Action, the Parker–Planet Tap 69-kV Transmission Line and associated access roads were constructed between 1943 and 1947 as part of the Parker Dam Project. The ROW for this transmission line runs from Western's Parker Substation located in San Bernardino County, California for approximately 7.1 miles to the east to Planet Tap near Southwest Transmission Cooperative, Inc. (SWTC) Structure 1 (SWTC #1). Western owns the transmission line up to SWTC #1 in Mohave County, Arizona (Figures 1-1 and 1-2). The line services APS and the Central Arizona Project (CAP) facilities prior to the interconnection with SWTC. The SWTC portion of the line continues east for over 50 miles and terminates at a copper mine in Bagdad, Arizona. The entire line is sometimes referred to as the Parker–Bagdad 69-kV Transmission Line.

On July 15, 1943, Western's predecessor, Reclamation, was granted ROW for the construction, operation, and maintenance of the Parker–Bagdad 69-kV Transmission Line; the project was assigned case number AZPHX 080802. The Planet Tap–Bagdad portion of the transmission line ROW was transferred to Arizona Electric Power Cooperative, Inc. (a.k.a. SWTC) and assigned a new ROW, case number AZA-061574. The Parker–Planet Tap portion of case number AZPHX 080802 was transferred to Western in 1977. Recently, Western discovered ROW case number AZPHX 080802 was inadvertently closed (i.e., terminated) on October 14, 1982; however, the

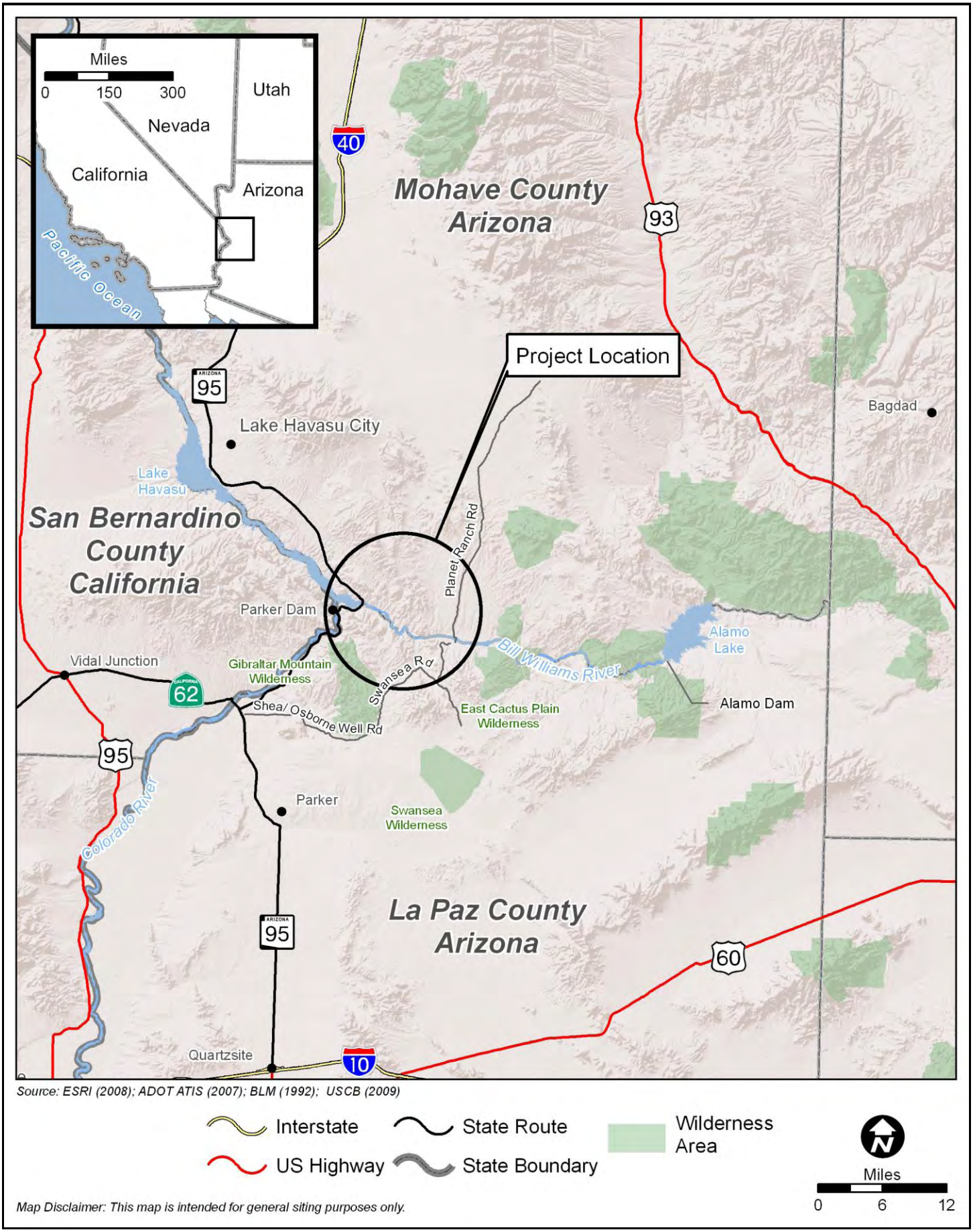

Figure 1-1 Location Map

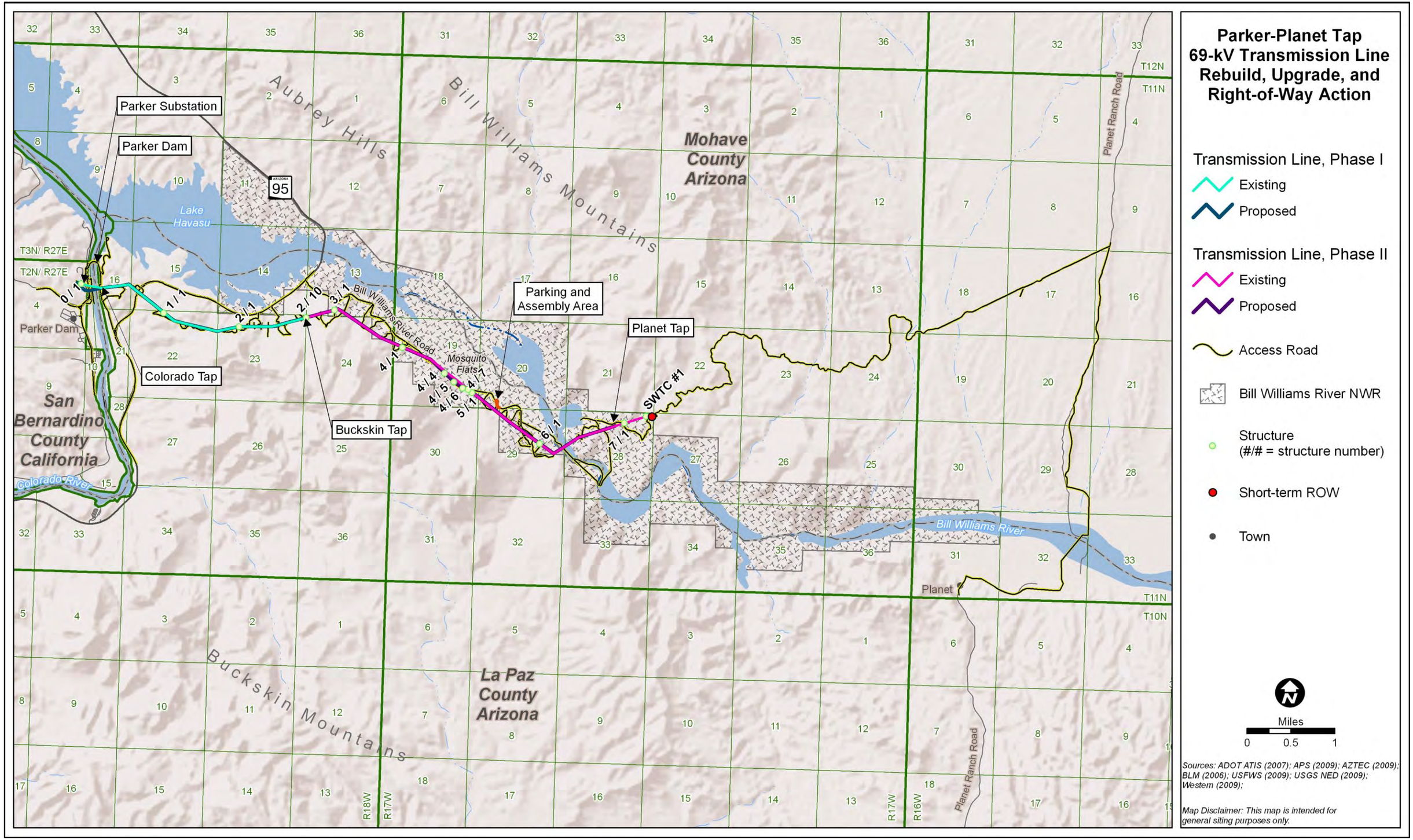

Figure 1-2 Vicinity Map

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Parker–Planet Tap 69-kV Transmission Line is an existing built entity (i.e., on the ground). Under the direction of BLM, Western submitted an application for the Parker–Planet Tap 69-kV Transmission Line rebuild, upgrade, and access roads, and BLM assigned the ROW serial number AZA 35132. The new ROW would be authorized under the Federal Land Policy and Management Act (FLPMA) of 1976. The new ROW permit or easement across USFWS lands would be authorized following a compatibility application in accordance with the National Wildlife Refuge System Administration Act of 1966 under the Bill Williams NWR Tract (E12). The ROW permit or easement would be in conformance with 50 CFR § 29.21-9.

As part of this application, Western is requesting permanent authorization to use all of the access roads shown in Figure 1-2 for both construction and maintenance. Western also requests authorization for the realignment of an approximately 0.5-mile section of the transmission line within the BWRNWR, the newly defined access roads, and a short-term ROW (also known as temporary construction easement) near SWTC #1 (see Figure 1-2).

Since a new BLM ROW authorization is required for the Parker–Planet Tap 69-kV Transmission Line and access roads across BLM lands, a new NEPA analysis is required for the entire project (Parker Substation to SWTC #1). Western split this project into two phases because of seasonal construction restrictions and funding.

Phase I of the rebuild included transmission line and access road improvements between the Parker 69-kV Substation and the Buckskin Tap (Structure 2/10). This work was completed between October 2008 and March 2010. Phase I was reviewed under a Categorical Exclusion (CE) dated October 2008 (Appendix D).

Phase II of the Parker–Planet Tap project would include the transmission line rebuild and associated access road improvements from Buckskin Tap to SWTC #1.

1.2 PROJECT DESCRIPTION

1.2.1 Project Area

The term "project area" is used in this document to represent the footprint and surrounding lands outside but adjacent to the footprint of the Proposed Action.

The footprint of the rebuilt transmission line would be identical to the 100-foot-wide ROW of the existing transmission line, except for the 0.5-mile reroute (see Section 1.2.3), and all associated access roads. The existing 50-foot-wide access roads ROW meanders in and out of the transmission line ROW. The footprint also includes the short-term ROW (see Section 1.2.4) and the parking and assembly area (see Figure 1-2). All construction-related work would be conducted within the transmission line ROW authorized area.

The project area (Figure 1-2) includes both Phases I and II for the BLM decision. The project area for the Western decision involves Phase II. Table 1-1 describes the private and public lands Phases I and II are located on as well as defining the ROW required.

Table 1-1 Legal Description

Township	Range	Section	Subdivision	Land Ownership	ROW: Transmission Line (TL) Access Road (AR)
Gila and Salt River Meridian - Arizona					
11 N.	16 W.	9	SW1/4SW1/4SW1/4	BLM	AR
		16	W1/2NW1/4, W1/2W1/2NW1/4SW1/4	BLM	AR
		17	N1/2NE1/4, NW1/4SW1/4NE1/4, S1/2NW1/4, N1/2NW1/4SW1/4	BLM	AR
		18	N1/2SE14/, S1/2SW1/4, NW1/4NW1/4SE1/4	BLM	AR
		20	E1/2	Private	AR
		21	NW1/4NW1/4	Private	AR
		29	E1/2	Private	AR
		31	SE1/4SW1/4, SE14	Private	AR
		32	NE1/4, S1/2	Private	AR
11 N.	17 W.	19	SW1/4NW14, S1/2NW1/4, SE1/4	USFWS	TL/AR
		20	S1/2SW1/4	USFWS	TL/AR
		22	NE1/4, S1/2NE1/4SW1/4, S1/2SW1/4, N1/2SE1/4	BLM	AR
		23	S1/2NE1/4, NW1/4	BLM	AR
		24	N1/2	BLM	AR
		27	NW1/4NW1/4NW1/4	BLM	AR
		28	N1/2, N1/2SW1/4, SE1/4SW1/4	USFWS	TL/AR
		29	N1/2	USFWS	TL/AR
		29	NE1/4NW1/4NW1/4, N1/2N1/2NE1/4SE1/4, N1/2NE1/4NW1/4SE1/4	BLM	AR
11 N.	18 W.	13	SE1/4SW1/4	USFWS	TL/AR
		13	S1/2S1/2SW1/4SW1/4SW1/4	BML	TL/AR
		14	SE1/4SW1/4	USFWS	AR
		14	SE1/4SE1/4	Private	AR
		15	S1/2	Private	TL/AR
		16	Lot 4, S1/2S1/2NE1/4SE1/4, N1/2SE1/4	BLM	TL/AR
		22	N1/2NE1/4, N1/2NE1/4NW1/4	BLM	TL/AR
		22	N1/2N1/2	ASLD	TL/AR
		23	N1/2N1/2	BLM	TL/AR
		24	NW1/4NE1/4, N1/2N1/2NW1/4, NE1/4SE1/4NE1/4	BLM	TL/AR
		24	NE1/4NE1/4	USFWS	TL/AR
San Bernardino and Meridian - California					
2 N.	27 E.	4	NE1/4	BLM	TL/AR

1.2.2 Phase I: Parker to Buckskin Tap

Phase I covered the rebuild of the transmission line from the Parker Substation at Parker Dam in California to Buckskin Tap (Structure 2/10), located adjacent to the Hillcrest Bay Mobile Home Park subdivision north of Parker, Arizona. The line was rebuilt using 795 kilo thousands of circular mils (kcmil) aluminum conductor steel reinforced (ACSR) conductors on steel structures. The new line is a double-circuited 69-kV transmission line between Parker Substation and the APS-owned Colorado Tap (see Figure 1-2). A single 69-kV circuit owned by Western, with an APS-owned underbuild 12.47-kV circuit, was constructed from Colorado Tap to Buckskin Tap. The previous 69-kV line to Buckskin Tap has not been removed from service yet. Overhead ground wire was also added to the line as part of the rebuild to protect the circuit from lightning strikes. As stated earlier, Phase I was evaluated under NEPA in 2008 and construction completed in March 2010.

1.2.3 Phase II: Buckskin Tap to SWCT #1

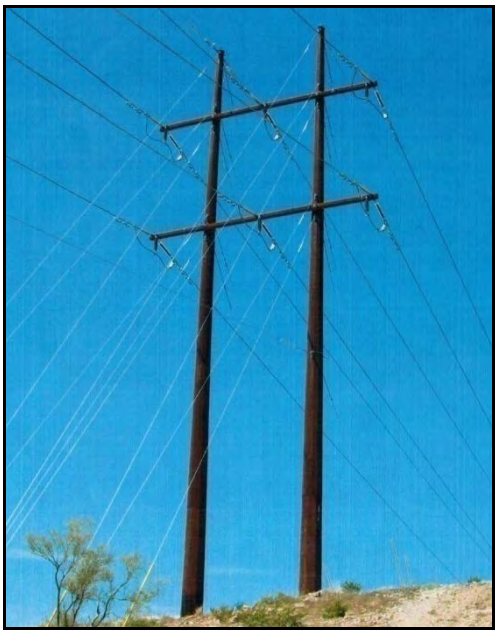
Phase II of the project would consist of improvements between the APS-owned Buckskin Tap (Structure 2/10) (Township 11 North, Range 18 West, Section 24; Gila and Salt River Baseline and Meridian) and SWTC #1 (Township 11 North, Range 17 West, Section 28; Gila and Salt River Baseline and Meridian). SWTC #1 is approximately 0.3 mile beyond the Western-owned Planet Tap. The Phase II section currently has a "flying tap" switch configuration (conductors from one circuit directly attached to the tapping circuit) between existing Structures 6/6 and 7/1. This switch would be relocated once construction is complete.

Western proposes to replace the existing wood structures with steel structures and reroute approximately 0.5 mile of the transmission line. The existing conductor (2/0 copper) would be replaced with a larger, new conductor (795 kcmil ACSR). Overhead ground wire would be added to provide lightning protection for the circuit. All other hardware and insulators would be replaced.

The existing disconnect switches (Photograph 1-1) located both north and south of the Bill Williams River on existing Structures 5/3 and 7/1 would be replaced with new switches on Structures 5/6 and 6/1 on the south side of the river. The portion of the transmission line from

new Structure 5/6 to new Structure 7/1 would be converted to double circuit by installing two independent circuits (three conductors per circuit) on the same structures. The Planet Tap would be relocated from Structure 7/1 to new Structure 6/1. The new switches would allow service on either or both transmission lines to be interrupted from easily accessible sites close to the main access road south of the Bill Williams River. In conjunction with the two switches, two separate sets of conductors would be "stacked" with all three phases of each circuit on separate crossarms (Photograph 1-2). Western would own the top set of conductors, and APS would own the bottom set of conductors on the double-circuit portion of the line.

Photograph 1-1 Example of a Switch



Photograph 1-2 Example of Double Stacked Crossarms

The existing access roads would be improved and one new access road would be constructed to accommodate the construction crews and equipment, and to provide access for future maintenance.

1.2.4 ROW Decisions to be Made

As part of this project, BLM would issue ROW authorization to Western for Phases I and II transmission lines and access roads. More specifically, the FLPMA ROW AZA 35132 shall be

granted to Western for lands either previously authorized under case number AZPHX 080802 or presently under the jurisdiction of BLM (see Table 1-1).

In addition to the BLM ROW authorization, the USFWS would issue a ROW permit or easement, Bill Williams NWR Tract (E12), to Western for the Phase II transmission line and access roads that crosses BWRNWR. USFWS shall also grant a short-term ROW near SWTC #1 for a temporary staging area of large equipment during construction. Phase I does not require ROW authorization from USFWS, because there are no access roads or transmission lines occurring on USFWS lands. More specifically, the ROW permit or easement shall be granted to Western for lands either previously authorized under case number PHX 080802 or presently under the jurisdiction of the USFWS (see Table 1-1). The USFWS ROW permit will be in conformance with 50 CFR § 29.21-9.

1.3 PURPOSE AND NEED

The Parker Substation serves as a distribution point for the power generated by the Parker Dam. The Parker–Bagdad circuit is the only point of service for six substations owned by three separate entities (APS, CAP, and Mohave Electric Cooperative, Inc. [MEC]), and any problems on the line requires temporary outages to all. Western's transmission line equipment can be unreliable and frequently has problems with power transmission. The line's wood structures have degraded due to weathering, rot, and normal aging, and are beyond their serviceable life expectancy of 50 years. Although individual structures are grounded, there is no lightning protection for the transmission line from Structure 2/10 to SWTC #1. Given the existing condition of the line, more frequent and longer unplanned power outages as well as higher maintenance costs are anticipated if the line is not rebuilt.

As part of scheduled maintenance procedures, Western regularly evaluates the integrity of each structure and replaces or repairs those structures as needed. A structure testing program completed by Western (2007) determined that a substantial number of the wood structures have deteriorated and no longer maintain structural integrity and strength due to shell rot and heavy weathering with deep surface cracking extending into the heartwood. Many structures are out of alignment, heavily guyed, and raked or bowed. Similarly, numerous structure crossarms have

been replaced, others are cracked and in need of repair, and several have metal braces to keep them from splitting. The structures' conditions make them unsafe for maintenance personnel to climb. Replacing the aging wood structures with steel structures, as well as adding an overhead ground wire to protect the line from lightning, would increase the reliability of the line and reduce future maintenance costs and efforts.

The access roads to the transmission line have degraded over the years and are not suitable for use without maintenance. Many locations along the access roads are steep and have eroded over time. Repairing the access roads would enable crews to reach structures quicker, resulting in less repair time and shorter customer outages.

Structures 4/4, 4/5, and 4/6 would be moved from their current locations closer to the Bill Williams River Road and away from the riparian vegetation in the floodplain south of the Bill Williams River (Figure 1-3). For safety and the reliability of its transmission lines, Western requires a minimum of 20 feet clearance between a 69-kV line and any vegetation. Moving the line to a location closer to the road would reduce the need to trim riparian vegetation, thereby reducing future maintenance requirements. The realignment would also provide access to these structures from the Bill Williams River Road and eliminate the need for separate access roads to these three structures.

1.3.1 Western's Underlying Purpose

Western's underlying purpose is to improve the safety and reliability of providing electrical service to its customers serviced by the existing Parker–Planet Tap 69-kV Transmission Line north and east of Parker, Arizona. Western's objectives in carrying out this Proposed Action include environmental, engineering, and economic considerations to achieve a balance in protecting environmental resources; accommodating technical, safety, and reliability standards for engineering; and ensuring an economically feasible project that meets Western's fiscal constraints.

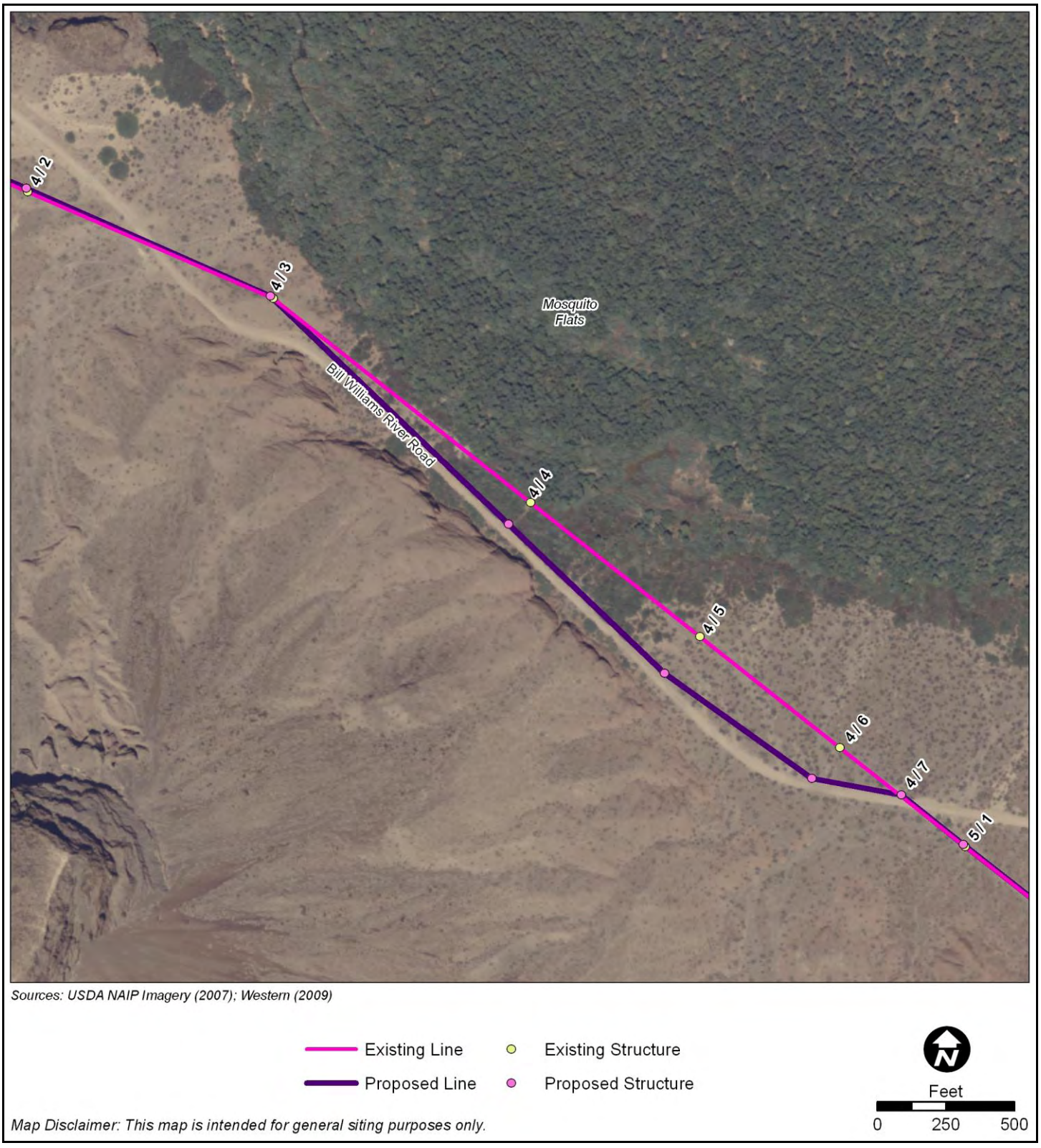


Figure 1-3 Relocated Structures 4/4 through 4/6

1.3.2 BLM's Underlying Purpose

The underlying purpose the BLM would achieve through this project is to place existing facilities under appropriate ROW authorization to meet FLPMA land management requirements as detailed in the *Lake Havasu Field Office Record of Decision and Approved Resource Management Plan* (RMP).

The Parker–Bagdad circuit is the only point of service for six substations owned by three separate entities (APS, CAP, and MEC). BLM shall issue a FLPMA ROW for the transmission line and access roads bringing it into conformance with the *Lake Havasu Field Office Record of Decision and Approved Resource Management Plan* (RMP).

1.3.3 USFWS's Underlying Purpose

The underlying purpose the USFWS would achieve through this project is to place existing facilities under appropriate ROW authorization to meet FLPMA land management requirements as detailed in the *Lower Colorado River National Wildlife Refuge (NWR) Management Plan*, and relocate a section of the transmission line to a new location outside the riparian area.

1.4 APPLICABLE REGULATORY REQUIREMENTS AND REQUIRED COORDINATION

The following Table 1-2 summarizes applicable laws and regulations as they pertain to the project.

Table 1-2 Summary of Applicable Laws and Regulations

Law / Regulation	Applies to
American Indian Religious Freedom Act	Archaeological resources and Tribal consultation
Antiquities Act of 1906	Archaeological resources and Tribal consultation
Archaeological Resources Protection Act	Archaeological resources and Tribal consultation
California Desert Protection Act	Desert conservation
Clean Air Act	Air pollution prevention and control Emission levels of regulated pollutants
Clean Water Act (Sections 401/402/404)	Surface water quality Discharge or dredge or fill materials into jurisdictional waters of the US
Endangered Species Act	Threatened and endangered species
Executive Order 11593	Protection and enhancement of the cultural environment
Executive Order 11988/11990	Floodplains and wetlands
Executive Order 12898	Environmental justice
Executive Order 13112	Noxious weeds
Executive Order 13175	Consultation and coordination with Tribal government
Executive Order 13212	Energy policy
Farmland Protection Policy Act	Prime and Unique Farmlands
Federal Land Policy and Management Act	Management of public lands
Migratory Bird Treaty Act	Protection of Selected Bird Species
National Environmental Policy Act	Federal undertakings / DOE NEPA regulations
National Historic Preservation Act (NHPA)	Historic properties and traditional cultural properties
Native American Graves Protection and Repatriation Act of 1990	Archaeological resources and Tribal consultation
Noise Control Act of 1972, as amended	Noise protection
Occupational Safety and Health Act	Health and safety standards
Pollution Prevention Act of 1990	Reducing potential for pollution sources
Secretarial Order 3206	Endangered Species Act and Tribal Trust responsibilities

1.5 PERMITS, LICENSES, AND ENTITLEMENTS

Table 1-3 summarizes permits, licenses, and entitlements required for this project.

Table 1-3 Summary of Permits and Authorization

Permitting Agency	Permit/Authorization
Arizona and California State Historic Preservation Offices	Section 106 NHPA, as amended; amended consultation
Bureau of Land Management	FLPMA ROW authorization
US Fish and Wildlife Service	ROW permit or easement and a Short-Term ROW
Arizona Department of Environmental Quality	Arizona Pollutant Discharge Elimination System Permit for construction activities and Section 401 water quality certification
US Army Corps of Engineers	Sections 401 and 404 Clean Water Act

1.6 SCOPING ISSUES

Western notified interested agencies, Tribes, and organizations about the Proposed Action and requested their input regarding alternatives to be evaluated and issues to be addressed in the EA. These efforts were carried out pursuant to the "scoping process," as defined by CEQ's regulations implementing NEPA. Issues and concerns identified during this scoping process have been considered in the preparation of this EA. A list of agencies scoped can be found in Section 4.0.

Western solicited public comment through local newspaper notifications in Parker, Lake Havasu, Blythe, and Kingman during the week of November 30, 2009 (Appendix C). No public comments were received as a result of these notifications.

An agency meeting was held at the USFWS Bill Williams Refuge office on November 23, 2009. Twelve representatives from Western (DSWR), USFWS (BWRNWR), and the BLM (Lake Havasu Field Office [LHFO]) attended. Western provided a detail description of the project and requested the agencies to identify issues and management concerns related to the project. The following comments were received:

<u>USFWS</u>

- Requested the transmission line be moved to a new location adjacent to the Bill Williams River Road, which would affect Structures 4/4 through 4/6

- Required that all seed used to revegetate disturbed land within the BWRNWR be collected from within the BWRNWR
- Deferred to the BLM requirements for the EA and ROW authorization
- Requested that a new access road be constructed to bypass area where changes to Bill Williams River destroyed the original access road
- Requested the EA identified the defined "assembly area" (i.e., parking and assembly area)
- Expressed concern about erosion control on access roads
- Requested that the abandoned access roads be obliterated
- Considered co-signing the decision document
- Requested the use of "rusty" weathered steel within Phase II to minimize visual impacts

BLM

- Noted that the EA needs to comply with BLM standards so BLM may use it as the basis for its ROW decision
- Specified that the EA must address:
- BLM LHFORMP
- Resources considered but not further evaluated, which can include farmlands, grazing and rangeland, navigable waterways, socioeconomics/environmental justice, and Areas of Critical Environmental Concern
- Either separately or together: geology, soils, and water resources
- Separate invasive species (non-native plants) and native plants sections
- Helicopter and implosive device noise generation
- Separate Energy Policy and Land/ROW requirements
- Define the "staging area" (parking and assembly area)
- Long- and short-term health and safety (during and after construction)
- Requested that the construction should follow the Arizona Game and Fish Department (AGFD) guidelines for desert tortoise
- Expressed concerns about erosion control on access roads
- Noted the bighorn sheep lambing information in LHFORMP is outdated
- Stated their biggest concern for implosive devices is that it may push bighorn sheep off lambing areas

Western has incorporated each cooperating agency's requests into its format for the EA, Proposed Action, and resource protection requirements (i.e., stipulations). No issues were raised that would require the analysis of an additional alternative.

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 PROPOSED ACTION

2.1.1 Western's Proposed Action

Western, with APS as a partner, would rebuild and upgrade the Phase II segment of the Parker–Planet Tap 69-kV Transmission Line by:

- Replacing the existing wood H-frame structures and three-pole structures with a combination of "rusty" metal monopoles, H-frame structures, and three-pole structures
- Stringing new 795 kcmil ACSR conductor on new neutral polymer insulators
- Adding overhead ground wire for lightning protection for the line
- Moving approximately 0.5 mile of transmission line (Structures 4/4 to 4/6) to a new location/alignment adjacent to the Bill Williams River Road
- Replacing the existing disconnect switches (located on Structures 5/3 and 7/1) on the north side of Bill Williams River with new switches at locations (Structures 5/6 and 6/1) on the south side of the river
- Converting the portion of the transmission line from new Structure 5/6 to new Structure 7/1 to a double circuit configuration by installing two independent circuits (three conductors per circuit) on the same structures
- Relocating the existing Planet Tap (between existing Structures 6/6 and 7/1) to new Structure 6/1
- Improving existing access roads where required to make them passable for construction and maintenance vehicles
- Constructing a new 12-foot-wide road between Structures 5/6 and 6/2
- Blocking access roads after construction with natural barriers or gates to keep motorized vehicles out
- Clearing structure pads, pulling and/or tensioning stations, and drilling holes for structure placement
- Removing the old conductors and wood structures
- Reseeding disturbed areas within the BWRNWR with native seeds gathered from the refuge

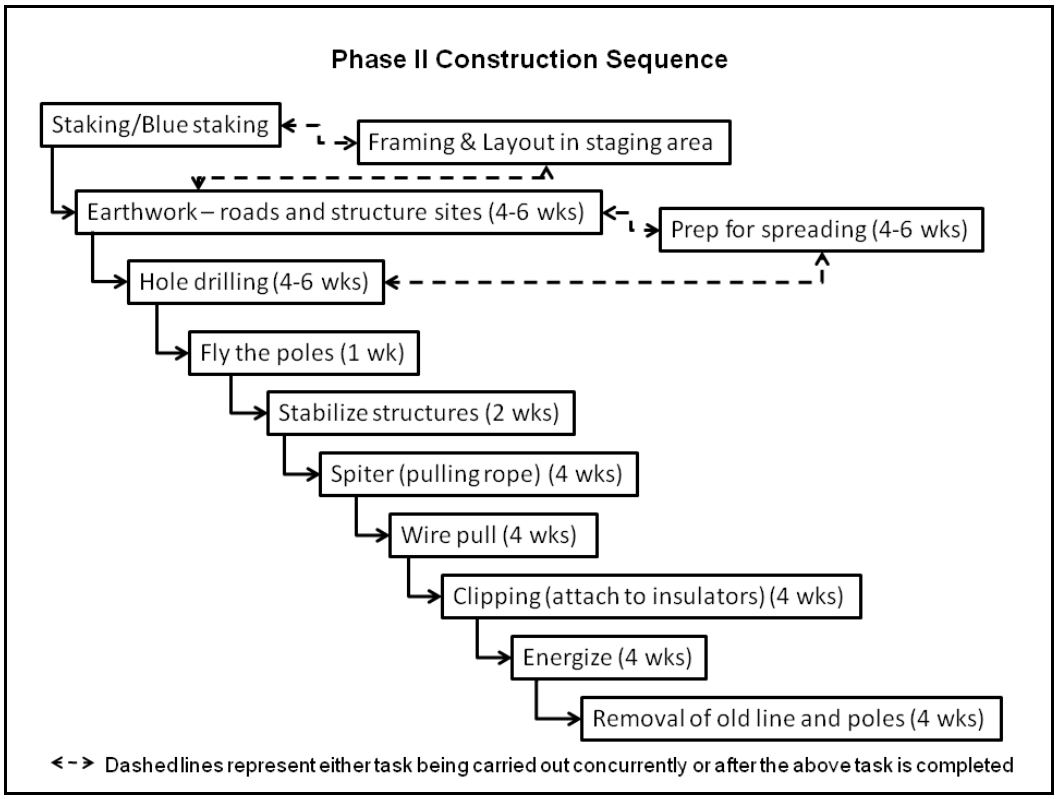
2.1.2 BLM and USFWS's Proposed Action

The BLM would issue a FLPMA compliant ROW to Western for the Parker–Planet Tap 69-kV Transmission Line alignment and for the access roads needed for maintenance and repair (Figure 1-2) where they cross lands managed by the BLM. No temporary short-term ROW is required from BLM.

The USFWS would issue a ROW permit or easement to Western for the Parker-Planet Tap 69-kV Transmission Line alignment and access roads needed for maintenance and repair where they cross lands managed by the USFWS. A temporary short-term ROW for staging would be issued for an area by SWTC #1.

2.1.3 Construction Activities and Sequence

The new structures for Phase II would be installed with the existing transmission line in place to simplify stringing the new conductor. The construction process would include the steps identified in Figure 2-1.



Source: APS 2010a

Figure 2-1 Phase II Construction Sequence and Anticipated Duration

2.1.4 ROW Needs from BLM and USFWS

The existing transmission line ROW is 100-feet in width. Structure assembly and erection activities would occur outside the existing 100-foot ROW and a short-term ROW for the staging area near SWTC #1 would be required from the USFWS. The ROW authorization for access roads would be 50-feet in width. The USFWS would issue a separate ROW authorization for the transmission line and access roads within the BWRNWR. Table 2-1 summarizes the ROW requirements from BLM and USFWS (BWRNWR). The ROW traversing lands owned by Reclamation, ASLD, and private lands have already been acquired.

Table 2-1 ROW for BLM and USFWS

	BLM*		BWRNWR	
	Acreage	Linear Feet	Acreage	Linear Feet
Phase I Transmission Line	25.15	10,955	0.00	0.00
Phase I Access Road	24.42	21,275	1.03	897
Phase II Transmission Line	9.88	4,304	51.84	25,844
Phase II Access Road	76.78	66,891	59.33	51,688
Short-term ROW	0.00	0.00	1.38	**
Totals	136.23	84,277	113.58	78,429

* Includes Reclamation withdrawn land managed by BLM
** Short-term ROW is not linear, the area is 200 x 300 ft

2.1.5 Parking and Assembly Area

One assembly area on the south side of the Bill Williams River, adjacent to the north side of the Bill Williams River Road near Structures 5/3 and 5/4, would be needed for the entire project (refer to Figure 1-2). The assembly area would be used to:

- Provide a site for "framing" (i.e., assembly) of the structures from materials delivered by truck transport
- Provide a site for parking service vehicles and other construction equipment
- Serve as a helispot to transport structures, crossarms, insulators, and hardware to the construction sites

2.1.6 Access Roads

The following public roads would be used to reach the project area: Shea/Osborne Well, Swansea, Planet Ranch, and Bill Williams River roads (refer to Figures 1-1 and 1-2). No project-related improvements are planned for these roads. Existing access roads constructed to

build the original Parker–Planet Tap 69-kV Transmission Line would require minor improvement, as some are no longer usable due to flooding or normal weathering. Improvements to access roads would involve minor grading and the installation of corrugated metal pipes (CMPs) to maintain stormwater flows in washes. In addition, new construction would be required between Structures 5/6 and 6/2 to access Structures 6/1 and 6/2. This new road, about 12-feet wide and 0.3-mile long, would follow a different route from that used for the original construction. Figure 1-2 displays the access roads that would be used to complete the construction project. A bulldozer, grader, or backhoe may be used to improve road surfaces, grades, and turns.

During construction north of the Bill Williams River, all-terrain vehicles (ATV) (Photograph 2-1) would be used to transport work crews and fuel across the river. The fuel would be transported in secondary leak-proof containers. ATVs would cross the Bill Williams River at designated low spots used frequently by BWRNWR personnel. Generally, the river would be crossed by ATVs twice per day until construction on the north side of the river is complete, though daily crossings may occur more frequently if additional fuel is required.

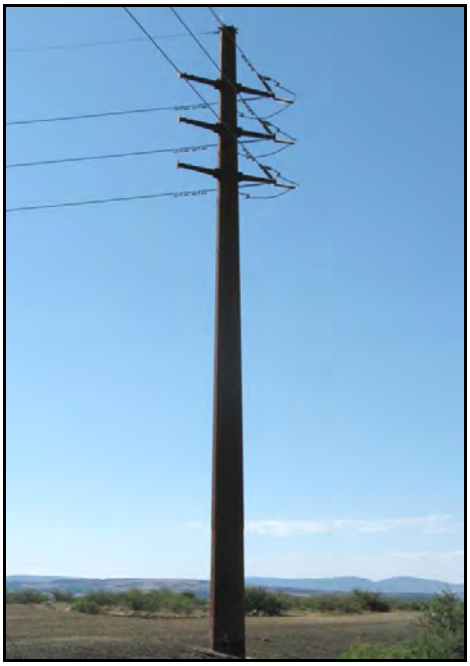
Photograph 2-1 Examples of ATVs Used to Cross the Bill Williams River

Vegetation is sparse throughout the project area except around the area of Mosquito Flats (see Figure 1-3). The access road improvements would be restricted in this location and would be carried out in the upgrade process after blue staking has taken place (see Figure 2-1). Primarily rubber-tired equipment would be used to improve existing access roads in this area.

2.1.7 Design

The transmission line is designed to meet or exceed the requirements of the National Electrical Safety Code (NESC), US Department of Labor's Occupational Safety and Health Administration (OSHA) Standards, and Western's policies for safety and protection of landowners, property, wildlife, and the public.

Structures would be replaced with "rusty" metal H-frame, monopole (Photographs 2-2 and 2-3) or three-pole structures. The new metal structures would be placed adjacent to existing structures in-line with the existing transmission line where electrical clearances allow. Due to the proximity of the existing and new structures, the existing wood structures would be left in place during construction to ensure that adequate soil stability remains for the installation of the new structures. Table 2-2 provides a summary of the structure types and other design characteristics.



Photograph 2-2 Example of a Metal Monopole (rusty appearance)

Photograph 2-3 Example of a Metal H-frame Structure (not rusty appearance)

Table 2-2 Transmission Line Design Characteristics	
Feature	**Description**
Type of Structures	Tangent structures are in-line and consist of tubular "rusty" steel – Monopole or H-frame types
	Self-supporting structures require no guyed lines
Structure Height Structure Diameter	Tangent structures – 65 to 95 feet in length; buried about 10.5 to 23.0 feet below ground, and stand 54.5 to 81.5 feet above ground
	Self supporting structures – 80 to 85 feet in height, buried about 18.0 to 23.0 feet in native material, and stand 62 feet above ground
	Tangent structures – 18.0 to 29.0 inches wide at base and 8.5 to 14 inches wide at top
	Self-supporting structures – 24 to 40 inches wide at base and 11 to 20 inches wide at top
Span Length	Varies from 200 to 1,430 feet Bill Williams River Crossing Structures – 1,383 feet
Total Number of Structures	Tangent – 20 Self-supporting structures – 3
Voltage	69,000 volts, alternating current
Circuit Configuration	Single circuit, one conductor per phase with three phases from Buckskin Tap to structure 5/6 and from 7/1 to SWTC #1 Double Circuit, one conductor per phase with six phases from Structure 5/6 to 7/1
Conductor Size	37-strand aluminum conductor 1.03 inches in diameter
Overhead Ground Wire	7-strand steel static wire 0.031 inches in diameter
NESC Standard for Ground Clearance of Conductor	21 feet minimum at 212 degrees Fahrenheit
Structure Foundations	Native material backfill for most structure foundations Cement for turning Structure 6/3

Source: APS 2010b

2.1.8 Site Clearing

Temporary and permanent ground-disturbing activities would occur from the installation of new structures, access road blading and construction, removal of existing structures, maintenance activities, and creation of an estimated eight pulling stations. Work would be performed with bladed equipment, such as a grader, front-end loader, backhoe, or tracked machinery, to construct a new access road, improve existing access roads, and construct pads at each structure location when necessary. Ground disturbance from construction would be limited to the transmission line ROW (100-feet) and the width of the access roads. Pulling stations (Photograph 2-4) are where vehicles with spools under tension are used to collect old conductor for removal and to supply new conductor being pulled from spools onto the new structures within the authorized ROW. Each pulling station would be 100-feet wide by 200-feet long and within the transmission line ROW. Most of the area between structures, other than the access

roads, would remain undisturbed since construction and maintenance activities would only occur intermittently in these areas.

Photograph 2-4 Example of Tensioning Equipment

All ground-disturbing activities would take place when soil surface conditions are dry and when necessary, Best Management Practices (BMPs), such as silt fences for sediment control, would be installed (i.e., Mosquito Flats) to prevent sediment from entering the Bill Williams River. Whenever possible, vegetation would be avoided and left in place.

2.1.9 Electrical Outages

Although the Buckskin Tap–Planet Tap Section would be taken out of service during the construction period, no long-term interruption of electrical service to any of Western's customers would be necessary. Electrical service to Western's customers would be rerouted through alternate paths to maintain service on both the Planet Tap and Buckskin Tap side of the line during the expected five to six month construction period. The line would be de-energized in segments to accommodate construction. This process avoids service interruptions to customers, but puts more stress on the system and is not a long-term solution for serving customers.

If this line cannot be taken out of service during construction, a temporary outage would be necessary to install temporary fiberglass arms on existing structures to provide adequate

horizontal electrical clearances. This would require spreading the existing conductors apart to provide room for a helicopter to deliver the new structures directly to the prepared holes.

2.1.10 Structure Assembly and Erection

The metal structures, crossarms, and other hardware for monopole structures would be delivered by truck (Photograph 2-5) and assembled in the parking and assembly area adjacent to the Bill Williams River Road in the vicinity of Structures 5/3 and 5/4 (see Figure 1-2). The H-frame and three-pole structures would be assembled in this area; however, crossarms, insulators and other hardware would be installed as part of the stabilization process after the structures have been flown to the site and placed in the prepared holes (Photograph 2-6).

Photograph 2-5 Example of Truck Delivery to Assembly Area

Photograph 2-6 Example of Helicopter Delivery to Structure Site

Once the new structures are in their holes, a boom truck (Photograph 2-7) would be used to straighten the structure and backfill with cement combined with/or tamped native material to stabilize the structures. Insulators and pulleys needed to string the new conductor would be installed during this step.

2.1.11 Excavation and Foundations

Structure pad locations would be bladed with a backhoe or tracked bulldozer. The structure holes would be drilled with a drill rig (Photograph 2-8). Structures would be cemented in or bedded with rock material, placed around the structure and compacted to help anchor the

structure. A cement truck would be parked as close to the structures as able to provide cement for structures. Any excess excavated material would be placed on top of the rock material next to the structure base to provide for any subsequent natural compaction.

Photograph 2-7 Example of a Boom Truck

Photograph 2-8 Example of a Drill Rig

2.1.12 Conductor Stringing

After the structures are installed, stringing sheaves (pulleys) would be attached on the crossarms of each structure. A sock line (rope or lightweight wire) would be strung from structure to structure through the stringing sheaves. A larger-diameter pulling line would then be attached to the conductor/ground wire to pull the conductor/ground wire through the sheaves, stringing them from structure to structure. The existing conductor would be wound onto spools for removal by trucks.

Vegetation clearing would not be needed for stringing the conductor from one structure to the next. The conductor/ground wire would be installed under controlled tension, using powered pulling equipment at one end and powered braking or tensioning equipment at the other end (Photograph 2-9). This keeps the conductor/ground wire off the ground to avoid damage to both the conductors and underlying vegetation. This equipment, when used in concert, establishes the proper tension for crews to clip conductors and ground wires into hardware, thereby maintaining the proper ground clearance. The stringing sheaves would then be removed, and the new

conductor would be connected to the new polymer insulators hanging from the crossarms. The ground wire would be attached to the top of the structures as lighting arrestors.

Photograph 2-9 Example of a Pulling Station

When two conductor segments are spliced together to form a continuous line, either a mechanical device or implosive method to connect metal sleeves is used to connect the conductor. APS anticipates that it would use implosive connector technology on this line to weld the spliced ends instead of the more traditional hydraulic compression process. Table 2-3 displays the estimated total number of conductor splices required for Phase II based on 1,000 feet of conductor per spool.

Table 2-3 Splice Calculations for Phase II

	Conductor Length (feet)	# Splices / Conductor	Number of conductors Per Circuit	Total # Splices
Single Circuit (Buckskin Tap to SWTC #1)				
Conductor length and Total splices	23,800	25	3	75
Double Circuit (Structures 5/6 to 7/1)				
Conductor length and Total splices for double circuit	6,800	8	3	24
Total Splices				99

2.1.13 Right-of-Way and Access Road Restoration

Restoration would be completed following construction and cleanup. Disturbed surfaces would be restored to the original contour as required by the BLM and BWRNWR. All disturbed soil, other than surfaces intended for permanent access roads, would be seeded with native species free of invasive seed. Seeding within the boundary of the BWRNWR would be accomplished with native seed gathered within the refuge. Water diversions (i.e., waterbars) would be

constructed along the access roads to control surface water drainage and erosion. Access roads not needed for operation and maintenance would be closed using a natural barrier or gate.

2.1.14 Operation and Maintenance

Western owns, operates, and maintains the Parker–Planet Tap 69-kV Transmission Line, with the exception of the APS-owned 12.47-kV underbuild between the Colorado and Buckskin taps. The line is inspected by Western on a regular basis for maintenance needs, and necessary maintenance is scheduled accordingly. Temporary operation of the line would be granted to APS during the construction phase.

2.2 RESOURCE PROTECTION MEASURES

Resource protection measures specific to the Proposed Action are found in Appendix A. Western's *Construction Standard 13 - Environmental Quality Protection* (Western's Construction Standards 13) and Western's Standard Mitigation Measures for Construction, Operation, and Maintenance of Transmission Lines (Western's standard mitigation measures) are found in Appendix B. The resource protection measures include information on the responsible party and when implementation measures would be taken. APS would incorporate the resource protection measures and Western's Construction Standards 13 and standard mitigation measures into the project specifications.

2.2.1 BLM Mitigation Measures

Below is the list of BLM mitigation measures (i.e. resource protection measures) for the Proposed Action. When the mitigation states "the Holder," the responsible party is Western.

1. The Holder shall construct, operate, and maintain the facilities, improvements, and structure within the ROW's in strict conformity with the plan of development which was approved and made part of the grant AZA-35132. Any relocation, additional construction, or use that is not in accord with the approved plan of development, shall not be initiated without the prior written approval of the authorized officer. A copy of the complete ROW grant, including all stipulations and approved plan of development, shall be kept on site during construction, operation, and termination. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

2. The Holder shall contact the authorized officer at least 15 days prior to the anticipated start of construction and/or any surface disturbing activities. The authorized officer may require and schedule a preconstruction conference with the Holder prior to the Holder's commencing construction and/or surface disturbing activities on the ROW. The Holder and/or his representative shall attend this conference. The Holder's contractor, or agents involved with construction and/or any surface disturbing activities associated with the ROW, shall also attend this conference to review the stipulations of the grant including the plan of development.

3. The Holder shall conduct all activities associated with the construction, operation, maintenance, and termination of the ROW within the authorized limits of the ROW.

4. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the Holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the Holder.

5. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the Holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pests(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.

6. The Holder shall designate a field contact representative who shall be responsible for overseeing compliance with these mitigation measures and for coordination on compliance with the BLM. The field contact representative and authorized/qualified biologist(s) shall have the authority and the responsibility to halt all project activities that are in violation of these mitigation measures. The field contact representative shall be responsible for oversight of compliance with these mitigation measures, coordination with permitting agencies, land managers, and the state wildlife agency, and shall serve as a contact point for personnel that encounter desert tortoises. The field contact representative shall be on site during project activities and shall be familiar with and have a copy of these mitigation measures.

7. Work areas under ROW authorization within desert tortoise habitat shall adhere to the following mitigations measures:

    - Prior to any surface-disturbing activities, one preconstruction survey of work sites shall be conducted for desert tortoises by a qualified biologist approved by the BLM. Surveys shall be in accordance with USFWS protocol (USFWS 1992). For surface-disturbing activities occurring during the desert tortoise season (March 1 through

November 1), the survey shall be conducted within 24 hours of initiation of surface-disturbing activities and before the installation of a tortoise fence. If burrows are discovered during the survey all work should cease and the LHFO Wildlife Biologist shall be contacted at (928) 505-1200.

- If a tortoise is found in a project area, activities shall be modified to avoid injuring or harming it. If activities cannot be modified, tortoises shall be moved from harm's way. Upon discovery of a desert tortoise in harm's way, the authorized biologist shall translocate the animal the minimum distance possible (but not more than 2 miles) within appropriate habitat to ensure its safety from death, injury, or collection associated with the project or other activities. The authorized biologist shall be allowed some discretion to ensure that survival of each relocated desert tortoise is likely. Desert tortoises shall not be translocate to lands outside the administration of the Federal government without the written permission of the landowner.
- Only biologists authorized by the BLM and the appropriate state wildlife agency shall handle desert tortoises. The Holder shall submit the name(s) of the proposed authorized biologist(s) to the BLM for review and approval at least 45 days prior to the onset of activities that could result in a take.
- Workers shall check under vehicles for desert tortoises before vehicles are moved. If tortoises are found, they shall be allowed to move out of harm's way on their own or shall be moved by an authorized biologist prior to moving the vehicle.
- In desert tortoise habitat, project-related vehicles shall not exceed 10 miles per hour on unpaved roads.
- The Holder shall take care not to disturb or destroy desert tortoises or their burrows. Handling, collecting, damaging, or destroying a desert tortoise is prohibited by the Federal Endangered Species Act. Any sightings of desert tortoise shall be reported to the LHFO, Wildlife Biologist at (928) 505-1200 within 48 hours, including location, approximate size, and date of observations. If a desert tortoise is endangered by any activity; that activity shall cease until the desert tortoise moves out of harm's way on its own accord.
- Workers shall be trained on Desert Tortoise protection measures and when in the field workers shall check under parked vehicles or equipment and in excavations for tortoises before moving vehicles and equipment.

8. All trash, food items and debris caused by the activity will be removed and promptly contained within closed, raven-proof containers. These would be regularly removed from the project site to reduce the attractiveness of the area to ravens and other desert tortoise predators.

9. Areas of new construction or disturbance shall be flagged or marked on the ground prior to construction. All construction workers shall strictly limit their activities and vehicles to areas that have been marked. Construction personnel shall be trained to recognize markers and understand the equipment movement restrictions involved.

10. Blading of new access or work areas shall be minimized. Disturbance to shrubs shall be avoided. If shrubs cannot be avoided during equipment operation or vehicle use, they shall be crushed rather than excavated or bladed and then laid over the ground as vertical mulching.

11. Project features that might trap wildlife such as open trenches, pits, open pipes, etc., shall be covered or modified to prevent entrapment.

12. After completion of the project, trenches, pits, and other features in which wildlife could be entrapped or entangled, shall be filled in, covered, or otherwise modified so they are no longer a hazard to wildlife.

13. The existing ROW that shall be realigned and reclaimed by either vertical mulching or replanting of native species. Other acceptable techniques may include placing boulders so that the road is no longer useable. Only native plant species, preferably from a source on or near the project area, should be used in restoration.

14. No pets (e.g., dogs) shall be allowed on construction site.

15. The Holder shall provide the BLM Authorized Officer a copy of the Storm Water Pollution Prevention Plan (SWPPP) prior to construction.

16. The Holder shall remove only the minimum amount of vegetation necessary for the construction of structures and facilities.

17. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste "means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. Holder shall maintain the ROW in a safe, usable condition, as directed by the authorized officer. (A regular maintenance program shall include, but is not limited to, blading, ditching, culvert installation, and surfacing.)

18. In the event that the public land underlying the ROW encompassed in this grant, or a portion thereof, is conveyed out of Federal ownership and administration of the ROW or the land underlying the ROW is not being reserved to the US in the patent/deed and/or the ROW is not within a ROW corridor being reserved to the US in the patent/deed, the US waives any right it has to administer the ROW, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations at 43 CFR § 2800 and 2880, including any rights to have the Holder apply to BLM for amendments, modifications, or assignments and for BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the US in all matters relating to the ROW, or portion thereof, within the conveyed land and shall be subject to applicable state and local government laws, statutes, and ordinances.

After conveyance, any disputes concerning compliance with the use and the terms and conditions of the ROW shall be considered a civil matter between the patentee/grantee and the ROW Holder.

19. The Holder shall be responsible for weed control on disturbed areas within the limits of the ROW. The Holder is responsible for consultation with the Authorized Officer and/or local authorities for acceptable weed control methods within limits imposed in the grant stipulations.

20. No hazardous material, substance, or hazardous waste, (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 US Code § 9601, et seq., or the Resource Conservation and Recovery Act, 42 US Code § 6901, et seq.) shall be used, produced, transported, released, disposed of, or stored within the ROW area at any time by the Holder. The Holder shall immediately report any release of hazardous substances (leaks, spills, etc.) caused by the Holder or third parties in excess of the reportable quantity as required by federal, state, or local laws and regulations. A copy of any report required or requested by any federal, state or local government agency as a result of a reportable release or spill of any hazardous substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved federal, state or local government agency.

    The Holder shall immediately notify the Authorized Officer of any release of hazardous substances, toxic substances, or hazardous waste on or near the ROW potentially affecting the ROW of which the Holder is aware.

    As required by law, the Holder shall have responsibility for and shall take all action(s) necessary to fully remediate and address the hazardous substance(s) on or emanating from the ROW.

21. The Holder shall not violate applicable air standards or related facility siting standards established by or pursuant to applicable federal, state, or local laws or regulations. The Holder shall be responsible for dust abatement within the limits of the ROW and is responsible for obtaining all necessary permits from appropriate authorities for acceptable dust abatement and control methods (e.g., water, chemicals). The Holder shall be solely responsible for all violations of any air quality permit, law or regulation, as a result of its action, inaction, use or occupancy of the ROW.

    Notwithstanding whether a violation of any air quality permit, law or regulation results, the Holder would cooperate with the Authorized Officer in implementing and maintaining reasonable and appropriate dust control methods in conformance with law and appropriate to the circumstances at the sole cost of the Holder.

    Prior to relinquishment, abandonment, or termination of this ROW, the Holder shall apply reasonable and appropriate dust abatement and control measures to all disturbed areas. The abatement and measures shall be designed to be effective over the long-term (e.g., rock mulch or other means) and acceptable to the Authorized Officer.

22. The Holder shall comply with all applicable local, state, and federal air, water, hazardous substance, solid waste, or other environmental laws and regulations, existing or hereafter enacted or promulgated. To the full extent permissible by law, the Holder

agrees to indemnify and hold harmless, within the limits, if any, established by state law (as state law exists on the effective date of the ROW), the US against any liability arising from the Holder's use or occupancy of the right-of way, regardless of whether the Holder has actually developed or caused development to occur on the ROW, from the time of the issuance of this ROW to the Holder, and during the term of this ROW. This agreement to indemnify and hold harmless the US against any liability shall apply without regard to whether the liability is caused by the Holder, its agents, contractors, or third parties. If the liability is caused by third parties, the Holder will pursue legal remedies against such third parties as if the Holder were the fee owner of the ROW.

Notwithstanding any limits to the Holder's ability to indemnify and hold harmless the US which may exist under state law, the Holder agrees to bear all responsibility (financial or other) for any and all liability or responsibility of any kind or nature assessed against the US arising from the Holder's use or occupancy of the right-of way regardless of whether the Holder has actually developed or caused development to occur on the ROW from the time of the issuance of this ROW to the Holder and during the term of this ROW.

2.3 ADDITIONAL COORDINATION

Western and APS would provide their customers along the Parker–Planet Tap 69-kV Transmission Line with information affirming that their electrical service would continue to be supplied from different sources even though the line would be de-energized during construction. Similarly, since the Parker–Planet Tap 69-kV Transmission Line supplies the SWTC transmission line to Bagdad, Western and/or APS would coordinate with SWTC for construction, de-energizing and re-energizing once construction is complete.

2.4 NO ACTION ALTERNATIVE

The No Action Alternative is considered in all Western EAs. It provides a baseline against which impacts of the other analyzed alternatives can be compared, and also demonstrates the consequences of not meeting the need for the action. Similar to Western's policy, the No Action Alternative is considered in all BLM EAs. The No Action Alternative provides the BLM with information for its consideration about whether to accept or deny Western's request for ROW authorization under FLPMA.

Under the No Action Alternative, Western would not reconstruct the Parker–Planet Tap 69-kV Transmission Line and BLM would not issue a ROW authorized under FLPMA to Western. Western would continue to operate and maintain the Parker–Planet Tap 69-kV Transmission

Line as it currently exists, with its aging wood structures on lands for which it does not have an authorization under FLPMA. Structure replacement and frequent emergency repairs are likely. Safety of the public will be impacted with aging structures in place long past their serviceable life expectancy of 50 years (reached in the 1990s). Unplanned outages due to failure of aged equipment are possible.

2.5 ALTERNATIVES CONSIDERED BUT NOT FURTHER EVALUATED

Western also considered an alternative that included the removal of the Parker–Planet Tap 69-kV Transmission Line. This alternative was considered, but not fully evaluated through detailed analysis since it is in direct conflict with Western's Purpose and Need to provide reliable electrical service to its customers. The Parker–Planet Tap 69-kV Transmission Line is part of the power grid in western Arizona, and as such, it serves dual purposes. It not only provides power to customers in the region, it also constitutes a redundant (i.e., different or secondary) route for the power infrastructure to continue to supply power to users when segments of the grid are taken off the line. When an emergency or maintenance results in a decision to de-energize a transmission line, power can be rerouted to supply customers who might not otherwise have service.

2.6 CONFORMANCE WITH LAND USE PLANS

2.6.1 USFWS Lower Colorado River NWR Management Plan

The BWRNWR, as part of the Lake Havasu NWR, was designated to protect the unique habitat characteristics it contains and for its importance to migratory wildlife species (Executive Order 8647). The BWRNWR was designated as an independent refuge by the Director of the USFWS on June 9, 1993. It is currently one of four refuges along the Colorado River flyway that are managed together as vital core habitats. According to the *Lower Colorado River NWR Management Plan* (September 19, 1994), the mission of the USFWS is to "Provide leadership toward achieving a national net gain of fish and wildlife and the natural systems which support them."

The BWRNWR includes easements for two local power lines, a telephone line, and the Bill Williams River Road maintained by La Paz County. The transmission line shall be in conformance with the *Lower Colorado River NWR Management Plan*.

2.6.2 BLM Lake Havasu Field Office Record of Decision and Approved Resource Management Plan (RMP)

The proposed action for a FLPMA ROW is in conformance to the *Lake Havasu Field Office Record of Decision and Approved Resource Management Plan* (RMP) which was approved on May 10, 2007, even though it is not specifically provided for in the plan, it is clearly consistent with the following RMP objectives, terms, and conditions: Use Authorizations on page 38 of the plan specifically provides for "The types of uses that will be authorized by ROW issued pursuant to Title 5 FLPMA will include access roads, power lines, telephone lines, fiber optic systems, communication facilities, and so forth."

2.6.3 Relationship to Statutes, Regulations, or Other Plans

This document has been prepared in compliance with requirements detailed in the NEPA Implementation Procedures outlined in 40 CFR Parts §1500 – 1508; BLM Arizona Environmental Handbook; BLM Manual 1790 and BLM National Environmental Policy Act Handbook H-1790-1; DOE NEPA Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements - Second Edition (The Green Book); and Environmental Assessment Checklist – DOE, Office of NEPA Oversight (August 1994). The *Lake Havasu Field Office Record of Decision and Approved Resource Management Plan* (RMP) was used to identify BLM land management requirements and the *Lower Colorado River NWR Management Plan* was used to identify USFWS land management requirements within their respective jurisdictions.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSQUENCES

The Affected Environment and Environmental Consequences section describes the existing conditions and the potential impacts to the natural, human, and cultural environment within the project area as a result of the Proposed Action and the No Action Alternative. Through internal and external scoping, Western and cooperating agencies identified several issues of concern. These issues have been evaluated in detail in the EA.

Impacts to resources can be characterized as direct impacts, indirect impacts, short-term impacts, long-term impacts, and permanent impacts. Direct impacts as defined by 40 CFR §1508.8 are caused by the action and occur at the same time and place as project construction activities. Indirect impacts are associated with a project and occur later in time or farther removed in distance, but they are still reasonably foreseeable (CFR 2009). Short-term impacts are temporary and episodic; the duration is limited to construction and ancillary activities. Long-term impacts occur beyond the duration of short-term impacts but are recoverable. Permanent impacts occur when a resource is not recoverable.

The term "project area" is used in this section to represent the footprint and surrounding lands outside but adjacent to the footprint of the Proposed Action (see Section 1.2.1 for the complete definition).

3.1 RESOURCES CONSIDERED BUT NOT FURTHER EVALUATED

The following were not considered for further evaluation because they are not present in the project area or no measurable impacts would occur.

3.1.1 Law Enforcement

Law enforcement activities are carried out throughout the project area to protect the public, wildlife, and sensitive resource areas within or adjacent to the management areas boundaries. Law enforcement agencies often work cooperatively to uphold and enforce laws and statutes within or adjacent to management areas boundaries. APS would hire a dedicated guard to oversee construction equipment parked during non-working hours on the north side of the Bill

Williams River. The Proposed Action would not increase law enforcement activities or require additional personnel to patrol resource areas during transmission line upgrades or after improvements are complete; therefore, no measureable effect on law enforcement would occur.

3.1.2 Travel Management

Travel management considers the use of public access, natural resources, and regulatory needs to ensure coordination for road and trail system planning, and on the ground management. The new road construction to access Structures 6/1 and 6/2 would remain behind the currently locked gate at the end of the Bill Williams River Road. Travel management was not further evaluated as the Proposed Action would not create additional roads that would be open to public use. Therefore, no measureable effect on travel management is expected.

3.1.3 Farmlands, Grazing, and Rangelands

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, and other agricultural crops. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. Designation of prime or unique farmland is made by the US Department of Agriculture (USDA).

Farmland of statewide or local importance is land in addition to prime and unique farmlands that is of statewide or local importance for the production of food, feed, fiber, forage, and oilseed crops. Designation of this farmland is determined by the appropriate state or local agency.

On BLM-managed lands, the project area crosses areas that are available for grazing through allotments administered through the LHFORMP. Grazing is permitted within the BWRNWR; however, there are no occupied grazing permits within the project area. Additionally, there are no farmlands within or adjacent to the project area. Therefore, no measureable effect on farmlands and grazing areas is expected.

3.1.4 Socioeconomics and Environmental Justice/Title IV

The US Bureau of the Census (USBC) Decennial Census 2000 data was obtained for the project area and surrounding area to determine the presence of potential protected populations (USCB

2000). The project area is predominately publicly owned land. USBC data confirmed that there are no protected populations within the project area. The Hillside Bay Mobile Home Park subdivision is less than a tenth of a mile from the Buckskin Tap; however no residences are located within the project area or will be displaced by the project (Figure 3-1). Therefore, no measureable socioeconomic effects or effect on protected populations are expected.

3.1.5 Mineral Resources

No active mineral resource mines occur along the Parker–Planet Tap 69-kV Transmission Line. There are no active or closed mining claims within the transmission line corridor (BLM 2006a). The Planet Ranch Road north of the Bill Williams River crosses several locations where mining claims have been closed, and no mining activity occurs in these areas (BLM 2006a). Mining operations occurring in the adjacent Buckskin Mountains historically extracted gold, silver, copper, iron, and manganese. Furthermore, several mines occur within BLM-designated wilderness areas outside the project area. According to LHFORMP, wilderness areas are closed to mineral leasing and mineral material disposal. The Proposed Action would not impact mineral resources given no mining operations or known mineral resources of value occur within the project area.

3.1.6 Geology

Geologic formations vary through the project area with the dominant features consisting of sedimentary rocks deposited during mid-Tertiary orogenic activity in the Basin and Range Province and southwestern Transition Zone. Other geologic formations in the area include layered deposits of sedimentary and volcanic rocks. Sedimentary rocks are of the Bidahochi and Bouse formations deposited during and after late Tertiary activity. The sedimentary layers are commonly capped by patches of Quaternary surficial deposits and basaltic rocks from the Hickey Formation, which erupted after most mid-Tertiary volcanism and tectonism (Reynolds 1988).

Terrain in the project area ranges from a mix of mountainous regions with rugged peaks and steep escarpments to gently rolling hills and the relatively flat Bill Williams River floodplain. Elevations range from approximately 500 feet to 1,000 feet above mean sea level. The transmission line generally lies at the base of the Buckskin Mountains located to the south and

the Aubrey Hills and Bill Williams Mountains located to the north. The lowest elevation points occur at the Bill Williams River, though in places, the terrace banks rise precipitously exposing up to 100 feet of sedimentary and alluvial deposits derived from the surrounding geologic features.

The transmission line occurs within an earthquake seismic zone with peak acceleration calculated at 8% acceleration of gravity (g-force) with a 2% probability of exceeding 8% g-force in 50 years (US Geological Society 2008). This means there is a relatively low chance (2%) that an earthquake would have an "on the ground g-force" exceeding 8% along the transmission line within a given 50-year period. Thus, there is a low seismic risk and low probability of an earthquake occurring in the project area.

The Proposed Action would not generate impacts to geologic resources on a large scale. Minor localized impacts to geologic resources such as rocks would occur due to grading construction access roads and drilling holes for new transmission structures. Disturbed areas would be stabilized for erosion control and safety purposes. Activities under the Proposed Action are not expected to impact areas of geologic importance or create hazards due to slope instability. The new transmission line would be constructed in conformance with Western's construction standards (Western 2009a). The structures are expected to withstand relatively low g-force, low-frequency, and rare earthquakes that define the seismic hazard of the region.

3.1.7 Navigable Waterways

Navigable waters are waterways that are, were, or may be used in interstate or foreign commerce, and include waters that are subject to the ebb and flow of the ocean tide. The US Army Corps of Engineers (Corps) designates navigable waterways as Traditional Navigable Waters. The nearest designated Traditional Navigable Water is the Colorado River. The transmission line crosses the Colorado River below Parker Dam. No other navigable waters occur in the project area. The segment of the transmission line that crosses the Colorado River was completed under Phase I. Phase II of the Proposed Action would not impact navigable waterways.

3.1.8 Air Quality

The US Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) for pollutants considered harmful to public health and the environment. Six principal pollutants (carbon monoxide, nitrogen dioxide, ozone, particulate matter, sulfur dioxide, and lead), referred to as the criteria pollutants, were set under NAAQS, which placed limits on acceptable ambient concentrations. Because the project area is located within the attainment areas for all criteria pollutants, the concentrations for all these criteria pollutants are below the NAAQS (ADOT EPG 2009).

Air quality impacts due to construction of the proposed transmission line and associated facilities would be minimal, and the construction activities are generally short term in nature. The primary type of air pollution during construction would be combustion pollutants from equipment exhaust and fugitive dust particles from disturbed soils becoming airborne. The amount of pollutants emitted from construction vehicles would be relatively small. Air quality impacts during operation and maintenance of the project would be negligible. Operation and maintenance vehicles would mainly use access roads, causing dust particles to be stirred up. Dust control would be provided on cleared areas on an as needed basis to reduce dust generation and off-site deposition of soil from the project site. Measures to minimize air pollution are included in the resource protection measures (see Section 2.2.1 and Appendix A) and Western's Construction Standard 13 and standard mitigation measures (see Appendix B). Therefore, quantities of potential emissions would be very small, temporary, and localized.

3.1.9 Areas of Critical Environmental Concern

Areas of Critical Environmental Concern are areas that the BLM designates for special management to protect important natural, cultural, or scenic resources or to identify natural hazards. There are no Areas of Critical Environmental Concern within the project area. The nearest Area of Critical Environmental Concern is the Swansea Historic District, which is approximately 11 miles east of the project area. Therefore, no measureable effect on Areas of Critical Environmental Concern is expected.

3.2 LAND USE AND OWNERSHIP

3.2.1 Affected Environment

3.2.1.1 Land Ownership and Jurisdiction

The existing transmission line ROW is located on public lands managed by the BLM, USFWS, and ASLD as well as privately owned lands. Of the 7.1 miles along the transmission line, approximately 2.1 miles (135.2 acres) cross Reclamation-withdrawn / BLM-managed lands (Figure 3-1).

The Secretary of the Interior has assigned management responsibilities for certain resources on Reclamation withdrawn lands to the BLM. These lands are managed by the BLM for multiple uses; however, their ultimate use is held for Reclamation purposes. The BLM exercises primary day-to-day management for uses that would not conflict with the primary Reclamation purpose. Reclamation retains certain management responsibilities.

The existing transmission line crosses approximately 3.9 miles (112.2 acres) of the BWRNWR, which is managed by the USFWS. The transmission line also crosses 0.7-mile (8.1 acres) of Arizona State Trust Lands managed by the ASLD and approximately 0.4-mile (55.2 acres) of private land. Land ownership in the area surrounding the project area consists primarily of large sections of BLM-owned and managed lands.

3.2.1.2 Existing Land Use

The primary purpose of the BWRNWR is to protect habitat for wildlife as discussed in Section 2.6.1. The BWRNWR also provides the public with recreational activities such as wildlife viewing, hiking, fishing, and hunting.

The ASLD manages State Trust lands and resources to enhance their value and optimize economic return for the Trust beneficiaries, consistent with sound stewardship, conservation, and business management principles to support socioeconomic goals for citizens here today and for generations to come. State Trust lands that the project area crosses are currently undeveloped. Uses that could occur on these lands would include dispersed recreation such as hiking and hunting.

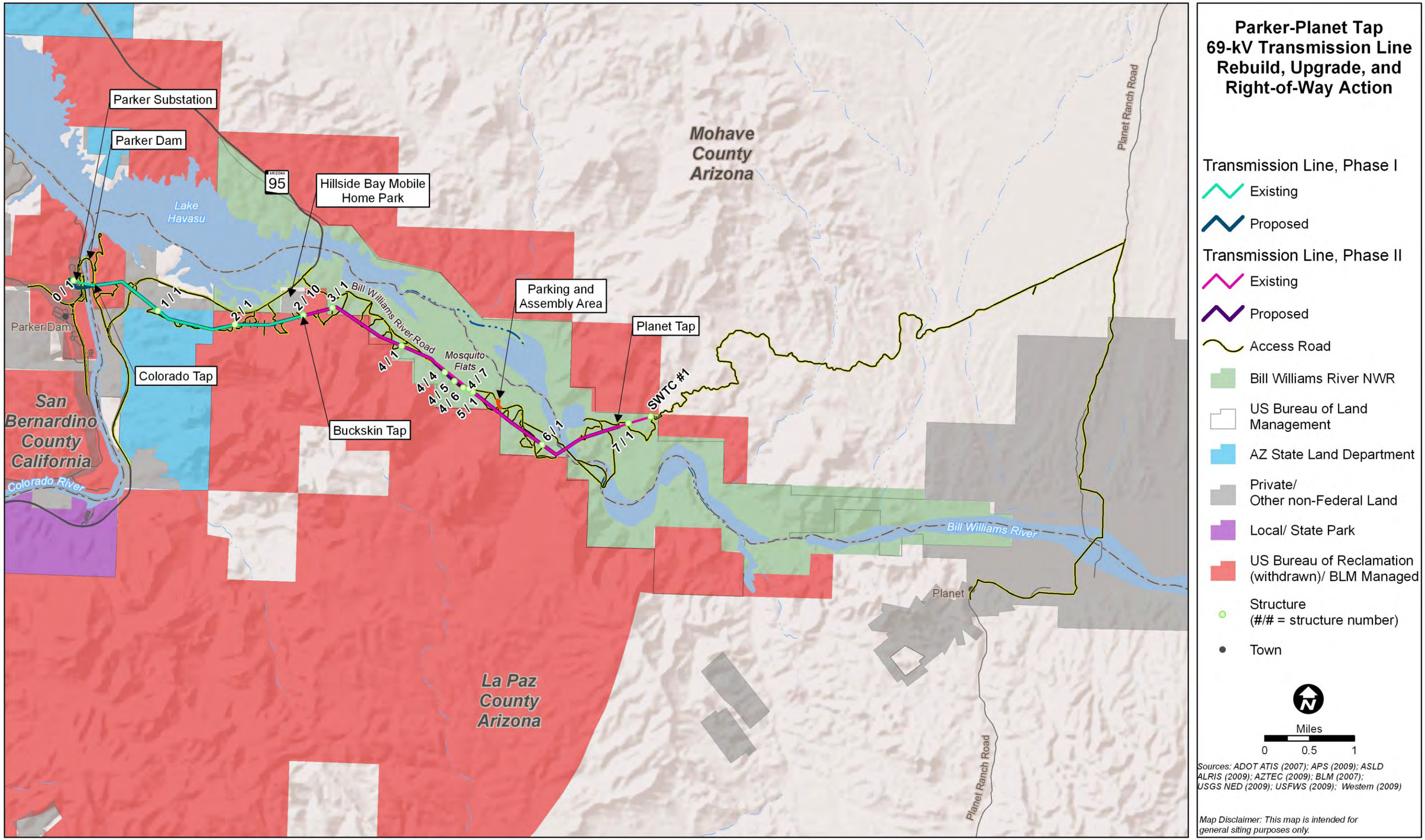


Figure 3-1 Land Ownership and Jurisdiction Map

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One parcel is occupied by the CAP Mark Wilmer Pumping Plant, which lifts water from Lake Havasu to the inlet portal of the Buckskin Mountains Tunnel. The water flows through the approximately 7-mile-long tunnel and discharges into the Hayden-Rhodes Aqueduct, which conveys it to the Phoenix metropolitan area.

A majority of the private land is vacant (i.e., undeveloped). Several residential areas and one industrial area are located near the project area.

3.2.1.3 Planned Land Use and Zoning

BLM lands managed under the LHFORMP have several different objectives based upon various resource categories consistent with multiple uses such as recreation, grazing, wildlife habitat, and a wildlife corridor. The Mohave County General Plan (2005) and La Paz County Comprehensive Plan Future Land Use Map (2005) indicate the land within the project area as having a future land use designation of public lands. The San Bernardino County Land Use Plan (County of San Bernardino 2007) designates non-Federal and state lands as having a resource-conservation zoning. ASLD does not have a specific management plan for this area.

3.2.1.4 Recreation

The project area crosses three Recreation Management Zones (RMZ) within three Special Recreation Management Areas (SRMA) (Figure 3-2). The east section crosses the Buckskin Mesa RMZ of the Gibraltar SRMA and has objectives for semi-primitive recreation for visitors to engage in personal exploration and discovery (BLM 2007). Also, naturalness and unconfined recreation is a high priority promoting more a primitive experience. Any developments to best merge or blend with the surrounding environment. Primary recreation activities would include wildlife watching, hiking, hunting, off-highway vehicle touring, mountain biking, and photography. Moving west the project area crosses into Havasu Springs RMZ of the Lake Havasu SRMA, which has the most developed and some of the highest recreation use on the lake. Recreation objectives are to facilitate the higher visitation by providing developed recreation opportunities such as picnic areas, boat ramps and campgrounds in close proximity to the Lake Havasu shoreline. On the California side the project area crosses into the Parker Strip

Urban RMZ of the Parker Strip SRMA, where visitation is moderate to high and has objectives for developed recreational opportunities.

The area within the BWRNWR provides visitors with recreational opportunities such as wildlife viewing, sightseeing, hiking, fishing, and hunting. No mechanized or motorized off-road travel is permitted. Some areas of the refuge are only open to vehicular traffic seasonally. There are no developed recreation areas within the project area. There are no planned recreation sites or developments along or adjacent to the project area.

3.2.1.5 Wilderness Areas

There are no Wilderness Areas within the project area (see Figure 1-1). The nearest Wilderness Areas to the Proposed Action are the Gibraltar Mountain, Swansea, and the East Cactus Plain. The Gibraltar Mountain Wilderness is approximately 2 miles south of the transmission line. The Swansea Wilderness is about 2 miles south/southeast of the transmission line. The East Cactus Plain Wilderness is about 9 miles south of Planet Ranch Road.

3.2.2 Environmental Consequences

A significant impact on land use and land ownership would result if any of the following were to occur from construction or operation of the Proposed Action:

- Conflict with applicable land use plans, policies, goals or regulations
- Conflict with existing utility ROW
- Conflict with state or Federally established, designated, or reasonably foreseeable planned special use areas (e.g., recreation, wildlife management areas, game management areas, waterfowl production areas, scientific and natural areas, Wilderness Areas, etc.)
- Results in nuisance impacts attributable to incompatible land uses
- Prior land uses could not be restored to pre-construction use activities (for areas disturbed and not containing permanent structures)
- Increased demand for recreation activities due to the influx of people during construction and operation of the Proposed Action would exceed capacity for that activity in a given area such as a campground, wilderness, hunting area and/or trails

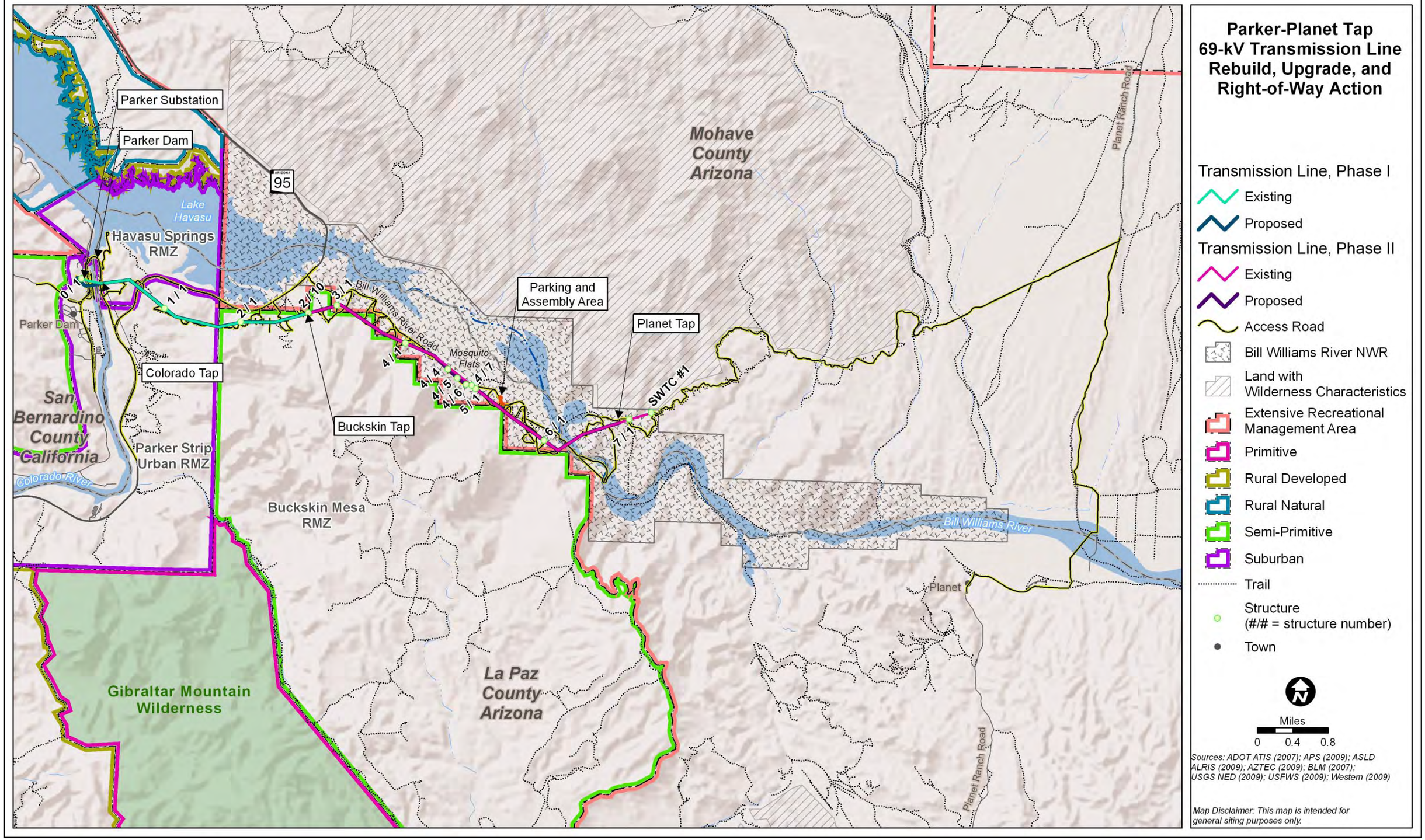

Figure 3-2 Land Use and Recreation Map

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- Conflicts with established recreational areas
- Project-related changes that alter or otherwise physical affect established, designated, or planned recreation areas or activities
- Decreased accessibility to areas established, designated, or planned for recreation

Proposed Action

The FLPMA allows BLM to authorize the placement of utilities and access roads on BLM lands via a ROW grant. As previously discussed, Western's ROW authorization along the transmission line was closed. As part of this project, Western would obtain a new ROW authorization under FLPMA from BLM and authorization from USFWS for the transmission line and access roads.

The existing transmission line is not located in a utility corridor that is identified in the LHFORMP. Although the project is not located in a formally identified utility corridor, and is within a wildlife habitat area, the project is replacing an existing line that was constructed and permitted on public lands managed by the BLM and the USFWS, and has been in continuous use since 1947. Due to the purpose and location of the line and the customers it serves, there is no practicable alternative that would relocate the line to an alignment within one of the utility corridors identified within the LHFORMP or outside wildlife habitat areas. The Proposed Action and a new ROW authorization under FLPMA from BLM would not conflict with an existing utility ROW.

The transmission line would be constructed within the same 100-foot-wide ROW, except for the approximately 0.5-mile reroute, and the majority of the access roads are the same used to construct the original line. Operation of the Proposed Action would likely result in a reduction of maintenance activities in the foreseeable future when compared to the No Action Alternative. Construction and operation of the Proposed Action and the new ROW authorization under FLPMA from BLM would not result in changes to the existing landowners or land uses and would not conflict with or impede the implementation of any land use plans or special use areas within the project area. Furthermore, because there would be no change in land use, there would be no nuisance impacts attributable to incompatible land uses.

During construction there may be some temporary disruption to recreation in the areas immediately adjacent to the construction areas to ensure public safety. However, there is a large expanse of dispersed recreational opportunities surrounding the project area. There would be no changes in recreational opportunities upon completion of the Proposed Action. Construction and operation of the Proposed Action and the new ROW authorization under FLPMA from BLM would not increase the demand for recreation and would not conflict with, physically alter, or decrease accessibility to established or planned recreational areas.

No construction activities would occur within any designated Wilderness Areas. Access would occur along existing roads including Shea/Osborne Well Road and Swansea Road. During construction there would be more truck traffic along these roadways; however, it would not impede access to any Wilderness Area. No restrictions along any of these access roads are anticipated. Therefore, no effect to Wilderness Areas would occur.

No Action Alternative

Under the No Action Alternative, the transmission line would require increased routine and emergency maintenance, including replacement of individual structures, as the line continues to age. Existing access roads would continue to degrade from increased use. Operation and maintenance of the line would not result in changes to the existing landowners, land uses, or recreation; and would not impede the implementation of any land use plans or special use areas within the project area.

3.3 VISUAL RESOURCES

3.3.1 Affected Environment

3.3.1.1 BLM Lake Havasu Field Office

A Visual Resource inventory was performed and Visual Resource Management (VRM) classes identified for public lands within BLM jurisdiction of the LHFO during the preparation of the 2007 LHFORMP. VRM classes and their objectives are:

- **Class I Objective:** To preserve the existing character of the landscape; the level of change to the characteristic landscape should be very low and must not attract attention

- **Class II Objective:** To retain the existing character of the landscape; the level of change to the characteristic landscape should be low
- **Class III Objective:** To partially retain the existing character of the landscape; the level of change to the characteristic landscape should be moderate
- **Class IV Objective:** To provide for management activities that require major modification of the existing character of the landscape; the level of change to the characteristic landscape can be high

The project area affecting BLM public land is categorized as VRM Class II and III. The land is mostly undeveloped within a Sonoran and Mohave Desert transition zone. The prominent mountains and geologic features are the Aubrey Hills and Buckskin and Bill Williams Mountain Ranges (see Figure 1-2 and Photograph 3-1). The transmission line varies across the topography, but generally blends with the landforms and background.

Photograph 3-1 Example of Sonoran Desert Views within Project Area

3.3.1.2 USFWS Bill Williams River National Wildlife Refuge

The BWRNWR holds one of the last stands of natural cottonwood-willow forest along the Lower Colorado River (LCR), creating a unique ecosystem that provides good habitat for resident and

migratory wildlife. USFWS uses various management techniques to protect and restore the habitat, native plants, and animals in the BWRNWR. Cottonwood and willow trees are planted and maintained; tamarisk is controlled.

3.3.2 Environmental Consequences

A significant affect on VRM resources would result if one or more of the following were to occur from construction or completion of the Proposed Action:

- Degradation of the character or scenic quality of the project landscape area
- Dominant visual change in color, form, or texture of the landscape seen in one or more Key Observation Points (viewer locations where likely to be seen by most people), any developed motorized or non-motorized access points, residences or business locations.
- Create a conflict with the visual or scenic quality criteria identified by other Federal or state land management agency resulting in an adverse affect
- Create a visual eyesore that would dominate the natural view shed or scenic quality

Proposed Action

Approximately a 0.5-mile segment of the Parker–Planet Tap 69-kV Transmission Line would be rerouted within the BWRNWR to reduce maintenance requirements for trimming or removal of mature vegetation. This new alignment would be closer to an existing road and would reduce the impact of man-made features on the natural character of the landscape, and the need for access roads to individual structures.

Aged wood structures would be replaced with new metal monopoles, metal H-frame structures and metal three-pole structures. At the request BWRNWR, Western would use structures with a "rusty" appearance in order to blend in with the natural look of the refuge area. The new insulators would be of a gray polymer designed to reduce visibility. Ancillary equipment such as conductors and hardware would be more visible than the existing equipment. However, the increased visibility would be short-term and diminish over time until weathering of the transmission line returns to a less reflective condition.

The new access road between Structures 5/6 and 6/2 is not in a location that would be highly visible by the general public. It would be visible by hikers or other dispersed users, and noticeable in the immediate foreground but would not be a dominant visual element in the overall landscape. The area along the transmission line has many small access roads along its length, and the new roadway would not be a notable new feature. The improvements to the existing roads may create a short-term increase the contrast of the roadways and the surrounding landscape but would diminish over time as weathering occurs.

No Action Alternative

Overall, continued maintenance and repair of the line would not change the aesthetic qualities of the landscape. The wood structures would be maintained or replaced as needed, and mature vegetation would continue to require removal in the future for the portion of the line within the BWRNWR and on BLM land. The No Action Alternative would not result in substantial dominant changes in the landscape and would conform to BLM visual quality objectives.

3.4 BIOLOGICAL RESOURCES

Four biological reports were completed, each covering the biological impacts of separate aspects of the project and in total covering all phases of the project: *Draft Biological Assessment, Western's Parker to Buckskin Tap 69-kV Transmission Line Rebuild and Upgrade Project, San Bernardino County, California and La Paz County, Arizona* (Transcon Environmental 2008a); *Western's Buckskin Tap to Planet Tap 69-kV Transmission Line Rebuild and Upgrade Project, La Paz and Mohave Counties, Arizona* (Transcon Environmental 2008b); *Biological Report: Addendum 1, Buckskin Tap to Planet Tap 69-kV Transmission Line Rebuild and Upgrade Project, La Paz and Mohave Counties, Arizona* (Transcon Environmental 2010); and *Biological Evaluation for Planet Tap Access Road Upgrade Project, La Paz and Mohave Counties, Arizona* (Del Sol Group 2009). The species covered in this section are based upon the species identified by these reports that may occur in the project area. Additional discussion of these species is based on the information from aerial photographs, topographic maps, Geographic Information System (GIS) data, various natural history and biological texts, unpublished technical documents, and *Federal Register* documents, as well as from state and Federal agency coordination and websites.

3.4.1 Vegetation

3.4.1.1 Affected Environment

The project lies within the LCR Subdivision and the Arizona Upland Subdivision of the Sonoran Desertscrub Biotic Community (Turner and Brown 1994), and the Sonoran Riparian Deciduous Forest and Woodlands of the Tropical-Subtropical Wetlands Biotic Community (Minckley and Brown 1994). This project occurs at elevations ranging from 500 to 1,000 above mean sea level.

The nonriparian upland areas are dominated by unvegetated soil and rocks interspersed by creosotebush (*Larrea tridentata*), brittlebush (*Encelia farinosa*), paloverde (*Parkinsonia* spp.), cholla (*Cylindropuntia* spp.), saguaro (*Carnegiea gigantea*), and mesquite (*Prosopis* spp.). Only sparse groundcover is present in these areas.

The Bill Williams River floodplain on the BWRNWR, including Mosquito Flats where the transmission line would be rerouted, is dominated by a Fremont cottonwood (*Populus fremontii*) and Goodding's willow (*Salix gooddingii*) gallery forest with an understory of native and non-native vegetation including tamarisk (*Tamarix* spp.), arrowweed (*Pluchea sericea*), and seep willow (*Baccharis salicifolia*). Isolated areas of emergent aquatic vegetation (wetlands) including spikerush (*Eleocharis macrostachya*), cattail (*Typha angustifolia*), and bulrush (*Scirpus americanus*) also occur within the floodplain (Photograph 3-2).

Several species of protected native plants are present in the project area including saguaro (*Carnegiea gigantea*), barrel cactus (*Ferocactus cylindraceus*), strawberry hedgehog cactus (*Echinocereus engelmannii*), beavertail cactus (*Opuntia basilaris*), buckhorn cholla (*Cylindropuntia acanthocarpa*), and teddy bear cholla (*Cylindropuntia bigelovii*).

In addition to the native species mentioned above, both the upland areas and the Bill Williams floodplain support non-native species. Most notable of these is tamarisk, which composes a large percentage of the understory in the riparian deciduous forest of the Bill Williams River. Tamarisk also occurs sparsely along the margins of the Colorado River within the project area. Other non-native species include grasses, reeds, and various annual species, such as red brome (*Bromus rubens*), Russian thistle (*Salsola iberica*), common ragweed (*Ambrosia artemisiifolia*),

Sahara mustard (*Brassica tournefortii*), giant reed (*Arundo donax*), Bermuda grass (*Cynodon dactylon*), and spiny rush (*Juncus acutus*).

Photograph 3-2 Example of Riparian Vegetation within Project Area

3.4.1.2 Environmental Consequences Native Plants

A significant impact on native vegetation would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss to any population of sensitive plants that would jeopardize the continued existence of that population
- Loss to any population of plants that would result in a species being listed or proposed for listing as endangered or threatened

Proposed Action

The extent of the environmental consequences to native vegetation would vary depending on the type and location of the vegetation. In the Mosquito Flats area near Structures 4/4 through 4/6, vegetation trimming and removal would be required where the transmission line would be rerouted outside the riparian area. Vegetation removal would only occur to the extent necessary to remove the existing transmission line and construct the rerouted transmission line near the existing road and away from the riparian area. The vegetation removal in this area would likely

have a short-term negative impact. The movement of the transmission line outside the riparian zone would eliminate the need to routinely trim the riparian vegetation. Although some vegetation trimming below the transmission line may be required for safety precautions, it is expected to be infrequent. This relocation of the transmission line is anticipated to have a net positive impact on the riparian vegetation in the Mosquito Flats area.

There would be little to no impacts to the riparian vegetation where the transmission line crosses the Bill Williams River because the transmission line spans above the riparian canopy. No vegetation would be trimmed or removed in this area, and the line would be strung over the existing vegetation.

The primary impacts to vegetation in the upland areas would come from road maintenance and construction, and from clearing of work areas. Road maintenance and construction may include grading or blading to level the surface, widening curves, adding or removing fill dirt, and installing erosion-control devices such as culverts. This maintenance would occur to the extent required to allow passage of the equipment for access roads. Roads needed for long-term maintenance would be rehabilitated in a manner that would minimize environmental effects and the need for frequent repeated maintenance. Roads that are modified would either be blocked or gated at the end of construction to prevent damage from unauthorized access.

Clearing would be required for areas at each structure location and pulling and/or tensioning stations; these areas would be reseeded with species native to the project vicinity once construction is completed. Additionally, reseeding within the affected areas occurring within the BWRNWR would use a native plant seed mix collected from the existing plant community. Thus, the genetic integrity of the cottonwood-willow riparian forest and its associated understory would not be affected by the Proposed Action.

Vegetation removal associated with the Proposed Action would not result in a loss of any population of sensitive plants that would jeopardize the continued existence of that population and would not result in a species being listed or proposed for listing as endangered or threatened.

No Action Alternative

The No Action Alternative would not result in any change to the existing native vegetation in most of the project area. However, routine and emergency maintenance of the transmission line would likely require occasional vegetation removal for maintenance access. The transmission line alignment would remain the same, and the riparian area under the transmission line would continue to be regularly trimmed for safety precautions. The area of ground disturbance could vary from 0.02 acre to 0.2 acre per structure depending on the type of repair required (e.g., replacement of an insulator vs. a structure) and the need to construct a pad to create a flat area for equipment. Western would evaluate impacts to biological resources for routine maintenance projects. Western's standard mitigation measures would be implemented during maintenance activities to minimize impacts to vegetation (see Appendix B). Vegetation removal associated with the No Action Alternative would not result in a loss of any population of sensitive plants that would jeopardize the continued existence of that population and would not result in a species being listed or proposed for listing as endangered or threatened.

3.4.1.3 Environmental Consequences Non-Native Plants

A significant impact on non-native vegetation would result if the following was to occur from construction or operation of the Proposed Action:

- Introduce or increase the spread of noxious weeds

Proposed Action

Noxious weeds are already present in the project area. To prevent the introduction of new invasive species, all earthmoving and hauling equipment would be washed at the contractor's storage facility (parking and assembly area) prior to entering the construction site every day. All disturbed soils that would not be permanently stabilized by construction would be seeded using species native to the project vicinity. As previously discussed, all reseeding within the BWRNWR would be accomplished with a native plant seed mix gathered from within the BWRNWR. In addition, to prevent the spread of invasive species seed to uncontaminated areas, construction personnel would inspect all construction equipment and remove all attached plant/vegetation debris prior to leaving the construction site. Further resource protection

measures are included in Section 2.2.1 and Appendix A. The Proposed Action would not result in the introduction or spread of noxious weeds to an area not previously infested.

No Action Alternative

Maintenance and construction vehicles and equipment would continue to access the project area for routine and emergency repairs of the existing transmission line. Vehicle access and ground-disturbing activities could result in the introduction of noxious weeds if vehicles are not washed prior to accessing the transmission line.

3.4.2 Wildlife

3.4.2.1 Affected Environment

The array of habitats within the project area supports many diverse species of wildlife. Typical mammals include desert cottontail (*Sylvilagus auduboni*), black-tailed jackrabbit (*Lepus californicus*), woodrat (*Neotoma* spp.), coyote (*Canis latrans*), raccoon (*Procyon lotor*), bighorn sheep (*Ovis canadensis*), and burro (*Equus asinus*). Typical birds include yellow warbler (*Dendroica petechia*), bell's vireo (*Vireo bellii*), summer tanager (*Piranga rubra*) , Yyllow-breasted chat (*Icteria virens*), Southwestern willow flycatcher (*Empidonax traillii extimus*), cactus wren (*Campylorhynchus brunneicapillus*), and turkey vulture (*Cathartes aura*). Typical reptiles include California kingsnake (*Lampropeltis getulus*), western diamondback (*Crotalus atrox*), whiptail lizards (*Aspidoscelis* spp.), and zebra-tailed lizard (*Callisaurus draconoides*). Fish in the project area include largemouth bass (*Micropterus salmoides*), flathead catfish (*Pylodictus olivarius*), green sunfish (*Chaenobryttus cynellus*), and razorback sucker (*Xyrauchen texanus*).

The bighorn sheep is not listed as a special status species by AGFD or BLM; however, in part because of its status as a big game animal and its low reproductive rate, there is concern over this species. Desert bighorn sheep populations have declined range-wide. This species is not yet protected under the Endangered Species Act but if its populations do not turn around soon, it may be listed. Bighorn sheep in Arizona inhabit rocky sparsely vegetated mountainous terrain. They tend to browse on a variety of grasses, shrubs, trees, and succulents, such as catclaw acacia, mesquite, jojoba, and prickly pear. Lambing occurs in steep areas of limited accessibility that

provide some protection from predators (Hoffmeister 1986). BLM LHFO closures for the lambing season extends from January 1 through June 30 (BLM 2007a). Threats to bighorn sheep include loss of food and water resources, infections, diseases, competition with burros, and disturbance (Hoffmeister 1986).

BLM-designated sensitive sheep habitat exists throughout a majority of the project area (BLM 2007a). Sensitive habitat is habitat that is considered to be used by sheep for lambing or other essential functions including accessing water (BLM 2007a).

In the vicinity of the project, bighorn sheep in the area use both sides of the river (BLM 2007a), but tend to stay north of the project area in the Aubrey hills and the Bill Williams Mountains (Bridges 2010a). Lambing areas for these populations tend to be dispersed and not concentrated in specific locations (Henry 2010). Additionally, the lambing area locations often change yearly (Henry 2010). Based on radiotelemetry data, any high or steep area with limited accessibility that is used by bighorn sheep is a potential lambing area (Henry 2010).

3.4.2.2 Environmental Consequences

Impacts to wildlife would occur when habitats or individuals are disturbed or lost during the Proposed Action's construction or operation. The significance of the impact depends in part on the sensitivity of the population. A significant impact on wildlife would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss to any population of wildlife that would jeopardize the continued existence of that population
- Loss to any population that would result in the species being listed or proposed for listing as endangered or threatened
- Interference with the movement of any native, resident, or migratory wildlife species for more than two reproductive seasons
- Local loss of wildlife habitat (as compared to total available resources within the area)
- Interference with nesting or breeding periods of any species that results in a loss of viability or a trend toward Federal listing
- Reduction in the range of occurrence of any wildlife species

Proposed Action

The Proposed Action would have different impacts depending on the type of species. Clearing and excavation activities are likely to result in some displacement of small reptiles, mammals, and birds, and could injure or kill small reptiles and mammals if present during construction. Species that are most likely to be displaced, injured, or killed, include whiptail lizards or desert cottontail that are common and widely distributed. The work to clear new and improved access roads would fragment habitat and may act as an impediment to the movement of individual small mammals and reptiles but not affect the movement of any local species population as a whole.

The relocation of the disconnect switches from the north side of the river to a more accessible location on the south side of the river and the replacement of wood structures with steel structures would reduce the need to use and regularly maintain the road on the north side of the river. This reduction in use would serve to reduce the effects of that road on wildlife species.

The primary sources of noise would be from helicopters and from the implosive connector operations (see Section 3.9). Noise from helicopter transporting equipment would range from 70 to 90 "A"-weighted sound in decibels (dBA) with a distance from 200 feet to 1,500 feet above the ground. Noise from helicopters may disrupt sheep during their lambing season if they are in the vicinity of helicopter operations (Bridges 2010b). The helicopter flights are anticipated to occur during a one week period as shown in Figure 2-1. While the date of the helicopter work will depend on the startup date and length of the preceding construction phases, if helicopter work occurs during the lambing season, the short duration of the helicopter usage would minimize the length of impact to bighorn sheep.

The impulse noise from implosive connector installation is approximately 118–122 dBA at 200 feet. This noise is significantly louder than the helicopter noise. Although the short duration of this noise may prove to be less of an impact to sheep, it may startle them more than the constant noise of the helicopter. The implosive connector/pulling operations are anticipated to occur during a four week period as shown in Figure 2-1. This longer period increases the chances that this operation would occur during the lambing season; however, the exact timing is unknown. On the other hand, the chances that sheep would be near the implosive sites are less than the

chances that the sheep would be close to locations where the helicopter would be used. The implosive sleeving is a stationary source of noise that only affects the area immediately around the fixed implosive station, whereas the noise from a helicopter covers the entire area that the helicopter travels. Additionally, the use of implosive connectors would allow fewer pulling stations to be created; thus lessening the impact of that aspect of the project.

During the lambing season, loud noises can cause the ewes to drop their lambs early or even abandon them. To avoid such adverse effects, a single flyover of the Aubrey Hills and Bill Williams Mountains would occur prior to the start of lambing to see if the sheep are in this area. The flight should be at least 500 feet above ground level to minimize any adverse effects to the ewes and lambs. If bighorn sheep are present during this flyover, then the helicopter should avoid lower flights over these hills during the rest of the construction. Regardless of whether sheep are present or not during this flyover, the AGFD has requested that the helicopter (used to bring in hardware and set structures) and personnel approach the work area from the south and follow along the river to the extent practicable (Bridges 2010a).

While the Proposed Action may have a short-term impact on bighorn sheep, it is not anticipated to have any long-term impacts. The project would not install any fences or barriers that could potentially interfere with the movement of bighorn sheep. The project would not result in an impact to any potential water source in the area. All roads that are improved in the course of this project would be closed or gated by the end of the project; therefore, the project would not increase public use or access to the area.

This Proposed Action may interfere with one year's breeding period of bighorn sheep; however, it will not contribute to a loss of population viability or result in Federal listing of the species because of only localized disturbance along the Bill Williams River would occur.

The Proposed Action would not result in the loss of any population of wildlife or wildlife habitat that would jeopardize the continued existence of that population or result in the species being listed or proposed for listing as endangered or threatened. Construction of the existing line and access road improvements and new road construction would not interfere with the movement of

any native, resident, or migratory wildlife species for more than two reproductive seasons, would not result in the local loss of wildlife habitat, and would not reduce the range of occurrence of any wildlife species.

No Action Alternative

Under the No Action Alternative, the transmission line and associated facilities would not be replaced. The construction-related noise associated with the helicopter use and implosive connectors would not occur. The transmission line would require increased routine and emergency maintenance as the line continues to age. Access roads may require improvements as they continue to degrade. Any maintenance work required would be structure specific, compared to the 7.1 miles the Proposed Action. This work would be more localized in nature than the Proposed Action. Western would evaluate impacts to biological resources for maintenance projects. Emergency repairs may not be able to avoid periods where wildlife are sensitive to disturbance. Western's standard mitigation measures would be implemented during maintenance activities to minimize impacts to wildlife.

The No Action Alternative would not result in the loss of any population or habitat of wildlife that would jeopardize the continued existence of that population or result in the species being listed or proposed for listing as endangered or threatened. Occasional vegetation removal would be minimal and would not result in the local loss of wildlife habitat. Construction activities associated with operation and maintenance of the line would not interfere with the movement of species for more than two reproductive seasons, or their nesting or breeding periods, and would not reduce the range of occurrence of any wildlife species.

3.4.3 Threatened or Endangered Species

3.4.3.1 Affected Environment

Table 3-1 provides a list of threatened or endangered species that may occur within the project area. The possibility for occurrence is based on the project biological reports, species lists of the BWRNWR, and additional sources. The California brown pelican (*Pelecanus occidentalis californicus*) was not analyzed because it was removed from the Endangered Species Act (ESA) list in December 2009.

Table 3-1 List of Threatened / Endangered Species that May Occur in the Project Area		
Common Name	**Scientific Name**	**Status[1]**
Bald eagle	*Haliaeetus leucocephalus*	ESA LT
Bonytail chub	*Gila elegans*	ESA LE
Razorback sucker	*Xyrauchen texanus*	ESA LE
Southwestern willow flycatcher	*Empidonax traillii extimus*	ESA LE
Yuma clapper rail	*Rallus longirostris yumanensis*	ESA LE
Mohave desert tortoise	*Gopherus agassizii [xerobates]*	ESA LT
Yellow-billed cuckoo	*Coccyzus americanus*	ESA C

[1] Status Definitions: ESA=Endangered Species Act, LE=Listed Endangered, LT=Listed Threatened, C=Candidate.
Source: Western Biological Reports.

Bald Eagle

Background: Currently, bald eagles are known to breed in Arizona from the lower deserts (1,100 feet) to higher elevation woodlands (5,600 feet) (AGFD 2002a). The bald eagle's main diet is fish; thus, it generally prefers areas near large, permanent water sources such as rivers and lakes with tall trees or cliffs that serve as perches and provide unimpeded views (AGFD 2002a). Bald eagles would, however, feed on mammals, birds, and carrion, including roadkill (AGFD 2002a). Arizona bald eagles most often build their nests on cliff edges, on rock pinnacles, and in cottonwood trees, but artificial structures, juniper, pinyon pine, sycamore, willow, and ponderosa pine, including snags, have also been used (Southwestern Bald Eagle Management Committee 2009). Threats include loss of habitat, reproductive impairment from pesticides and heavy metals, illegal shooting, trapping, food poisoning, collisions, and electrocution from power lines (AGFD 2002a).

Status in the Project Area: Present. Although the biological reports prepared for the project determined there is no suitable habitat for this species, the BWRNWR species list includes the bald eagle and bald eagles nest approximately 30 miles upstream at Alamo Lake. The bald eagle is likely an irregular visitor to the project area.

Bonytail Chub

Background: The bonytail chub is a medium-sized fish (generally 12–14 inches in length) that is gray or oliveaceous above with silvery sides and a white belly. The species gets its name from its long, thin caudal peduncle, and has a highly streamlined body that arches smoothly into a

predorsal hump in adults (USFWS 1990). Historically, this species was widespread and abundant throughout the upper and lower Colorado River Basin, occupying pools and eddies of the mainstream rivers. Today, the bonytail chub is mostly restricted to reservoirs along the Colorado River, where it occupies a variety of microhabitats. Habitat required for conservation of the bonytail chub includes river channels, and flooded, ponded, or inundated riverine habitats suitable for adults and young, especially in areas where competition from non-native fish has been reduced (USFWS 1990). Bonytail chub populations have been greatly reduced, and it is currently the rarest native fish in the Colorado River Basin. Threats to the species include altered hydrology, transformation of warm water to cool water habitats, and competition and predation by nonnative fish (AGFD 2001a).

Status in the Project Area: Present. The bonytail chub exists within the project area both within Lake Havasu and in the lower Bill Williams River. Critical habitat for the bonytail chub is designated in Lake Havasu and in the Lower Bill Willams River up to and including the 100-year floodplain.

Yuma Clapper Rail

Background: The Yuma clapper rail is a marsh bird that inhabits low elevation freshwater or brackish marshes with a wet substrate that supports cattail and bulrush stands of moderate- to high-density adjacent to shorelines. In Arizona, Yuma clapper rails are known to occur along the LCR and associated major drainages. Yuma clapper rails generally establish breeding territories in March and April and are highly territorial during the breeding season. Nests are usually built in dense vegetation near water's edge or on a small high site within the marsh. Eggs generally hatch April – July, with an incubation period of 21–23 days (AGFD 2001b). Threats to this species include habitat destruction, primarily due to stream channelization; drying and flooding of marshes, resulting from water flow management on the LCR; contaminants from agricultural tailwaters; prey base, including crayfish; and vulnerability to pesticides and heavy metal poisoning (AGFD 2001b).

Status in the Project Area: Possibly present. The Yuma clapper rail is present in the project vicinity; however, there is a lower possibility that they are present in the project area. Yuma

clapper rails likely prefer and use the larger areas of cattails that border the Bill Williams River Delta, downstream from the project area. The project biological resource reports determined that there is no suitable habitat for this species within the project area; however, in 2008, Yuma clapper rails were documented within 0.25 mile of where roads would be improved (McLeod et al. 2009).

Southwestern Willow Flycatcher

Background: The Southwestern willow flycatcher (flycatcher) is a small songbird that winters in Central America but migrates north to breed in the US and Canada during summer. Flycatchers are riparian obligates, breeding in dense riparian vegetation near a permanent or semipermanent source of water or saturated soil throughout the Southwestern US from or near sea level to 8,530 feet (Sogge et al. 1997). Historical breeding habitat in Arizona was typically mature cottonwood-willow riparian forest at lower elevations or willow thickets at higher elevations (Sogge et al. 1997). Flycatchers typically arrive at Arizona breeding sites from late April to mid-June and remain on the breeding grounds up to late August (USFWS 2001a). Threats to this species include riparian habitat loss and degradation due to invasion by non-native species, livestock grazing, and water management practices such as damming or diverting water, flood control, channelization, and bank protection (USFWS 2001a).

Status in the Project Area: Present. The flycatcher is present and breeds within the project area. Suitable habitat occurs along the Bill Williams River throughout the project area, which is regularly surveyed for flycatchers. In 2008, four pairs of flycatchers with five nests were located adjacent to and north of where the transmission line would be relocated in Mosquito Flats (McLeod et al. 2009).

Yellow-billed Cuckoo

Background: In Arizona, yellow-billed cuckoos breed in large blocks of riparian habitat below 6,500 feet in elevation, particularly cottonwood-willow, mesquite, ash, sycamore, and tamarisk forests with dense understory foliage (USFWS 2001b). Nesting season peaks in mid-July through August, which is later than in most co-occurring riparian bird species and generally coincides with increased numbers of cicadas, katydids, caterpillars, and other large invertebrate

prey that constitute the bulk of the yellow-billed cuckoo's diet (USFWS 2001b). Threats to this species include riparian habitat loss and degradation attributable to invasion by non-native species, livestock grazing, and water management practices such as damming or diverting water, flood control, channelization, and bank protection.

Status in the Project Area: Present. Yellow-billed cuckoo are detected yearly in the project area within the Bill Williams River floodplain. Yellow-billed cuckoo also nest within the vicinity of the project area (Transcon Environmental 2008b).

Mohave Desert Tortoise

Background: The Mohave desert tortoise is a large domed shell reptile that is most active during spring, early summer, and warmer fall months. The Mohave desert tortoise primarily occurs in bajadas and basins of desertscrub communities, but is also found on rocky slopes in areas west and north of the Colorado River. The Mohave desert tortoise is herbivorous and is threatened by habitat loss/fragmentation, disease, predation, and motorized vehicles (USFWS 2010).

Status in the Project Area: Mohave desert tortoises are not likely to be found in the project area because habitat is generally of low quality and highly disturbed. Additionally, only a small portion of the project area is west of the Colorado River, where the Mohave desert tortoise occurs. The nearest record of a Mohave desert tortoise is over 7 miles south of the project area near Crossroads, California. The nearest designated critical habitat to the project area is over 25 miles west in the Chemehuevi Unit (Transcon Environmental 2008a).

Razorback Sucker

Background: The razorback sucker is a medium-sized freshwater fish (up to 40 inches in length) that is oliveaceous to brownish black above, has brownish or pinkish to reddish stripes on the sides, and is lighter ventrally (AGFD 2002b). The razorback sucker was historically found throughout medium-sized to large rivers of the Colorado River Basin, but has suffered substantial reductions in range and overall population size in the past 50 years. The razorback sucker is generally found at elevations below 6,000 feet in backwaters or slow-moving areas.

Razorback sucker habitat preferences change with season, from slower, deeper waters in winter months to more rapid, shallower waters in summer months (USFWS 1998). Spawning usually occurs during spring, depending on temperatures, and evidence suggests that these fish may even migrate to smaller tributaries to spawn. Food sources for these fish include algae, insect larvae, plankton, and detritus (AGFD 2002b). Threats to the species include altered hydrology, transformation of warm water to cool water habitats, competition and predation by nonnative fish, and potentially parasites (AGFD 2002b).

Status in the Project Area: Present. The razorback sucker is known to exist within the project area both within Lake Havasu and downstream of Lake Havasu (Transcon Environmental 2008a). Critical habitat for the razorback sucker is designated in the mainstem of the Colorado River downstream of Lake Havasu, below Parker Dam.

3.4.3.2 Environmental Consequences

A significant impact on endangered or threatened species or their critical habitats would result if any of the following were to occur from construction or operation of the Proposed Action:

- Jeopardizing the continued existence of a Federally-listed species
- Loss of individuals of a population of species that would result in lowering a species status (e.g., from threatened to endangered)
- Adversely modifying critical habitat to the degree it would no longer support the species for which it was designated
- Modification of habitat used by special status species for resting, nesting, feeding, or escape cover

<u>Proposed Action</u>

Bald Eagle

It was determined the project would not affect the bald eagle or its habitat because they would likely not be present within the project area during the time of construction.

Bonytail Chub

No construction occurred in the Colorado River during Phase I, and no construction would occur in the Bill Williams River during Phase II. Portions of the Bill Williams River would be used by ATVs to transport work crews during this project; however, large equipment would not enter the river. The project would not alter the flow regimes of either river. The resource protection measures and Western's Construction Standards 13 and standard mitigation measures would reduce the potential for fluids or materials to enter aquatic systems. The Proposed Action would not affect the bonytail chub.

Critical habitat for the bonytail chub is designated in Lake Havasu and the lower Bill Williams River. No construction would occur in Lake Havasu or in the Bill Williams River. The project would not impact flow regimes or vegetation.

Mohave Desert Tortoise

There are no anticipated affects because of the limited quantity of minimally suitable habitat for the Mohave desert tortoise within the project area and because all work within potentially suitable habitat would be monitored by a qualified biologist.

Yuma Clapper Rail

Ground-disturbing activities and most other construction activities would take place outside the area that is currently used by the Yuma clapper rail. Some road work would occur outside the riparian vegetation about 0.25 mile from habitat that was occupied by rails in 2008. Additionally, there is a possibility there would be some over-flights of occupied Yuma clapper rail habitat. Western would coordinate activities with BWRNWR to avoid impacts to the Yuma clapper rail.

While there would be riparian vegetation trimming required to relocate a portion of the transmission line, the work would be in an area that is currently trimmed and only would occur to the extent necessary to relocate this line. Once this project is complete the vegetation that is currently being trimmed would be allowed to regrow.

Because activities would be conducted adjacent to occupied Yuma clapper rail habitat, it was determined that this project may affect, but is not likely to adversely affect, the Yuma clapper rail.

Southwestern Willow Flycatcher

All work is planned to occur from October 1 through April 30, outside the season when flycatchers may be present in the project area. If work is necessary outside this window, then a qualified biologist would survey for flycatchers. If a flycatcher nest is found, then work would cease within that transmission line span until the qualified biologist has determined that the nestlings have fledged.

While there would be riparian vegetation trimming required to relocate a section of transmission line, the work would be in an area that is currently trimmed and trimming only would occur to the extent necessary to relocate this line. Once this project is complete the vegetation that is currently being trimmed would be allowed to regrow, possibly increasing suitable habitat for flycatchers. There would be no vegetation trimming where the transmission line crosses the Bill Williams River. Western would further coordinate activities with BWRNWR to avoid impacts to the flycatcher.

Because activities would be conducted adjacent to occupied flycatcher habitat and would involve some riparian vegetation trimming, it was determined that this project may affect, but is not likely to adversely affect, the flycatcher.

Yellow-billed Cuckoo

All work is planned to occur from October 1 through April 30, outside the season when yellow-billed cuckoos may be present in the project area. If work is necessary outside this window, then a qualified biologist would survey for yellow-billed cuckoo. If a yellow-billed cuckoo nest is found, work would cease within that transmission line span until the qualified biologist has determined that the nestling have fledged.

While there would be riparian vegetation trimming required to relocate a section of transmission line, the work would be in an area that is currently trimmed and trimming only would occur to the extent necessary to relocate this line. Once this project is complete the trimmed vegetation would be allowed to regrow, possibly increasing suitable habitat for yellow-billed cuckoo. There would be no vegetation trimming where the transmission line crosses the Bill Williams River. Western would further coordinate activities with BWRNWR to avoid impacts to the yellow-billed cuckoo.

Because activities would be conducted adjacent to occupied yellow-billed cuckoo habitat and would involve some riparian vegetation trimming, it was determined that this project may affect, but is not likely to adversely affect, the yellow-billed cuckoo.

Razorback Sucker

Although razorback suckers may be present within the project area in the Colorado River, no work during Phase I occurred within the river. All project components crossed the Colorado River aerially with no structures in or on the banks of the river; therefore, there was no effects to razorback sucker or its critical habitat.

Overall

Western determined that the Proposed Action may affect but is not likely to adversely affect the flycatcher, the Yuma clapper rail, and the yellow-billed cuckoo. Western conducted ESA Section 7 formal consultation with the USFWS. The USFWS concurred with Western's determination on February 11, 2010 (see Appendix E).

Resource protection measures would be implemented to minimize impacts to threatened or endangered species (see Section 2.2.1 and Appendix A). The Proposed Action would not jeopardize the continued existence of a Federally-listed species, lower a species status, adversely modify critical habitat, or modify habitat used by a special status species for resting, nesting, feeding, or escape cover.

No Action Alternative

Under the No Action Alternative, the transmission line and associated structures would not be replaced. This would eliminate the possibility of affects to threatened and endangered species from construction of the project. The existing line, which is beyond the serviceable life expectancy, would remain in place and continued use of this line would likely result in the need for more frequent maintenance. This need for maintenance would increase frequency of work required in and adjacent to habitat for threatened and endangered species. Additionally, the existing line would be more likely to suffer a catastrophic failure from a weather event or possibly just due to its age. In the event of this type of failure, there would be an increased need to accomplish emergency repairs to the line, and Western may not have the necessary time to evaluate impacts to biological resources or arrange for a biological monitor to be present. Emergency repairs could occur during sensitive breeding seasons resulting in additional disruption to threatened and endangered species. Under the No Action Alternative regular trimming of riparian vegetation would continue adjacent to flycatcher and yellow-billed cuckoo habitat. This trimming would continue to restrict the expanse of the riparian deciduous forest canopy near Structures 4/4, 4/5, and 4/6.

Critical habitat for the bonytail chub is designated in Lake Havasu and the lower Bill Williams River. Critical habitat for the razorback sucker has been designated for the Colorado River below Parker Dam. The two structures adjacent to the razorback critical habitat are well above the river, and no work occurred in or immediately adjacent to the river.

Ground-disturbing activities associated with maintenance work would be structure specific, compared to the 7.1 miles the Proposed Action. Depending on the number of structures in need of repair or replacement at one time, construction activities could occur over several days, a few weeks, or longer. Western would evaluate impacts to threatened or endangered species for routine maintenance projects. Western's standard mitigation measures would be implemented during maintenance activities to minimize impacts to threatened or endangered species. When maintenance work is required that may affect threatened or endangered species, Western would re-initiate ESA Section 7 consultation with the USFWS. The No Action Alternative would not jeopardize the continued existence of a Federally-listed species, lower a species status, adversely

modify critical habitat, or modify habitat used by a special status species for resting, nesting, feeding, or escape cover.

3.4.4 Sensitive and Special Status Species

3.4.4.1 Affected Environment

Table 3-2 provides a list of special status species that may occur within the project area. The occurrence of the species is based on the project biological reports, species lists of the BWRNWR, and additional sources.

3.4.4.2 Environmental Consequences

Impacts to sensitive and special status wildlife species would occur when habitats or individuals are disturbed or lost during the Proposed Action's construction or operation. The significance of the impact depends in part on the sensitivity of the population. A significant impact on sensitive and special status wildlife species would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss to any population of sensitive or special status wildlife species that would jeopardize the continued existence of that population
- Loss to any population that would result in the species being listed or proposed for listing as endangered or threatened
- Interference with the movement of any sensitive or special status wildlife species for more than two reproductive seasons
- Local loss of wildlife habitat (as compared to total available resources within the area)
- Interference with nesting or breeding periods of any sensitive or special status wildlife species
- Reduction in the range of occurrence of any sensitive or special status wildlife species

Table 3-2 List of Sensitive and Special Status Species that May Occur in the Project Area		
Common Name	**Status[1]**	**Occurrence**
Pale Townsend's bigeared bat (*Corynorhinus townsendii pallescens*)	SC	Present. The project area contains suitable habitat, and the refuge species list includes Pale Townsend's big-eared bat as a breeding bat on the BWRNWR.
Greater western bonneted bat (*Eumops perotis californicus*)	SC	Present. The project area contains suitable habitat, and the refuge species list includes Greater western bonneted bat as a permanent resident.
Western red bat (*Lasiurus blossevillii*)	WSC	Present seasonally. The Western red bat is a documented migrant through the BWRNWR, and habitat exists along the Bill Williams River.
Western yellow bat (*Lasiurus xanthinus*)	WSC	Present. There are records of the Western yellow bat on the Bill Williams River, and suitable habitat exists within the project area.
California leaf-nosed bat (*Macrotus californicus*)	SC, WSC	Present. Habitat exists throughout the project area in the uplands, and the California leaf-nosed bat has been documented on the BWRNWR.
Cave myotis (*Myotis velifer*)	SC, S	Present. Habitat exists throughout the project area, and the cave myotis has been documented breeding on the BWRNWR.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	WSC	Present. Foraging habitat exists throughout the project area, and cliffs are present within the project area.
American peregrine falcon (*Falco peregrines anatum*)	D, WSC	Present. BWRNWR species list peregrine as breeding on the refuge.
Arizona toad (*Bufo microscaphus*)	SC	Present. Habitat exists within the project area and is recorded on the BWRNWR list.
Desert rosy boa (*Charina trivirgata gracia*)	S	Possibly present. Suitable habitat present in the project area; however, no records occur on BWRNWR species list.
Desert tortoise (Sonoran population) (*Gopherus agassizii*)	S	Present. BLM Category III habitat occurs over much of the project area. Sonoran Desert tortoises have been documented in the BWRNWR.
Banded Gila monster (*Heloderma suspectum cinctum*)	SC, S	Present. Documented occurrence and suitable habitat in the project area.
Common chuckwalla (*Sauromalus ater*)	S	Present. Suitable habitat exists within ROW and there are documented occurrences in BWRNWR.

[1] Status Definitions: D=Delisted under the ESA, WSC=Arizona Game and Fish Department Wildlife of Special Concern in Arizona, S=BLM Sensitive Species, SC=Federal Species of Concern. Source: Western Biological Reports.

Proposed Action

The Proposed Action would have different impacts depending on the type of species. Clearing and excavation activities are likely to result in some displacement of small reptiles, mammals, and birds, and could injure or kill small reptiles and mammals if present during construction. Species that are most likely to be displaced, injured, or killed are smaller species. The work to clear new and improved access roads would fragment habitat and may impede the movement of

individual small mammals and reptiles but not affect the movement of any local species population as a whole.

The relocation of the disconnect switches from the north side of the river to a more accessible location on the south side of the river and the replacement of wood structures with steel structures would reduce the need to use and regularly maintain the road on the north side of the river. This reduction in the use would serve to reduce the effects of that road on sensitive or special status species.

The banded Gila monster, common chuckwalla, and desert rosy boa may reside in the desertscrub vegetation within the project area. While this project may impact individual banded Gila monsters, common chuckwallas, and desert rosy boas, it is unlikely to impact overall population viability or contribute to a trend toward Federal listing.

Impacts to bats would be minimal because vegetation removed or trimmed would be limited to the amount necessary to conduct the work and the amount would be negligible compared to the expanse of the habitat in the greater project vicinity. Work would also occur primarily during the day, and no bridge structures where bats would possibly roost would be affected by this project.

Western incorporated resource protection measures for the Sonoran desert tortoise, because there is a chance that they may be impacted if it ventures within the project area during construction (see Appendix A).

The Proposed Action would not result in the loss of any population of sensitive or special status wildlife that would jeopardize the continued existence of that population or result in the species being listed or proposed for listing as endangered or threatened. Construction of the line, access road improvements, and new road construction would not result in the local loss of wildlife habitat, would not interfere with the movement of species for more than two reproductive seasons or nesting or breeding periods, and would not reduce the range of occurrence of any sensitive or special status wildlife species.

No Action Alternative

The aging of the transmission line would result in the increasing need for maintenance and road use. Ground-disturbing activities associated with maintenance work would be structure specific, compared to the 7.1 miles the Proposed Action. Depending on the number of structures in need of repair or replacement at one time, construction activities could occur over several days, a few weeks, or longer. Under the No Action Alternative regular trimming of riparian vegetation would continue. This trimming would continue to restrict the expanse of the riparian deciduous forest canopy near Structures 4/4, 4/5 and 4/6. Western would evaluate impacts to biological resources for routine maintenance projects. Western's standard mitigation measures would be implemented during maintenance activities to minimize impacts to sensitive species.

The No Action Alternative would not result in the loss of any population of sensitive or special status wildlife that would jeopardize the continued existence of that population or result in the species being listed or proposed for listing as endangered or threatened. Vegetation removal would be minimal and would not result in the local loss of wildlife habitat. Construction activities associated with operation and maintenance of the line would not interfere with the movement of species for more than two reproductive seasons or their nesting or breeding periods, and would not reduce the range of occurrence of any sensitive or special status wildlife species.

3.4.5 Birds Protected Under the Migratory Bird Treaty Act

3.4.5.1 Affected Environment

The BWRNWR is designated an Important Bird Area and supports numerous species of breeding migratory birds (National Audubon Society 2010). The area presents an important stopover for migratory birds by providing habitat and other resources. The refuge supports large breeding populations of Bell's vireo, yellow warbler, Lucy's warbler, and yellow-breasted chat (National Audubon Society 2010).

3.4.5.2 Environmental Consequences

Impacts to migratory birds would occur when habitats or individuals are disturbed or lost during the Proposed Action's construction or operation. The significance of the impact depends in part

on the sensitivity of the population. A significant impact on migratory birds would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss to any population of migratory birds that would jeopardize the continued existence of that population
- Interference with the movement of any migratory birds for more than two reproductive seasons
- Local loss of migratory bird habitat (as compared to total available resources within the area)
- Interference with nesting or breeding periods of any migratory bird species
- Reduction in the range of occurrence of any migratory bird species

Proposed Action

Short-term impacts to migratory birds from this project could include destruction of nests, disruption of normal activity patterns, and potential nest abandonment by construction activities and clearing of vegetation. Potential long-term impacts include conversion of habitat to roads and death by impacts with transmission lines or electrocution. While the relocation of the line between Structures 4/4 and 4/6 would result in the initial removal of riparian vegetation, the relocation of the transmission line would reduce impacts to migratory birds because it would reduce the regular maintenance need of trimming riparian vegetation. If construction occurs during March and April, a survey would be conducted by a qualified biologist to identify active migratory nests. If a nest is found, construction activities within that transmission line span would cease until a qualified biologist determined the birds had fledged. The transmission line would be designed to conform with Western's Avian Protection Plan to minimize collisions and electrocution of birds.

The Proposed Action would not result in a local loss of migratory bird habitat or the loss to any population of migratory birds that would jeopardize the continued existence of that population. It would not interfere with migratory bird species movement for more than two reproductive seasons or interfere with their nesting or breeding periods, and would not reduce the range of occurrence of any migratory bird species.

No Action Alternative

Under the No Action Alternative the transmission line and associated facilities would not be replaced. This would eliminate the possibility of effects to migratory birds from construction. Conversely, under the No Action Alternative, the existing line, which is beyond the serviceable life expectancy would remain in place. Continuing to use this line would likely result in the need for more frequent maintenance of the transmission line and associated facilities. Under the No Action Alternative regular trimming of riparian vegetation would continue to restrict the expanse of the riparian deciduous forest canopy in the area of Structure 4/4, 4/5, and 4/6. Western would evaluate impacts to biological resources for routine maintenance projects. When structures or other parts are replaced, Western's Avian Protection Plan would be implemented along with Western's standard mitigation measures to minimize impacts to migratory birds.

The No Action Alternative would not result in a local loss of migratory bird habitat or the loss to any population of migratory birds that would jeopardize the continued existence of that population. It would not interfere with migratory bird species movement for more than two reproductive seasons or interfere with their nesting or breeding periods, and would not reduce the range of occurrence of any migratory bird species.

3.4.6 Fish Habitat

3.4.6.1 Affected Environment

Two river systems, the Colorado River and the Bill Williams River, occur within the project area. There are many different habitat types within both of these rivers. The Colorado River provides both larger riverine and lake habitats as a result of numerous dams. The river below Parker Dam, where the project crosses the Colorado River, is controlled by Reclamation and is a flowing channelized riverine system with relatively clear flowing water. The area immediately above Parker Dam, including the lower portion of the Bill Williams Delta, is a calm, clear water lake habitat. The Bill Williams River within and adjacent to the project area has characteristics of traditional river and stream systems. Although the flow in the Bill Williams River is regulated by the upstream Alamo Dam (see Figure 1-1), the river maintains smaller scale riffles, runs, and pools that provide variable habitats for fish. Numerous species of fish occur in the project area including largemouth bass, flathead catfish, green sunfish, and razorback sucker. This system is

a more variable system than the Colorado River. The Bill Williams River is seasonally controlled by the Corps and is periodically flooded.

3.4.6.2 Environmental Consequences

Impacts to fisheries would occur when habitats or individuals are disturbed or lost during the Proposed Action's construction or operation. The significance of the impact depends in part on the sensitivity of the population. A significant impact on fisheries would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss of individuals of a population of aquatic species that would result in the species being listed or proposed for listing as threatened or endangered
- Interference with the movement of any native fish species for more than two reproductive seasons

Proposed Action

The Proposed Action would have little effect on fish habitat. No construction occurred in the Colorado River during Phase I, and no construction would occur in the Bill Williams River during Phase II. Portions of the Bill Williams River would likely be used by ATVs to transport work crews during this project; however, large equipment would not enter the river. Vehicle use in the river could decrease fish habitat by increasing siltation or by modifying the streambed. The project would not alter the flow regimes of either river. The resource protection measures and Western's Construction Standards 13 and standard mitigation measures would reduce the potential for fluids or materials to enter aquatic systems. The Proposed Action would not result in the loss of individuals of a population of aquatic species that would result in the species being listed because of the limited potential for impacts to aquatic resources. Additionally, the Proposed Action would not interfere with movement of native fish for more than two reproductive seasons because construction is anticipated to be completed in less than 1 year.

No Action Alternative

Operation and maintenance of the existing line under the No Action Alternative would not require work in the Colorado River or the Bill Williams River. The structures adjacent to the Colorado River are well above the river and would be accessed by land. There is no access road crossing the Bill Williams River between Structures 6/2 and 6/3. Both structures would be

accessed by existing roads; the access road to Structure 6/2 is degraded and would require improvement before it could be used for maintenance or in an emergency. Western would evaluate impacts to biological resources for routine maintenance projects. Western's standard mitigation measures would be implemented during maintenance activities to reduce the potential for fluids or materials to enter aquatic systems. The No Action Alternative would preserve the status quo for fish habitat in the project area. The No Action alternative would not result in the listing of aquatic species as threatened or endangered and would not interfere with native fish species movement for more than two reproductive seasons.

3.4.7 Wild Horses/Burros

3.4.7.1 Affected Environment

The Parker–Planet Tap 69-kV Transmission Line crosses two designated wild horse/burro areas, the Havasu-CA Herd Management Area (HMA) and the Havasu-AZ HMA. The Havasu-CA HMA, located on the California side of the Colorado River, comprises 24,318 acres and is managed as part of the Chemehuevi HMA (BLM 2007a). The west end of the project area is within the combined Havasu-CA/Chemehuevi HMA and is managed for 108 wild burros. The Havasu-AZ HMA is on the east side of the Colorado River north and south of the Bill Williams River and comprises 268,271 acres. The Havasu-AZ HMA is managed for 166 wild burros (BLM 2007a) and partially located within the project area.

Burros are documented within the project area including the BWRNWR and the surrounding BLM lands both north and south of the refuge. During the warmer months burros congregate at water sources and in the 1.5 miles surrounding water sources, whereas during the cooler months burros disperse away from water sources and use the upland and mountains more frequently (BLM 2007). The breeding season for burros is yearround; however, the majority of young are born during March to July (Hoffmeister 1986).

The LHFORMP primarily prescribes HMA management practices regulating management of numbers of burros in the herds. The LHFORMP calls for herd management at the minimum amount needed to maintain the health, self-sustaining nature, and free-roaming character. Other

than general herd management, the LHFORMP specifies that new fence construction could not prevent burro access to water.

3.4.7.2 Environmental Consequences

Impacts to wild horses/burros would occur when habitats or individuals are disturbed or lost during the Proposed Action's construction or operation. The significance of the impact depends in part on the sensitivity of the population. A significant impact on wild horses/burros would result if any of the following were to occur from construction or operation of the Proposed Action:

- Local loss of wild horses/burros habitat (as compared to total available resources within the area)
- Interference with breeding periods of wild horses/burros
- Reduction in the range of occurrence of wild horses/burros

Proposed Action

Impacts to wild horses/burros may include temporary disturbance or change in use patterns resulting from construction activities and noise. Short-term disturbances may include a short-term and/or long-term loss of forage at sites that are cleared or roads that are improved for construction activities. The project would not install any fences or barriers that would potentially interfere with the movement or reduce the range of wild horses/burros. This would also further the LHFORMP specific goal of not hindering wild horses/burro access to water sources.

Construction of the line, access road improvements, and new road construction all would not result in the local loss of wild horse/burro habitat, would not interfere with the movement of wild horses/burros for more than two reproductive seasons or breeding periods, and would not reduce the range of occurrence of wild horses/burros.

No Action Alternative

Under the No Action Alternative, the transmission line and associated facilities would not be replaced. This would eliminate the possibility of effects to wild horses and burros from construction. Under the No Action Alternative, the existing line, which is beyond the

serviceable life expectancy, would remain in place. Continuing to use this line would likely result in the need for more frequent maintenance of the transmission line and associated structures. Depending on the number of structures in need of repair or replacement, any effects to wild horses and burros could be more frequent under the No Action Alternative but would also tend to be more isolated than the Proposed Action. Western would evaluate impacts to biological resources for routine maintenance projects. Although it may be possible to schedule routine maintenance to avoid the breeding season, this may not be possible when emergency repairs are required. Western's standard mitigation measures would be implemented during maintenance activities to minimize vegetation removal and the local loss of wild horse and burro habitat. The No Action Alternative would not reduce the range of wild horses and burros.

3.5 SOILS

3.5.1 Affected Environment

Soils in the project area are of the Lithic Camborthids-Rock Outcrop-Lithic Haplargids Association. This association consists of well-drained, shallow, very gravelly and cobbly, moderately coarse to moderately fine-textured soils that formed in materials weathered residually from granitic rocks, schists, volcanic tuffs and conglomerates, basalt, and some shale and limestone (Hendricks 1985). Most of the project area is well-drained and the soils are dry. However, hydric soil conditions in the vicinity of Structure 4/4 were evaluated due to the presence of wetland vegetation in the area. Soils within a 100-foot buffer of Structure 4/4 were assessed per the hydric soils analysis outlined in the *Corps of Engineers Wetland Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (2008). Conditions of hydric soils associated with a wetland were observed approximately 13 feet north and east of Structure 4/4. Structure 4/4 does not occur within the boundary of the hydric soils, and no hydric soils occur south and west of the structure.

3.5.2 Environmental Consequences

A significant impact on soils would result if any of the following were to occur from construction or operation of the Proposed Action:

- Increases in the probability or magnitude of mass geological movement (e.g., slope failures, slumps, and rockfalls)

- Soil loss including loss of hydric soils or accelerated erosion due to disturbance that results in the formation of rills and/or gullies, or that results in sediment deposition in down gradient lands or water bodies to the extent that existing uses cannot be maintained
- Structures fail or create hazards to adjacent property due to slope instability or adverse soil conditions (such as compressible, expansive, or corrosive soils)
- Heavily traveled soils are compacted to a point not suitable as a seed bed for revegetating (for areas disturbed and not containing permanent structures)

Proposed Action

The Proposed Action would generate localized impacts to soils due to vegetation removal, grading access roads, constructing one new access road, and drilling holes for installation of structures. Impacts to soils would be minor and would include removal or relocation of topsoil from disturbed areas and excavated soils from drill augers at pole sites. Soils excavated from drill sites would be temporarily side cast from the hole and would be backfilled once the pole is vertically in place. Excess soils would be compacted around the structure to stabilize the structure. Travel would generally occur on access roads and disturbed areas not containing permanent structures would not be compacted to a point not suitable as a seed bed for revegetating. In accordance with Western's standard mitigation measures, work areas will be regraded and/or scarified to facilitate natural revegetation.

The Proposed Action would require an Arizona Pollutant Discharge Elimination Systems (AZPDES) permit and a Stormwater Pollution Prevention Plan (SWPPP) because disturbance would be greater than one acre. Erosion-control measures would be implemented as a component of the SWPPP, and site specific measures would be implemented to minimize and prevent soil erosion at all disturbed areas. Furthermore, the SWPPP would include a revegetation plan requiring 70% of the disturbed vegetation to return to preconstruction conditions before erosion-control monitoring ceases. Avoidance measures would be implemented in the vicinity of Structure 4/4, and hydric soils would not be impacted. Additional wetland avoidance resource protection measures are described in the Wetlands/Riparian Zones analysis (Section 3.6.4). Relocation of Structure 4/4 nearer to the Bill Williams River Road and away from the hydric soils would reduce potential future impacts to these soils from maintenance

operations. Thus, the hydric soils would continue to provide conditions necessary for wetland habitats, which provide important habitat for a variety of wildlife and plant species.

Except for Structures 4/4 to 4/6, the new steel structures would be installed in the vicinity of existing wood structures where soils are stable and not exhibiting substantial changes in slope stability due to soil corrosion, compressibility, or expansion. Only one new access road would be constructed in a previously undisturbed area. With implementation of the SWPPP, the Proposed Action would not increase the probability of slope failures, slumps, and rockfalls; soil loss or erosion would not cause rills and/or gullies to form; and sediment would not be deposited in down gradient lands or water bodies such that existing uses could not be maintained.

No Action Alternative

Under the No Action Alternative, impacts to soils would be related to ground disturbance from maintenance of the existing transmission line. Periodic soil disturbances similar to the effects described under the Proposed Action may be required for vegetation removal, grading construction access roads and excavation for periodic structure replacement. Travel would generally occur on access roads and disturbed areas not containing permanent structures would not be compacted to a point not suitable as a seed bed for revegetating. In accordance with Western's standard mitigation measures, work areas will be regraded and/or scarified to facilitate natural revegetation. Soil disturbance at a structure would vary from 0.02 acre to 0.2 acre depending on the type of activity and the need for a flat area for equipment. Structures 4/4 to 4/6 would not be relocated and no new road construction would likely occur. Maintenance operations associated with Structure 4/4 would continue to threaten hydric soils in the area unless avoidance measures were implemented. Impacts to hydric soils due to maintenance operations could negatively impact wetland habitat for wildlife and plant species if soils are not protected during maintenance of the transmission line. Western's standard mitigation measures for erosion control would be used during maintenance or repair activities. Maintenance and repair activities would be localized and would not substantially alter soils. The No Action Alternative would not increase the probability of slope failures, slumps and rockfalls; soil loss or erosion would not cause rills and/or gullies to form; and sediment would not be deposited in down gradient lands or water bodies such that existing uses could not be maintained.

3.6 WATER RESOURCES

3.6.1 Floodplains

3.6.1.1 Affected Environment

Executive Order 11988, *Floodplain Management*, requires an evaluation of impacts to floodplains for all Federal actions and directs Federal entities to reduce impacts to floodplains and minimize flood risks to human safety. The 100-year floodplain in the project vicinity is located along the Colorado River, the Bill Williams River, and various tributaries of the Bill Williams River (Figure 3-3). The floodplain surrounding the Bill Williams River generally occurs north of the transmission line. None of the structures occur within the delineated boundary of the 100-year floodplain. Structure 6/2 and Structure 6/3 support the transmission line spanning the Bill Williams River, though these structures occur on highly elevated banks above the river and outside the floodplain. Portions of the existing access roads occur within the boundary of the 100-year floodplain. On the south side of the Bill Williams River, an existing access road to Structure 6/2 crosses the floodplain within an unnamed tributary of the Bill Williams River. On the north side of the Bill Williams River, the old Planet Ranch Road crosses the delineated 100-year floodplains for the Bill Williams River, Castenada Wash, Yucca Wash, Mohave Wash, and Cave Wash.

3.6.1.2 Environmental Consequences

A significant impact on floodplains would result if any of the following were to occur from construction or operation of the Proposed Action:

- Modification of a floodplain that would impede or redirect flood flows that would result in property damage on- or off-site
- Construction within on-site waters or surrounding rivers that would adversely affect the flood-carrying capacity of the floodplain, the pattern, or magnitude of the flood flow
- Increase in scouring during a flood event that would result in structural or property damage

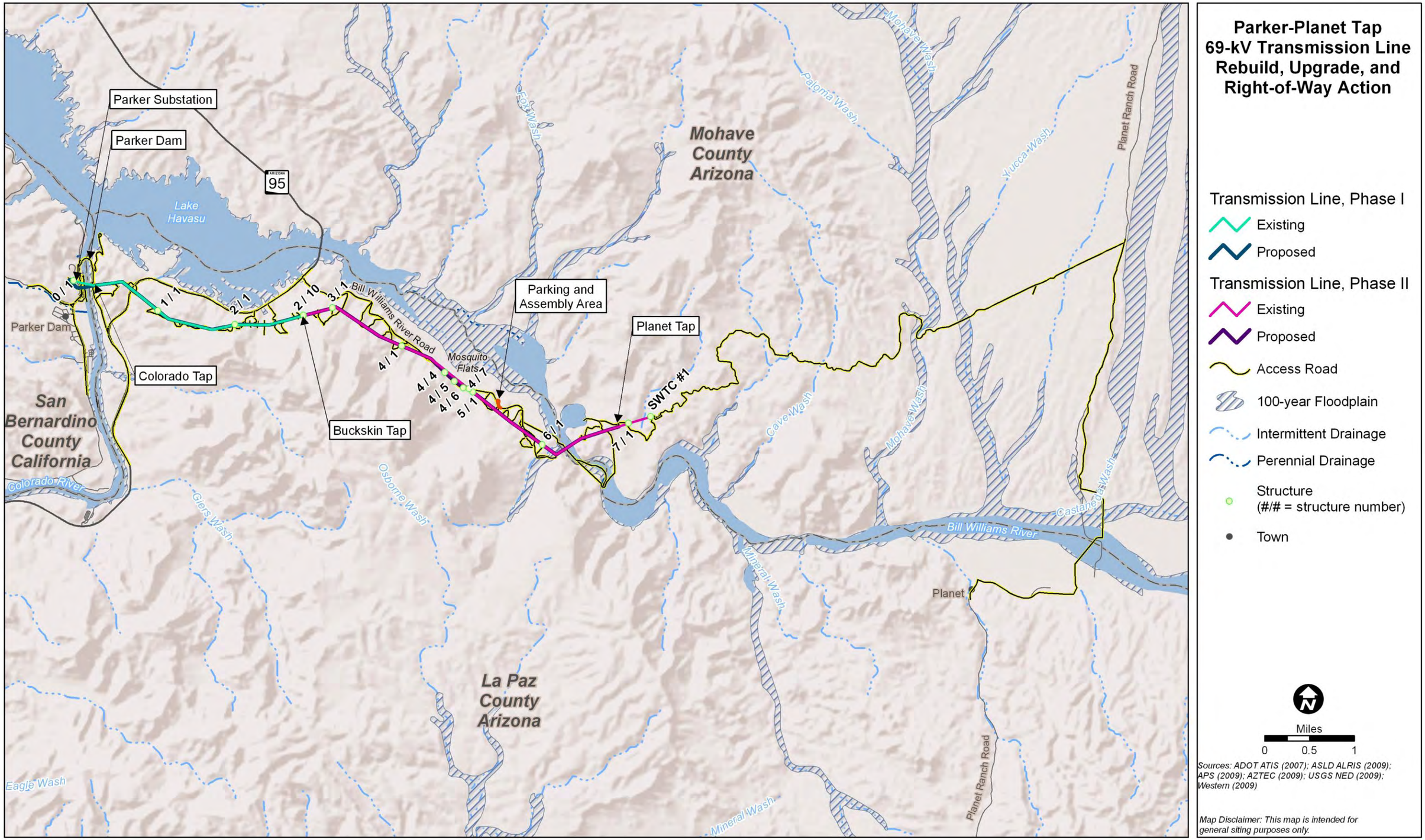

Figure 3-3 Water Resources Map

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Proposed Action

Under the Proposed Action, the rebuild, upgrade and access roads would not involve work within 100-year floodplains. However, as previously discussed, existing access roads to the transmission line cross 100-year floodplains. The roads are existing facilities that may require minor improvements to ensure construction vehicles have safe and reliable access to the transmission line. As stated in Section 2.1.6, improvements to access roads would be minor involving grading and the installation of CMPs to maintain stormwater flows in washes. No CMPs would be installed in a 100-year floodplain. Access road improvements would not modify the floodplain, adversely affect the flood-carrying capacity of the floodplain, the pattern or magnitude of the flood flow, or increase scouring during a flood event.

No Action Alternative

No existing structures are located in a floodplain. Under the No Action Alternative, access roads to the transmission line would only be improved if necessary to provide safe and reliable access for routine or emergency maintenance of the existing transmission line. Improvements would likely consist of minor grading of existing roads. Any grading of an access road within a floodplain would be minor and localized, and would not modify the floodplain, adversely affect the flood-carrying capacity of the floodplain, the pattern, or the magnitude of the flood flow, or increase scouring during a flood event.

3.6.2 Water Quality, Drinking, Surface, or Ground Water

3.6.2.1 Affected Environment

The Clean Water Act (CWA) is the primary Federal statute governing water quality and the discharge of dredge or fill materials into jurisdictional waters of the US. Section 401 of the CWA requires any projects discharging pollutants in waters of the US to obtain conditional or individual certification to ensure the project meets state water quality standards. State water quality standards designate specific uses that a water body should support. Section 402 of the CWA formed the National Pollutant Discharge Elimination System (NPDES), which regulates pollutant discharges, including stormwater, into waters of the US. In Arizona, NPDES is carried out under the AZPDES program and requires the implementation of erosion control BMPs and a SWPPP for construction activities exceeding one acre of ground disturbance.

With the exception of the Colorado River and the Bill Williams River, the drainages in the project area are ephemeral. All work in the vicinity of the Colorado River has been completed; the only surface water in Phase II is that within the Bill Williams River. Other than rainfall, flow in the Bill Williams River is regulated by the Alamo Dam, which is approximately 30 miles upstream from the transmission line. Below the dam, flow in some portions of the Bill Williams River is subterranean, particularly near the old Planet Ranch Road (Corps 2003). The Alamo Dam regularly releases low-volume flows to maintain riparian vegetation and wildlife habitat downstream of the dam (Reclamation 2009). State designated uses of the Bill Williams River include agricultural irrigation, livestock watering, aquatic and wildlife habitat, fish consumption, and full body contact (complete human submergence) (EPA 2008).

There are no Arizona-designated unique or impaired waters along the transmission line. However, the Bill Williams River between Alamo Dam and Castenada Wash is on the Arizona 2006/2008 list of Section 303(d) impaired waters due to the presence of ammonia, low-dissolved oxygen, and elevated pH levels. The impaired reach of the Bill Williams River is approximately 7.25 stream miles upstream from the transmission line. Planet Ranch Road provides access to the north side of the Bill Williams River across the impaired stretch.

Information regarding drinking water in the project area is limited. According to the Arizona Water Atlas (ADWR 2009), various wells along the western portions of the Bill Williams River show arsenic and fluoride concentrations that exceed state drinking water standards. Two instream flow claims for water rights have been filed for the Bill Williams River including claims from the USFWS and the BLM (ADWR 2009).

According to the Arizona Department of Water Resources (ADWR), there are numerous groundwater wells along the Bill Williams River (ADWR 2010a). There is a hydraulic connection between flow in the Bill Williams River and groundwater along the river. Groundwater levels fluctuate as much as 30 feet (ADWR 2010b). In the area designated for transmission line rerouting between Structures 4/4 to 4/6, the water table is fairly shallow and fluctuates between 3.16 feet and 11.64 feet below ground surface (Hautzinger 2009). Fluctuations in the groundwater table are related to the water releases at Alamo Dam.

3.6.2.2 Environmental Consequences

A significant impact to drinking, surface, and ground water would result if any the following were to occur from construction or operation of the Proposed Action:

- Groundwater quality degradation that causes groundwater quality to exceed state or Federal standards
- Groundwater depletion or interference with groundwater recharge that adversely affects existing or proposed uses of the groundwater aquifer
- Contamination of surface water from erosion or storm water runoff that would result in a violation of Federal and/or state water quality standards
- Surface water quality degradation which causes a long-term loss of human use or use by aquatic wildlife and plants
- Alteration of the existing drainage pattern of the site or area that would result in off-site erosion or siltation, resulting in adverse effects to adjacent properties
- Reduction of instream flow in the Bill Williams River and/or downstream watercourses
- Any impact to existing surface water rights on the Bill Williams River and/or downstream watercourses

Proposed Action

No work in standing water is anticipated as a result of the Proposed Action. However, activities that could potentially affect surface water quality include vegetation clearing and grading for access roads because of the increased chance of sediment-laden stormwater being transported offsite to downstream drainages. Because the Proposed Action would generate greater than one acre of disturbance, the project would require an AZPDES permit, and erosion-control measures would be installed and maintained to minimize and/or eliminate erosion and sediment loading in stormwater before, during, and after construction.

Revegetation in disturbed areas would occur as a post-construction component of the SWPPP. After construction is complete, all disturbed areas would be seeded with a seed mix consisting of plant species native to the project area. The USFWS provided the project team with a comprehensive list of native plants occurring on the BWRNWR. As requested by the USFWS, seeds would be collected from the refuge in order to maintain the genetic integrity of the existing

plant communities. The reseeding efforts would be maintained and monitored until a minimum of 70% of all disturbed areas are revegetated (Brown 2009). No long-term degradation of water quality is anticipated because revegetation would stabilize soils and increase on-site stormwater infiltration preventing sediments from leaving the disturbance areas. Thus, construction pollutants such as sediments are not anticipated to reach the Bill Williams River, and designated uses of the river would not be affected. No long-term loss of human use and aquatic wildlife and vegetation use is anticipated to occur as a result of the Proposed Action.

Because erosion protection measures would be implemented before, during, and after construction, the Proposed Action would not degrade or contaminate surface water, drinking water, or groundwater due to erosion and sediments in stormwater runoff. Furthermore, the Proposed Action would not alter the existing drainage pattern of the site or area that would result in off-site erosion or siltation, resulting in adverse effects to adjacent properties.

No work within the impaired reach of the Bill Williams River is expected to occur. However, limited construction access across the river on the Planet Ranch Road would occur during the beginning stages and after the completion of construction when larger equipment would be hauled to the construction site for staging. Daily construction access is not expected to occur via the Planet Ranch Road where the Bill Williams River is impaired, and no road improvements have been identified. Thus, the project would not contribute to the impairment of the Bill Williams River for ammonia, low-dissolved oxygen, and elevated pH levels, and the project would not violate state water quality standards.

Most construction access to the north side of the Bill Williams River would occur via a ford across a portion of the river that is not impaired. Crossings of the river would occur from the Bill Williams River Road located on the south side of the river. Construction access to the north side of the river would be via ATVs carrying construction crews and fuel for construction equipment stored in secondary leak-proof containers. Generally, the river would be crossed by ATVs twice per day until construction on the north side of the river is complete, though daily crossings may occur more frequently if additional fuel is required. However, impacts to water quality due to ford crossings would be minor and local at crossing points. All-terrain vehicles

could briefly increase temporary sediment turbidity when crossing the river. However, the increase would be minor relative to the entire drainage system and is not expected to affect water quality.

Dust abatement measures may be required during construction. These measures may include spraying water onto disturbed surfaces without over-wetting soils to prevent sediment laden runoff from occurring. Water used for dust abatement may come from outside sources or local sources on the BWRNWR, such as a well or from river flows if permission is granted by the refuge. Ground and surface water contamination from dust control water is not expected to occur because over-wetting and runoff to watercourses would not occur, local water sources are not contaminated, and non-local sources that do not evaporate are expected to infiltrate and clean filter through soils. Although the project may use local water sources for dust control, effects to instream flows in the Bill Williams River would be minor. Water used for dust control would be limited to the amount necessary to abate dust, and dust control would be a temporary operation during construction only. Thus, no long-term effects to instream flows would occur.

The Proposed Action is not expected to generate degradation of drinking water sources or impacts to surface water rights on the Colorado River and Bill Williams River and/or downstream watercourses because the project would prevent water pollution through implementation of a SWPPP, and no long-term effects to water quality or instream flows would occur.

Given the varying depths of groundwater in time and space along the transmission line, drilling for new structures may hit groundwater, particularly in the Mosquito Flats region where the transmission line would be rerouted. However, it is not expected that drilling the structure holes would contaminate groundwater such that the quality of water would exceed Federal or state standards because unsuitable materials are not expected to be used in stabilization of pole structures. Stabilization of structures is expected to occur with compaction of the local soils removed and backfilled from the drilling sites. The alloys that make up the steel in the transmission line structures leave the poles with a weathered appearance. Following standard APS practice, the base of the structure is treated with a urethane coating to protect it from

subsurface conditions. Thus, subgrade decay is not anticipated to occur at a rate that would cause pollutants in groundwater. Furthermore, the activity would not cause groundwater depletion or interference with groundwater recharge that adversely affects existing or proposed uses of the groundwater aquifer.

No Action Alternative

Minor impacts similar to those outlined in the Proposed Action may occur at a lesser intensity due to activities associated with the structure-specific nature of routine and emergency maintenance. Western generally purchases water when required for maintenance work. Water would be supplied by a 2,000-gallon water truck, and auger trucks have a mounted water tank. Western would evaluate impacts to water resources for routine maintenance projects and would implement its Standard 13 mitigation measures to minimize impacts to water resources. Substantial impacts to drinking, surface, and groundwater would not be anticipated under the No Action Alternative. Western would evaluate impacts to water resources for routine maintenance projects and would implement its standard mitigation measures during maintenance activities to minimize impacts to water resources. The No Action Alternative would not degrade surface or groundwater quality, alter existing drainage patterns, or reduce or impact instream flow or water rights in the Bill Williams River and/or downstream watercourses.

3.6.3 Waters of the US

3.6.3.1 Affected Environment

Section 401 of the CWA requires any applicant requesting a Federal permit for activities that may result in discharge into waters of the US to first obtain a Section 401 certification from the state in which the discharge originates. The Section 401 certification verifies the prospective permits comply with the state's applicable effluent limitations and water quality standards. Federal permits are not issued until the Section 401 certification is obtained. The Arizona Department of Environmental Quality (ADEQ) is responsible for the Section 401 certifications in the state of Arizona outside tribal lands. There are two types of Section 401 certifications:

- Conditional Section 401 certification occurs when all project activities can comply with the general conditions outlined on a Federal permit. An application to ADEQ is not required for a conditional certification.

- Individual Section 401 certification is required when a project cannot meet the terms of a conditional certification or when it would occur within a designated unique, impaired, or tribal water. An application for Section 401 certification is required for Individual certification.

Section 404 of the CWA regulates the discharge of earthen fill, concrete, and other construction materials into waters of the US, and authorizes the Corps to issue permits regulating the discharge of dredge or fill material into jurisdictional waters of the US, including wetlands. There are two types of Section 404 permits:

- Nationwide Permits (NWPs) authorize a specific category of activity that cause only minimal adverse environmental impacts. There are two levels of NWPs, non-notifying permits and permits requiring notification to the Corps.
- Individual Permits (IPs) are required for projects with impacts that exceed the requirements outlined in NWPs.

Both types of permits may require mitigation for project-related impacts to waters of the US. Typical Section 404 permits used for transmission line activities are NWP 12 (Utility Line Activities) and/or NWP 14 (Linear Transportation Projects). NWP 12 and NWP 14 authorize projects with less than 0.50 acre of permanent loss to waters of the US and with no impacts to special aquatic areas, such as wetlands. An IP is required for projects that exceed impact threshold requirements of NWPs or cause impacts to special aquatic sites, such as jurisdictional wetlands.

The dominant hydrologic features in the project area include the perennial Colorado River and semi-perennial Bill Williams River (tributary to Colorado River), though numerous named and unnamed ephemeral tributaries dissect the area as well. The flow regime in the area is dependent on the mountain range of origin for each drainage. Washes draining from the north side of the Buckskin Mountains generally drain northerly, and washes draining the southeast side of the Aubrey Hills and Bill Williams Mountains generally drain to the south. Washes from all of the aforementioned mountain ranges ultimately enter the Bill Williams River, which drains west to the Colorado River.

The presence of wetlands along the transmission line was evaluated, and potential wetlands associated with the Bill Williams River were identified at Structure 4/4. A wetland determination in the vicinity of Structure 4/4 using the *Corps of Engineers Wetland Delineation Manual* (1987) and the 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* was conducted on October 20, 2009. A 0.46-acre patch of jurisdictional wetland was identified approximately 13 feet north and east of Structure 4/4. The wetland exhibits characteristics of wetland hydrology, hydrophytic vegetation, and hydric soils (Western 2009b). On March 15, 2010, the Corps concurred with the wetland determination prepared for the project and agreed that 0.46 acre of wetlands occur in the vicinity of Structure 4/4 though no wetlands occur within the footprint of the structure.

3.6.3.2 Environmental Consequences

A significant impact to Waters of the US would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss of a Federal or state protected wetland(s), as defined by Section 404 of the CWA or other applicable regulations
- Surface water quality impacts that would violate Section 401 of the CWA or other applicable surface water regulations, including state-established standards for designated uses
- Impacts to waters of the US that would violate requirements and/or conditions of a CWA Section 404 permit

Proposed Action

The Proposed Action would impact eight ephemeral jurisdictional drainages due to construction access requirements. Work within drainages to maintain stormwater flows may include grading washes or installing CMPs with compacted fill at road crossings where necessary and temporarily removing a portion of an artificially constructed berm that directs stormwater to a wash. Under the Proposed Action, a cumulative total of approximately 0.024 acre of waters of the US would be impacted. Approximately 0.02 acre of permanent impacts to waters of the US would occur due to grading access roads in four drainage crossings and installing CMPs with compacted fill in three drainages. A total of 0.004 acre of temporary impacts to waters of the US

would result from the Proposed Action due to temporary removal of the artificial berm. The drainage and artificial berm would be restored to preconstruction conditions once construction is complete.

Work in the vicinity of Structure 4/4 would include grading a 12-foot-wide access road and a 25-foot × 25-foot structure pad south of the structure, removal of the existing structures, and installing a new structure nearer to the Bill Williams River Road farther away from the wetland. Although a patch of jurisdictional wetland occurs approximately 13 feet to the north and east of Structure 4/4, no impacts to wetlands are anticipated under the Proposed Action due to the implementation of avoidance measures including marking the boundary of the wetland as a "no work zone." Additional wetland avoidance resource protection measures are described in the Wetlands/Riparian Zones analysis (Section 3.6.4). Furthermore, Structure 4/4 would be relocated approximately 100 feet south/southwest away from the wetland. Any future impacts to wetlands from maintenance activities, such as construction equipment access, vegetation removal, and structure repair, and future costs associated with implementing wetland avoidance resource protection measures at Structure 4/4 would be eliminated. Thus, the Proposed Action would have a long-term beneficial effect on jurisdictional wetlands.

Western discussed the Section 404 permitting requirements for the project with the Corps (Western 2009c). Impacts to ephemeral drainages would require a non-notifying NWP 14 because impacts at each drainage crossing would not exceed 0.10 acre of permanent impact. Construction personnel would be required to adhere to the conditions of NWP 14 during construction to ensure that impacts to waters of the US are minimized to the maximum extent possible. The construction crew would also be required to adhere to wetland avoidance resource protection measures at Structure 4/4 during construction. A Section 404 permit would not be required for activities in the vicinity of Structure 4/4 because avoidance measures would be implemented, the wetland would be protected in place, and no discharge of dredge or fill material would occur in jurisdictional wetlands. On March 18, 2010, the Corps concurred that no impacts to wetlands would occur if avoidance measures are implemented.

A SWPPP would be prepared by the contractor (APS) and implemented by Western for erosion control to minimize surface water quality impacts and prevent violation of Section 401 of the CWA. SWPPP inspections typically occur every two weeks and after rain events (Western 2009d). Western and APS would comply with the State of Arizona 401 Water Quality Conditions for non-tribal waters. Conditional Section 401 water quality certification applies to the Proposed Action. Individual certification is not required, and no certification application would be submitted to the ADEQ.

The Proposed Action would not result in the loss of a Federal or state protected wetland. Work conducted within waters of the US would comply with the requirements and conditions of a CWA Section 401 certification and Section 404 permit.

No Action Alternative

Under the No Action Alternative, routine and emergency maintenance of the line would continue to be required and impacts to waters of the US could occur. Thus, all activities in waters of the US as described in the Proposed Action may be required under the No Action Alternative at a later date in order for crews to access the transmission line for maintenance. Additionally, maintenance of Structure 4/4 could affect wetlands if resource protection measures identified for the Proposed Action are not implemented, and costs for implementing avoidance resource protection measures would continue to be required. Access roads would only be improved where necessary to safely access a structure. As part of its environmental review process for maintenance projects, Western would identify impacts to waters of the US. Given the small size of the ephemeral washes, a Section 404 non-notifying NWP and Section 401 conditional certification would likely apply to the No Action Alternative. Western would comply with the requirements and conditions of a NWP permit and conditional certification. If the wetland in the vicinity of Structure 4/4 could not be avoided by emergency repair work, Western would mitigate the impact. The No Action Alternative would not result in the loss of a Federal or state protected wetland and would not violate Sections 401 and 404 of the CWA.

3.6.4 Wetlands/Riparian Zones

3.6.4.1 Affected Environment

Executive Order 11990, *Protection of Wetlands*, requires Federal actions to conduct an evaluation of effects to wetlands and to minimize impacts to wetlands. Wetlands and riparian zones are an important natural resource that provide rare and rich wildlife habitat, serve as erosion-control buffers against heavy flows, and filter sediments from water thereby providing a cleansing mechanism increasing water quality. A portion of the transmission line between Structures 4/4 and 4/6 occurs within the riparian zone of the Bill Williams River also known as Mosquito Flats. Vegetation in these areas is dominated by a Fremont cottonwood and Goodding's willow forest with an understory of native and non-native vegetation including tamarisk, arrowweed, and seep willow. Vegetation in this area is trimmed on a regular basis to prevent the riparian vegetation from interfering with the operation of the existing transmission line. During January and February 2009 site visits by Western personnel, standing water was observed in the vicinity of Structure 4/4, and it was determined that Structure 4/4 was the only structure along the transmission line where a wetland may occur (Photograph 3-3). As previously discussed, a wetland determination was conducted in the vicinity of Structure 4/4, and a 0.46-acre patch of wetland with characteristics of hydric soils, wetland hydrology, and hydrophytic vegetation was identified approximately 13 feet north and east of Structure 4/4. Hydric soils in the wetland vary among plant communities. The wetland hydrology is derived from flows in the Bill Williams River, which receives water from releases of Alamo Dam. The Alamo Dam regularly releases low-volume flows to maintain riparian vegetation and wildlife habitat downstream of the dam (Reclamation 2009). However, the original primary purpose of the dam is for flood control with the capability to release up to 7,000 cubic feet/second through this reach (Corps 2003). Dominant hydrophytic vegetation in the wetland includes isolated patches of emergent aquatic vegetation such as spikerush, cattail, and bulrush.

Photograph 3-3 Vegetation around Structure 4/4

3.6.4.2 Environmental Consequences

A significant impact to wetland and riparian would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss of a Federal or state protected wetland(s), as defined by Section 404 of the CWA or other applicable regulations
- Long-term loss of riparian habitat
- Indirect loss of wetlands or riparian areas, caused by degradation of water quality, diversion of water sources or erosion, and sedimentation resulting from altered drainage patterns

Proposed Action

Under the Proposed Action, work in wetlands and riparian zones would not occur outside the Mosquito Flats area where Structures 4/4 to 4/6 would be rerouted. As previously discussed, the Proposed Action would involve work near a wetland in the vicinity of Structure 4/4. Work that would occur at Structure 4/4 includes grading a 12-foot-wide access road and a 25-foot × 25-foot structure pad south of the structure, removal of the existing Structure 4/4, and installing a new structure nearer to the Bill Williams River Road away from the wetland. Although a patch of jurisdictional wetland is located approximately 13 feet to the north and east of Structure 4/4, no impacts to wetlands would occur under the Proposed Action with implementation of the resource

protection measures to ensure the protection of wetlands (see Section 2.2.1 and Appendix A). The Corps concurred that the implementation of avoidance measures would eliminate construction-related impacts to wetlands (Western 2010a).

Although wetland vegetation would not be impacted due to avoidance measures, construction of the Proposed Action would require removal of riparian vegetation in the Mosquito Flats area to safely remove and relocate structures closer to the Bill Williams River Road. Riparian vegetation removal would be limited to what is required to remove the existing transmission line and construct the rerouted line near the road, away from the riparian zone. The vegetation removal would primarily occur below the existing transmission line. Riparian vegetation removal would have a short-term negative impact because of the minor loss of riparian canopy. However, the relocation of the transmission line away from the wetland and outside the riparian zone would eliminate any future potential impacts to wetlands from maintenance activities, potential costs associated with implementing wetland avoidance resource protection measures at Structure 4/4, and regular trimming of the existing riparian vegetation thereby allowing vegetation in this area to reach maturity. Furthermore, because the project would implement a SWPPP to protect water quality and would not generate long-term effects to instream flows, the project is not expected to generate indirect loss of wetlands or riparian areas on the project area. Thus, no direct or indirect loss of wetlands or riparian areas would occur as a result of the Proposed Action.

No Action Alternative

Although immediate impacts to wetlands and riparian zones would not occur, the No Action Alternative would require regular trimming of vegetation under the transmission line from Structures 4/4 to 4/6. This trimming would not allow the riparian canopy to reach full maturity, thus detracting from the beneficial attributes of riparian habitat for wildlife. Any maintenance work in the vicinity of Structure 4/4 or replacement of the structure would continue to pose a threat to wetlands unless avoidance measures are implemented. Furthermore, the boundary and vegetation composition of wetlands can fluctuate over time due to a variety of factors such as changes in precipitation, groundwater, drought, and human-related disturbances (e.g., dams). Thus, if conditions such as an increase in precipitation, groundwater, or more frequent releases

of Alamo Dam allow for the wetland boundary to expand up to or more than 13 feet to the south and west, the current position of Structure 4/4 could be within the boundary of the wetland in the future. In this scenario, maintenance activities associated with Structure 4/4 would occur within the wetland, and impacts to wetlands would be unavoidable.

As part of its environmental review process for maintenance projects, Western would identify impacts to wetlands and riparian areas. Western would implement its standard mitigation measures to minimize impacts to wetlands and riparian areas. If the wetland in the vicinity of Structure 4/4 could not be avoided by emergency repair work, Western would mitigate the impact. The No Action Alternative is not expected to result in the direct or indirect loss of wetlands or riparian habitat.

3.7 CULTURAL RESOURCES

3.7.1 Affected Environment

The cultural environment includes those aspects of the physical environment that relate to human culture and society, along with the social institutions that form and maintain communities and link them to their surroundings. Four surveys have been performed to identify cultural resources: *Cultural Resources Inventory Report, Parker to Planet Tap 69-kV Transmission Line, Parker to Buckskin Tap Segment, San Bernardino County, California and La Paz County, Arizona* (Peters 2009a), *Cultural Resources Inventory Report, Western's Parker to Planet Tap 69-kV Transmission Line, Buckskin Tap to Planet Tap Segment, La Paz County, Arizona* (Peters 2009b), *A Cultural Resources Survey and Inventory of the Planet Ranch Access Road to Planet Tap, La Paz and Mohave Counties, Arizona* (Mitchell et al. 2010), and *Cultural Resources Inventory Report: Addendum 1, Parker to Planet Tap 69-kV Transmission Line, Buckskin Tap to Planet Tap Segment, La Paz and Mohave Counties, Arizona* (Peters 2010).

Prior to the fieldwork, site and project files were checked to determine if any previously recorded cultural resources were within 1 mile of the project. In Arizona, records were checked at the State Historic Preservation Office (SHPO), in the AZSITE Cultural Resources Database, and at the Arizona State University Archaeological Archives, the BLM LHFO, and Reclamation. The General Land Office (GLO) plats and historic land use information at the BLM-Arizona State

Office were reviewed. In California, the records search information was provided by the San Bernardino Archaeological Information Center, San Bernardino County Museum.

The records revealed that 29 projects have been conducted within 1 mile of the project area. Thirteen archaeological sites and historic features have been identified or are projected to occur within 1 mile of the project area; 10 are plotted within the project area. The entire project area is located within the boundaries of the California-Arizona Maneuver Area where World War II military desert training occurred. In California, the maneuver area is designated a California Historic Landmark. The Parker–Planet Tap 69-kV Transmission Line is of historic age, but has been determined to be not eligible for listing on the National Register of Historic Places (NRHP). The west end of the project area is located within the Parker Dam District, which has been recommended eligible for the NRHP. The GLO plats indicate three historic-period roads passed through the project area.

The four surveys identified 10 prehistoric and historic-period cultural properties in the project area (Table 3-3). No evidence of the California-Arizona Maneuver Area or one of the historic-period GLO roads was discovered. Four sites, AZ L:12:23(ASM), AZ M:9:21(ASM), AZ M:9:22(ASM), and AZ M:13:13(ASM), are eligible for listing in the NRHP. The remaining seven sites are not eligible for listing.

3.7.2 Environmental Consequences

A significant impact on cultural resources would result if any of the following were to occur from construction or operation of the Proposed Action:

- Damage to, or loss of, a site of archaeological, Tribal, or historical value that is listed, or eligible for listing, in the NRHP
- Adverse impacts to NRHP-eligible properties that cannot be satisfactorily mitigated as determined through consultation with the SHPO and other consulting parties

Proposed Action

Western has determined the Proposed Action will have no adverse affect on historic properties. Existing access roads pass through four archaeological sites eligible for listing in the NRHP, and the parking and assembly area as well as the installation and removal of two transmission line

Table 3-3 Cultural Resources Properties in the Project Area				
Site No. or Property Name	**Description**	**NRHP Eligibility**	**Project Impacts**	**Land Status**
California-Arizona Maneuver Area	World War II military training grounds	Undetermined	No evidence of property in project area	BLM, ASLD, Reclamation, Western, private
SBR-10395H Parker Dam District	Parker Dam complex includes a power plant, control buildings, transmission lines, switchyards, and other features	Not eligible	Portion in the project area is not eligible	Western
AZ L:12:20(ASM) Parker–Planet Tap 69-kV Transmission Line	Historic electrical transmission line	Not eligible	Line would be rebuilt	BLM, ASLD, Western, private
AZ L:12:21(ASM)	Historic trash dump	Not eligible	None	BLM
AZ L:12:22(ASM)	Historic trash dump	Not eligible	None	Private
AZ L:12:23(ASM)	Prehistoric artifact scatter with two rock features	Eligible	Parking and assembly area and 2 structures occur in previously disturbed areas lacking signs of artifacts, features, or cultural deposits	BLM, USFWS
AZ M:9:20(ASM)	Prehistoric trail	Not eligible	Existing access road passes through the site	BLM
AZ M:9:21(ASM)	Historic construction camp	Eligible, criterion d	Existing access road passes through the site	BLM
AZ M:9:22(ASM)	Rock ring and trails	Eligible, criterion d	Existing access road passes through the site	Private
AZ M:9:51(BLM)	Rock ring and trail	Not eligible	Existing access road passes through the site	BLM
AZ M:13:13(ASM)	Planet Mine and townsite	Eligible, criterion d	Existing access road passes through the site	Private
Mohave Wash 1919 GLO road	Historic road	Not eligible	Existing access road passes through the property	BLM, private
Section 17 1919 GLO road	Historic road	Not eligible	Existing access road passes through the property	BLM, private

structures are located within a previously destroyed portion of one archaeological site (AZ L:12:23[ASM]) that has been recommended eligible for listing in NRHP (Table 3-3). However, no ground-disturbing activities would occur within the site boundaries; no improvements to the roadbed would occur in these locations. Construction equipment would have rubber-tired wheels

and use the access road only in dry conditions. Resource protection measures to minimize impacts to cultural resources can be found in Section 2.2.1 and Appendix A. Under the Proposed Action, there would be no damage or loss of a site of archaeological, Tribal, or historical value that is listed, or eligible for listing, in the NRHP. Western conducted NHPA Section 106 compliance with the Arizona SHPO.

No Action Alternative

The No Action Alternative would not result in changes to the cultural resources in the project area other than the continued degradation of the Parker–Planet Tap 69-kV Transmission Line. Western would still need to make repairs and build or improve access roads on an as needed basis. As part of its environmental review process for routine maintenance projects, Western would identify impacts to cultural resources and would conduct Section 106 consultation with interested parties (i.e., Arizona SHPO) as necessary. Several measures to avoid impacts to cultural resources are included in Western's standard mitigation measures.

3.7.3 Native American Religious Concerns

Western contacted seven Indian tribal governments regarding the Parker Planet Tap Rebuild, Upgrade, and Realty Action project to determine if they had concerns or issues regarding cultural resources, traditional cultural properties, or religious practices. Western initiated consultation with these Indian tribes on the basis of proximity of ancestral lands to the project area or stated interest. Western sent letters and followed up with phone calls to the Chemehuevi Tribe, Colorado River Indian Tribes, Fort Mojave Tribe, Hopi Tribe, Cocopah Tribe, Hualapai Tribe, and Yavapai-Prescott Indian Tribe. A field visit occurred on May 4, 2010, and was attended by Western and a Hualapai Tribal Historic Preservation Office representative.

Two tribal governments concurred with a finding of no adverse effect, two have not yet responded, and three provided comments. One tribal government representative identified the Bill Williams River as an important area to the tribe, but did not have concerns about the project or its impacts. One tribal government representative stated that just because a site's surface is disturbed, like at Site AZ L:12:33(ASM), it does not mean that the site is erased. Another tribal

government representative pointed out that artifacts or features may be present under gravel piles present at the site outside the project area.

One tribal government representative stated that just because a site's surface is disturbed, like at Site AZ L:12:23 (ASM), doesn't mean the site is erased. Another tribal government representative pointed out that artifacts or features may be present under gravel piles present at the site outside the project area.

One tribal government representative requested that vehicles and equipment stay on the existing access road at Site AZ M:9:20(ASM), AZ M:9:22(ASM), and an unrecorded site located south of the access road right-of-way between Cave and Mohave Washes.

3.7.3.1 Environmental Consequences

A significant impact to Native American Religious Concerns would result if any of the following were to occur from construction or operation of the Proposed Action:

- Loss or degradation of a traditional cultural property or sacred site, or if the property or site is made inaccessible for future use
- Disturbance to any human remains, including those interred outside formal cemeteries
- Unmitigated adverse effect to a traditional cultural property determined to be NRHP-eligible or identified as important to tribes

Proposed Action

The Proposed Action would not lead to the loss, destruction or inaccessibility of a traditional cultural property or a sacred site. Human remains would not be disturbed. It would not have an unmitigated adverse effect to traditional cultural properties. Western addressed concerns by Indian tribes received during the on-going consultation process and will implement the protection measures presented in the Cultural Resources section to minimize construction impacts to archaeological sites.

No Action Alternative

The No Action Alternative would not lead to the loss, destruction or inaccessibility of a

traditional cultural property or a sacred site. Human remains would not be disturbed. It would not have an unmitigated adverse effect to traditional cultural properties. Western would repair the transmission line and build or improve access roads as needed and consult with Indian tribes as needed on a project by project basis.

3.8 PUBLIC HEALTH AND SAFETY

3.8.1 Affected Environment

3.8.1.1 Emergency Infrastructure

Police services in the project area are provided by a variety of volunteer and government agencies including the Parker and Lake Havasu Police Departments and the La Paz and Mohave County Sheriff's Departments. Law enforcement services also operate on BLM and BWRNWR areas (refer to Section 3.1.1) by the respective Federal agency. Fire services in the project area are provided by the Parker and Lake Havasu Volunteer Fire Departments. Hospitals are located in Parker and Lake Havasu.

3.8.1.2 Public and Worker Safety

The existing transmission line is within an area of rugged terrain and limited access, which minimizes public exposure to the transmission lines. The Bill Williams River Road provides open public access, which is used primarily for recreation purposes. The transmission line is parallel and adjacent to some segments of the road. The closest habituated structures, the Hillside Bay Mobile Home Park subdivision, is about a tenth of a mile from the transmission line. Worker safety is a concern with the existing transmission line because of the age of the structures; deep cracks in the poles and crossarms and wood rot make pole climbing hazardous.

3.8.1.3 Electric and Magnetic Fields

Current and voltage are required to transmit energy over electric transmission lines. Current, a flow of electrical charge, is the source of magnetic fields. Voltage, which represents the potential for an electrical charge to do work, is the source of electric fields. Electric and magnetic fields (EMF) surround every electrical device, including electrical appliances and power lines.

While studies have not confirmed EMF levels are unsafe, non-governmental organizations have published limits as a safety measure on the knowledge that high field levels may induce current in cells or nerve stimulation. The International Commission on Non-Ionizing Radiation Protection (1998) has established a continuous magnetic field exposure limit of 0.833 gauss (833 milligauss [mG]) and a continuous electric field exposure limit of 4.2 kilovolts per meter (kV/m) for the general public. The American Conference of Governmental Industrial Hygienists identified a Threshold Limit Value (2001) for occupational exposure to 60 hertz magnetic fields as 10 gauss (10,000 mG) and 25 kV/m electric fields. Guidelines at the edge of ROW set by several states for newly constructed transmission lines are about 2 kV/m for electric fields and 200 mG for magnetic fields (NIEHS 1999).

The existing transmission line has been in place for more than 60 years with no documented adverse effects from EMF caused by power line frequency. The NIEHS (1999) has found no conclusive evidence of adverse biological or human health effects from EMF. The epidemiological evidence from both residential and occupational studies regarding an association between EMF and cancer or other adverse effects in humans is inconclusive and does not indicate a causal link. The existing line was constructed to meet the applicable NESC.

3.8.2 Environmental Consequences

A significant impact on public health and safety would result if any of the following were to occur from construction or operation of the Proposed Action:

- Serious injuries to workers, visitors to the area, or area land users
- Interference with emergency response capabilities or resources
- Creation of worker health hazard(s) beyond limits set by health and safety regulatory agencies or that endangers human life and/or property
- Creation of electric and magnetic fields near an existing or proposed sensitive land use, such as schools or hospitals, that would pose a plausible risk to human health
- Creation of substantial interference and disruption of emergency communications and electronic health/safety devices that results in substandard performance

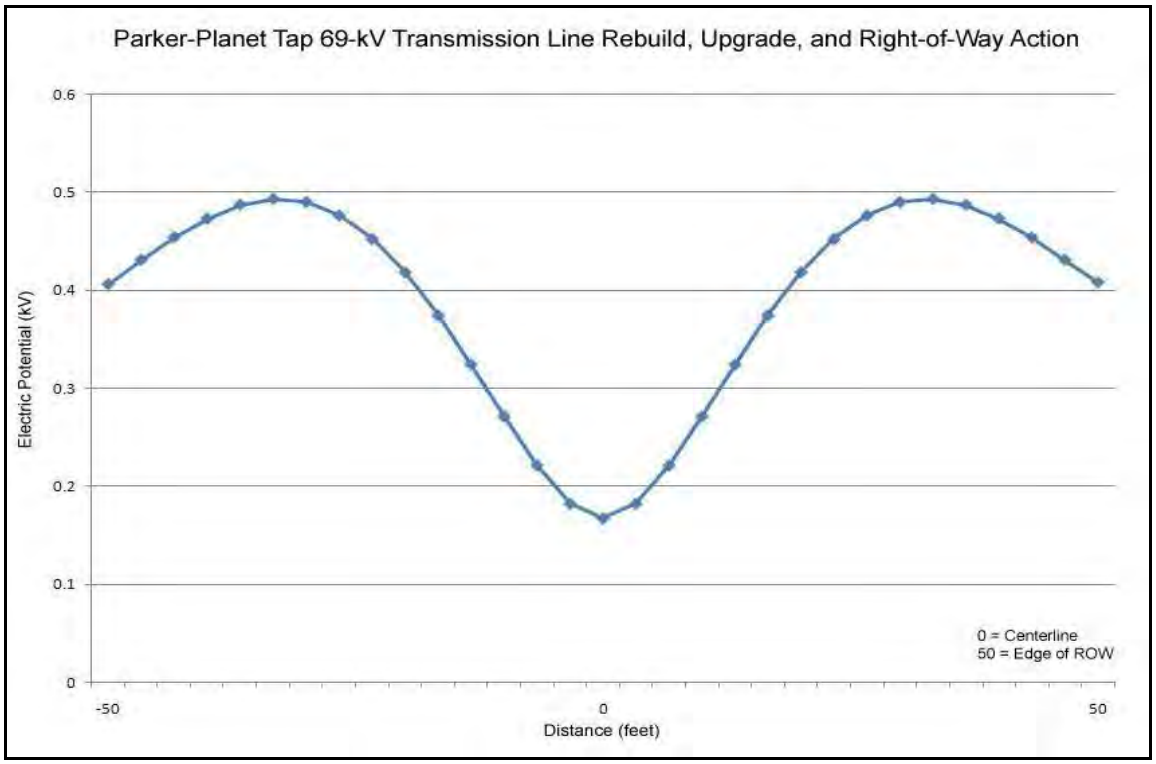
Proposed Action

Due to the rugged terrain and remote nature of the project area, potential impacts to public health and safety would remain minimal. Nevertheless, APS would ensure emergency services are notified of the construction activity. During aerial lifting of the structures, access to Bill Williams River Road would be limited to APS and Western crews and authorized USFWS personnel. Construction activities would include creating natural barriers or gating access roads to structures to prevent access by the general public. A dedicated guard would oversee equipment on the north side of Bill Williams River during non-working hours. With the implementation of these actions, the Proposed Action would not result in serious injuries to visitors to the area or interfere with emergency response capabilities or resources.

Electrical equipment of any kind can be a safety hazard, and special care must be taken by construction crews when working near transmission lines to avoid hazardous situations. During construction, standard health and safety practices would be conducted following OSHA policies and procedures. The upgraded line would reduce the potential hazards from broken poles and downed power lines, reduce climbing hazards due to cracked and rotted structures, and reduce safety hazards from wood crossarm failure. In addition, polymer insulators when shot at remain intact reducing maintenance and electrical problems. Therefore, the Proposed Action is not expected to result in serious injuries to workers or create worker health hazards beyond limits set by health and safety regulatory agencies or that endangers human life and/or property.

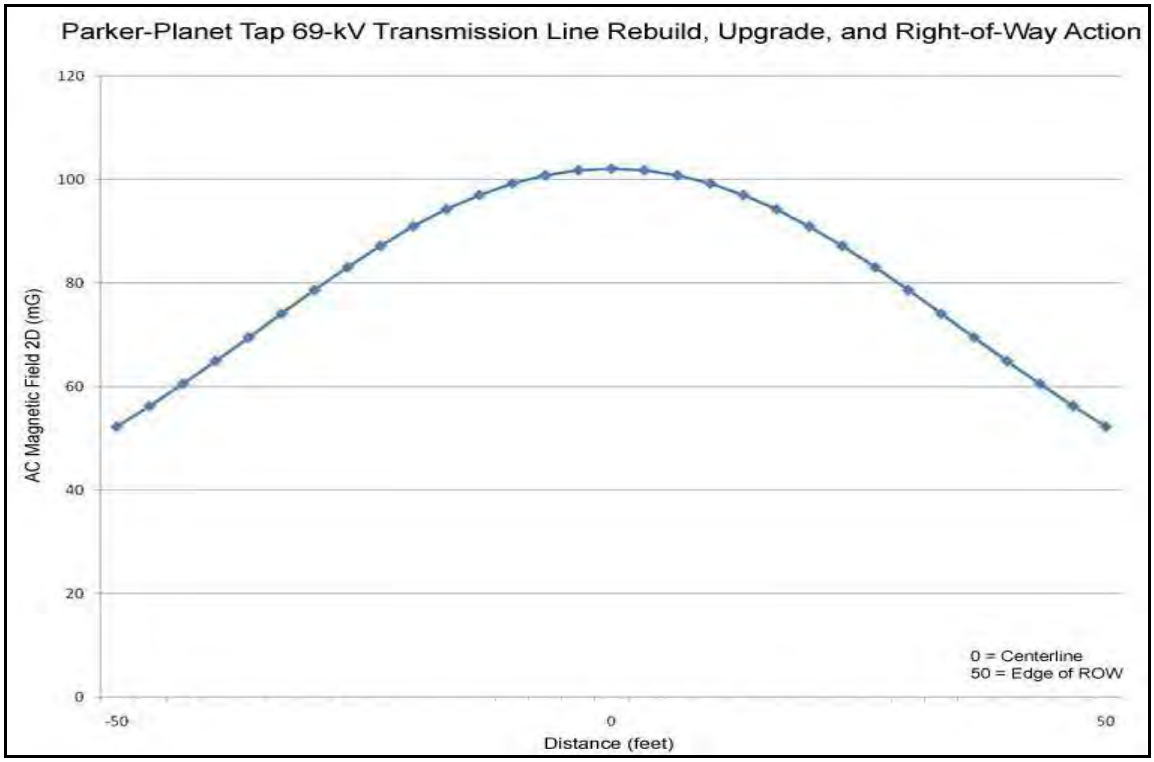
Population density in the project area is low, and few if any individuals would experience long-term exposure to EMF. The electric field would remain the same under the Proposed Action. As shown in Figure 3-4, the electric field would be 0.4 kV/foot (1.4 kV/m) at the edge of the ROW. This level is below recommended levels of exposure for any of the governmental or non-governmental organizations involved in EMF studies.

The magnetic field would increase under the Proposed Action due to the increase in the size of the conductor. The magnetic field from the Proposed Action would be about 50 mG at the edge of the ROW (see Figure 3-5), which is less than levels of magnetic fields measured near many common household appliances, as shown in Table 3-4.



Source: Western 2010b

Figure 3-4 Electric Field Potential



Source: Western 2010b

Figure 3-5 Magnetic Field Potential

Table 3-4 Typical 60 Hertz Magnetic Field Values from Common Electrical Devices		
Appliance	**Magnetic Field 6 Inches Away from Device (mG)**	**Magnetic Field 2 Feet Away from Device (mG)**
Washing machine	100	6
Vacuum cleaner	300	10
Electric oven	9	-
Dishwasher	20	4
Microwave oven	200	30
Hair dryer	300	10
Computer	14	2
Fluorescent light	40	2
Power drill	40	6
Copy machine	90	7
Garbage disposal	80	2

Source: EMF 2002

Even with the larger magnetic field inherent to a larger diameter conductor, the EMF would still be below recommended levels of exposure. Due to the rugged topography and low population in the vicinity of the transmission line, there are no sensitive land uses such as schools and hospitals, emergency communications, or electronic health / safety devices close enough to the infrastructure that would be affected by implementing the Proposed Action. Therefore, the Proposed Action would not create electric and magnetic fields that would pose a plausible risk to human health.

No Action Alternative

The existing transmission line associated with the No Action Alternative has been in place for more than 60 years with no documented adverse effects from EMF. Population density is low, and there are no sensitive land uses such as schools and hospitals, emergency communications, or electronic health / safety devices close enough to the transmission line that would be affected by EMF. Therefore, the No Action Alternative would not pose a plausible risk to human health from the EMF. The age of the line and structural integrity of existing wood structures could eventually break causing potential fire hazards or electrical hazards from downed power lines. Reliable power would be reduced due to more frequent outages for maintenance activities or catastrophic event. Maintenance and repair work would be localized and of short duration, minimizing the potential for serious injuries to workers or the public. Western's linemen are trained and experienced with transmission line operations and

maintenance. Western's comprehensive safety program includes an annual update of its Power System Safety Manual that provides direction and guidance for prevention of accidents that may result in personal injury, illness, property damage, or work interruption.

3.9 NOISE

3.9.1 Affected Environment

Sound is a form of energy that is transmitted by pressure variations. Humans perceive sound when sound pressure waves encounter the auditory components in the ear. Because the human ear does not equally perceive all sound frequencies, sound levels in sound frequency bands are adjusted or weighted to the frequency response of human hearing and the human perception of loudness. The dBA most closely represents the range of human hearing.

Noise is often called unwanted sound. Each individual perceives noise level changes differently. Generally, a noise level change of 3 dBA is barely perceptible to human hearing. A 5 dBA change in noise level, however, is clearly noticeable. An increase of 10 dBA is normally perceived as a doubling of noise loudness. Table 3-5 shows noise levels associated with common sources.

Table 3-5 Common Noise Sources and Levels

Sound Pressure Level (dBA)	Typical Sources
120	Jet aircraft takeoff at 100 feet
110	Same aircraft at 400 feet
90	Heavy turbine helicopter at 200 feet [1]
90	Motorcycle at 25 feet
80	Garbage disposal
70	City street corner
60	Conversational Speech
50	Typical office
40	Living room (without TV)
30	Quiet bedroom at night

Sources: Rau and Wooten 1980; [1] Spector 1978

The Proposed Action would occur primarily in rural range and desert areas. Noise sources in rural areas are predominantly natural, including insects, birds, wind, and weather. Ambient noise levels typically range between high 30s and low 40s dBA.

Transmission line noise includes noise from corona effects, insulator, and Aeolian noise. Transmission line noise can be generated throughout the transmission line route and is more likely to affect sensitive receivers (i.e., residences) near the transmission line. Corona noise is the most common noise associated with transmission lines. It is the partial electrical breakdown of the insulating properties of air around the transmission line wires. Corona noise can be characterized as a crackling or hissing sound that is accompanied by a 120 Hertz hum under certain conditions. Noise from transmission lines generally occurs during wet weather during periods of rain, fog, snow, or icing. Such conditions are expected to occur infrequently in the project area.

3.9.2 Environmental Consequences

A significant impact on noise would result if the following was to occur from construction or operation of the Proposed Action:

- Sensitive receptors such as residences, hospitals, or schools, or areas of ecological concern are exposed to harmful noise levels

Proposed Action

Construction-related noise from the Proposed Action would result in a temporary increase in noise levels during daytime hours and may cause localized impacts in the vicinity of the project. Noise levels associated with construction activity may range from 75–85 dBA within 50 feet of the activity. Noise from helicopter transporting equipment would range from 70– 90 dBA with a distance from 200 feet up to 1,500 feet to the ground. The World Health Organization (WHO) offers guidance on the potential health effects due to community noise exposure. The WHO study found that only when 24-hour equivalent level exceeds 70 dBA does the threat of environmental noise-induced hearing impairment arise, and helicopters rarely produce 24-hour equivalent levels that exceed 70 dBA (WHO 1999). Thus, noise-induced hearing impairment due to helicopter operations would be unlikely to occur. Operational noise includes noise from

the transmission lines and structures and noise from activities for routine inspection and maintenance of the new facilities. Routine maintenance noise is generally negligible.

No hospitals or schools are located in or adjacent to the project area. The Hillside Bay Mobile Home Park subdivision is located adjacent to the Buckskin Tap and is less than a tenth of a mile away from the transmission line. Noise from construction activities would generally be short term in nature and often intermittent. Truck traffic would increase during construction, which may temporarily increase noise traffic levels. After construction the noise levels would be less than levels experienced during construction; because less maintenance would be required, operational noise levels would be less than currently experienced.

The noise from implosive detonating in air is regarded as impulse noise. The impulse noise generally means a discrete noise of short duration (less than a second), in which the sound pressure level rises very rapidly (less than 500 milliseconds, sometimes less than 1 millisecond) to a high peak level before decaying below the level of background noise. The peak noise level is usually used to characterize the impulse noise. The noise threshold for maximum allowable impulse sound level is 140 dBA, as regulated by OSHA. A field measurement for the peak noise level associated with a typical implosive connector installation is approximately 118–122 dBA at 200 feet. The impulse sound level for the nearest sensitive receivers, Hillside Bay Mobile Home Park, would be less than the OSHA threshold. Therefore, the construction noise impacts would be minimal. No sensitive receptors would be exposed to harmful noise levels; however, minor impacts to wildlife may occur as discussed in Section 3.4.2.

No Action Alternative

The No Action Alternative would include operational and routine maintenance of the transmission line. There would be periodic noise from inspection/repair aircraft and vehicles, and constructive activity associated with structure-specific repair or replacement. These activities would occur infrequently and would be short-term. Maintenance activities in the vicinity of the Hillside Bay Mobile Home Park subdivision, which is less than a tenth of a mile from the existing transmission line, may cause noise levels to increase slightly due to more frequent inspections and maintenance inherent to the aging transmission line. The impacts are

unlikely to exceed the criteria set forth by WHO. No sensitive receptors or wildlife would be exposed to harmful noise levels.

3.10 SOLID WASTES AND HAZARDOUS MATERIALS

3.10.1 Affected Environment

A review of publicly available databases maintained by the ADEQ and EPA was performed to identify any hazardous materials sites within or near the project corridor (ADEQ 2010 and EPA 2010).

Two sites that are regulated generators of hazardous materials were identified near the project area. Continental Telephone is a Conditionally Exempt Small Generator adjacent to the project area. The Planet Ranch facility located near the access road passes through this corridor at 3939 Planet Ranch Road is a large quantity generator. While these sites may produce regulated wastes, there is no evidence of any spills or contamination at these locations.

Two leaking underground storage tank sites were identified within 0.5 mile of the project area. Both sites have been permanently closed, meaning that any contamination has been remediated to appropriate soil remediation levels.

Three underground storage tank sites were identified within 0.5 mile of the project area. These sites combined for a total of 14 tanks all of which have been permanently removed. No in-use or unclosed underground storage tank facilities were identified within 0.5 mile of the project area.

No sites included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5, Cortese List, were identified within or near the project corridor.

3.10.2 Environmental Consequences

A significant impact would result from hazardous materials use or creation of solid wastes if any of the following were to occur during construction or operation of the Proposed Action:

- Improper disposal of solid or sanitary waste generated by the Proposed Action that would pose a threat to the public health and environment in the project area
- Spills or releases of hazardous materials, hazardous substances, or oil at or above reportable quantities within the project area that would pose a threat to public health and the environment in the project area
- Impaired implementation of or physically interfere with an adopted emergency hazardous materials spills response plan or emergency evacuation plan

Proposed Action

Western would require that construction crews handle hazardous materials and solid wastes in accordance with Federal, state, and local laws. Hazardous materials that may be used include fuels, lubricants, and cleaning solvents for vehicle operation and maintenance. All such materials generated from the Proposed Action would be properly disposed of, including recycling the existing conductor and wood poles. During construction, ATVs would carry fuel stored in secondary leak-proof containers across the Bill Williams River to provide fuel for construction equipment parked on the north side of the river. ATVs would cross the river at least twice per day until construction on the north side of the river is complete, though daily crossings may occur more frequently if additional fuel consumption is required. The contractor would be required to develop a pollutant spill prevention, notification, and cleanup plan. The plan would identify any hazardous materials that would be used, precautions to prevent spills, and employee awareness training. Resource protection measurements included in Section 2.2.1 and Appendix A identify the recycling, reusing, and disposal of treated wood poles and spill containment plan. In addition, any hazardous materials or solid waste used or generated by maintenance activities under the Proposed Action would be properly disposed of in accordance with Western's Construction Standards 13 and standard mitigation measures. No measurable effect from hazardous materials and solid waste is expected with implementation of the Proposed Action. There are no materials spills response plans or emergency evacuation plans that would be impacted by the Proposed Action. Therefore, the Proposed Action would not pose a threat to public health or the environment in the project area.

No Action Alternatives

Continued operation and maintenance of the existing line may require replacement of the wood structures. Wood structures may be treated with pentachlorophenol to extend their life. Western would also use pentachlorophenol to treat existing structures that do not need to be replaced. Treated wood structures removed from service may be reused, recycled, or disposed in a landfill under applicable laws. Individuals that express interest in using removed poles may be given some of the wood poles upon signing Western's used pole waiver form. Any hazardous materials or solid waste used or generated by maintenance activities would be properly disposed of in accordance with Western's standard mitigation measures. Western's linemen are trained in hazardous spill response, and any spills would be cleaned up in accordance with Western's Spill Response Plan. No measurable effect from hazardous materials and solid waste is expected with implementation of the No Action Alternative.

3.11 FUELS/FIRE MANAGEMENT

3.11.1 Affected Environment

Both the BLM and the USFWS RMPs address the management of fuels and wildfire. Both agencies consider a combination of fire protection, suppression, and active fuels management as being integral to an overall revegetation program in their efforts to enhance and restore biological diversity. In particular, care is needed in dealing with the volatility and quantity of fuels within the riparian communities on the refuge to avoid negative effects on native plant communities. Lighting strikes have occurred on structures within the project area; however, no fires have started from these strikes (Western 2010c). Sparse vegetation in the project area creates low fuel levels except around those structures in the Mosquito Flats area.

3.11.2 Environmental Consequences

A significant impact on fuels/fire management would result if any of the following were to occur from construction or operation of the Proposed Action:

- Result in actions that alter vegetative cover and thereby result in a substantial shift in the condition classes of the Resource Management Plan (RMP)
- Result in actions which substantially increase the potential for wildfire in areas where it is not desired

- Result in actions which substantially inhibit appropriate management response to wildfire or appropriate treatments to prevent wildfire

Proposed Action

The inclusion of lightning protection for the conductor as well as for individual structures and the change from wood to metal structures in the Proposed Action would reduce the risk of fire ignition caused by lightning strikes. The current amount of fuels within the project area would remain the same after the Proposed Action other than in areas where clearing is required for construction of new access roads, structure pad, and pulling and/or tensioning stations. Most affected sites have minimal vegetation due to their use in the original construction. Also, the proposed new road to access Structures 6/1 and 6/2 intentionally avoids areas of dense vegetation.

As previously mentioned, Structures 4/4 through 4/6 are situated in a stand of dense riparian vegetation. Previous trimming under the transmission line has reduced the amount of large fuels, but shrubs and small trees are abundant. As a result, the majority of road and construction site clearing on the project causing slash generation would occur from site clearing to move these structures.

All slash created would be either chipped and scattered or piled for subsequent burning. Should the volume and size of fuels result in a decision to burn slash, it would be piled away from vegetation and the transmission line. APS and the BWRNWR would decide whether to use the cuttings for chipping material or burning the slash at some further date. Although some clearing would occur, overall fuel levels after the project is complete would be similar to current conditions; therefore, no measurable effect from fuels or fire management is expected from implementation of the Proposed Action.

Vegetation removal would be minimized, and the Proposed Action would not alter vegetative cover to the degree that condition classes identified in the RMP would change nor would it inhibit management response or treatments to prevent wildfire. The addition of lightning protection and the change to steel structures would reduce the potential for wildfires.

No Action Alternative

Since little of the existing conductor is not protected with a ground wire, there would be more risk from lightning damage and subsequent fire ignition with the No Action Alternative compared to the Proposed Action. Fuels that would be generated with implementation of the No Action Alternative would include minimal clearing associated with maintenance work and the periodic trimming of the vegetation associated with the spans between Structures 4/4 and 4/6. The condition classes of the RMP would not change, and no measureable effect on fire and fuels management is expected with implementation of the No Action Alternative.

3.12 ENERGY POLICY

3.12.1 Affected Environment

Executive Order 13212 (May 22, 2001) articulates the US energy policy as: "The increased production and transmission of energy in a safe and environmentally sound manner is essential to the well-being of the American people. In general, it is the policy of this Administration that executive departments and agencies (agencies) shall take appropriate actions, to the extent consistent with applicable law, to expedite projects that will increase the production, transmission, or conservation of energy… agencies shall expedite their review of permits or take other actions as necessary to accelerate the completion of such projects, while maintaining safety, public health, and environmental protections."

3.12.2 Environmental Consequences

A significant impact to energy policy would result if any of the following were to occur from construction or operation of the Proposed Action:

- A substantial, inefficient use of energy would occur
- The project infrastructure would pose a threat to public safety
- The project includes serious risks to the environment

Proposed Action

The Proposed Action would replace a 60-year-old transmission line. The new transmission line would be constructed of new materials that would improve the efficiency, reliability and safety of transmitting energy generated at Parker Dam to customers both north and east of Parker,

Arizona and those more distant in the power region. The upgraded line would reduce the potential hazards from broken poles and downed power lines; reduce climbing hazards due to cracked and rotted structures, and reduce safety hazards from wood crossarm failure. In addition polymer insulators when shot at remain intact reducing maintenance and electrical problems. Construction of the project would be designed to be in compliance with both the LHFORMP and the BWRNWR RMP and would adhere to the resource protection measures described in Section 2.2.1 and Appendix A of this document. The project as proposed adheres to Executive Order 13212. The Proposed Action would improve the efficient use of energy and would not pose a threat to public safety or serious risks to the environment.

No Action Alternatives

The Parker–Planet Tap 69-kV Transmission Line would continue to function with its current structures and conductor. Over time, the transmission line would require more frequent maintenance, and suffer more frequent interruptions due to failures. The existing transmission line is within an area of rugged terrain and limited access, which minimizes the public exposure to the transmission line. However, since the existing conductor is not protected with a ground wire and the structures are wood, there would be more risk from lightning damage and subsequent fire ignition. Other than its continuing obsolescence and reduced efficiency compared to modern facilities, there would be no measurable change from the existing condition. The No Action Alternative would pose some threat to public safety and risks to the environment.

3.13 INTENTIONAL DESTRUCTIVE ACTS

3.13.1 Affected Environment

Power transmission lines, like other elements of the US energy infrastructure, could potentially be the target of vandals, terrorist attacks, or sabotage. The US Court of Appeals for the Ninth Circuit decided that NEPA documents issued by the DOE should explicitly address the potential environmental consequences of intentional destructive acts (i.e., acts of vandalism, sabotage, or terrorism) (DOE 2006). This section addresses this issue and identifies potential "reasonably foreseeable" accidents, disasters, and intentional destructive acts that could occur to the Proposed Action and the No Action Alternative and their potential adverse consequences.

The analysis includes the transmission line emerging from the Parker Substation to the change of transmission line ownership at SWTC #1. Accidents, disasters, and intentional destructive acts perpetrated on either the Parker Dam or the power plant and substation are outside the scope of this analysis. Since neither the possibility nor the probability of an attack is truly known, the risk of terrorism or sabotage and any consequent environmental impact cannot be reliably estimated.

3.13.2 Environmental Consequences

A significant impact from Intentional Destructive Acts would result if any of the following were to occur from construction or operation of the Proposed Action:

- Results in action that makes the transmission facility susceptible to destructive actions by vandals, sabotage, or terrorist attacks
- Infrastructure would become more susceptible to intentional destructive acts
- Ability to protect and repair infrastructure are reduced
- Increased interdependency and potential failure of multiple facilities should an intentional destructive act be perpetrated

Proposed Action

Neither the existing Parker–Planet Tap 69-kV Transmission Line nor the Proposed Action includes any components that, individually or in combination, would likely cause serious environmental impacts. Possible intentional destructive acts could vary from ordinary vandalism, such as people using firearms to shoot insulators, to a pre-meditated attempt to destroy one or more transmission structures with explosives, or an intentionally set wildfire intended to damage the transmission line infrastructure or to disrupt service to electrical customers rather than to cause any environmental contamination. The environmental footprint of the project is primarily individual, scattered structure sites and the access roads needed to reach the structures. The structures and conductors or insulators, which are more sensitive to damage and would cause more disruption, would be the most likely target rather than the roads. Environmental impacts from attacks to the transmission line are most likely to cause local effects resulting from damage caused by the destruction of the facility as well as efforts to mitigate the impact by repair and reconstruction of damaged infrastructure. Larger scale regional impacts

could result, for example, from wildfire should the act result in a secondary effect, such as a wildfire ignition during particularly dry periods.

Intentional destructive acts committed on the Parker–Planet Tap 69-kV Transmission Line would potentially interrupt service to the power grid from the Parker Substation to Planet Tap and beyond to Bagdad. The redundant nature of the power grid would prevent service interruptions. Interrupted electrical service by itself would not likely have any adverse effects to the environment.

Environmental effects realized would depend on the method of attack used. Direct attacks to the structures with explosives would likely create only temporary, minor noise, air, and soil impacts due to the collapse of a structure. Should live conductors ignite a wildfire before current is interrupted, the amount of air, soil, water and other environmental damage would be dependent upon the quantity and size of the vegetation at the point of the attack and its condition (dryness) at the time, as well as the response time of the appropriate agency suppression crews. The sparse vegetation in the project area creates low fuel levels except around those structures in the Mosquito Flats; therefore, actions from arson would be quickly controlled around the riparian area at BWRNWR or allowed to burn out in the upland area where fuel levels are low. Due to the ruggedness, remoteness, and inaccessibility to most of the transmission line, the potential for intentional destructive acts is low.

No Action Alternative

The possible intentional destructive acts and environmental impacts would be similar to those described for the Proposed Action. However, the existing Parker–Planet Tap 69-kV Transmission Line, which uses wood structures, is inherently not as strong or heat resistant as steel structures and, therefore, is more susceptible to intentional destructive acts. Compounding the issue of materials, the age of the transmission line and weathering and mechanical damage consequent to the years since its construction have further weakened the structural integrity of the line compared to the condition, which would be anticipated of a similar transmission line constructed with steel components.

3.14 CUMULATIVE IMPACTS

Cumulative impacts are defined by the CEQ (40 CFR §1508.7) as "… the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions." To determine the cumulative effects in the analysis area, a review was completed of known past, present, and reasonably foreseeable future proposed projects in the vicinity of the project area and an analysis made of their short- and long-term incremental effects on the local environment. Past projects were considered to be those completed within the last 10 years. Because planned projects are not always carried to completion, the window for future reasonably foreseeable projects was projected only for those projects anticipated to have on-site impacts within 5 years.

The Proposed Action, which is limited to activities needed to replace the transmission line structures, insulators, and conductor, includes only minor new impacts; the primary impacts occurred during the original construction. The replacement of structures, hardware, and conductor would include small disturbed areas at each structure location and pulling and/or tensioning station as well as reopening roads accessing the structures.

While the expected lifespan of the reconstructed transmission line is considered to be 50 years, the existing infrastructure, which was constructed with less durable materials, has surpassed 60 years. The more durable materials would be expected to require less maintenance and, consequently, less use of the access roads. Except for those roads where continuing use for maintenance purposes are anticipated, the construction impacts would not be readily noticeable after approximately 2 years. One new 12-foot-wide access road approximately 0.3 miles in length would be constructed as part of this project. Otherwise, there would be no change in either miles or use of the access roads used to construct this project. Therefore, most of the impacts are considered temporary and short term.

3.14.1 Past and Present Projects

Projects completed in the recent past or current projects include:

- SWTC reconstructed their transmission line north of Planet Tap, SWCT #1 to the town of Bagdad

- Western reconstructed the Parker–Buckskin Tap section of the Parker–Planet Tap 69-kV Transmission Line
- BWRNWR restored and revegetated a portion of the refuge with 1,500 native plants including honey mesquite, palo verde, ironwood, and catclaw acacia
- BWRNWR constructed the Visitor Contact Center and peninsula structures (recreation sites)
- BLM added motel parking and recreational vehicle sites at the Havasu Springs Resort
- BLM added solar lighting to the Take-Off Point Boat Ramp
- Arizona Department of Transportation (ADOT) repaired the Bill Williams River Bridge on State Route (SR) 95 within the BWRNWR wetland area
- ADOT performed maintenance of the Bill Williams River Bridge on SR 95
- LaPaz County performed maintenance of the Bill Williams River Road
- Reclamation, in coordination with the BWRNWR, allows water flows designed to replicate original high-water flowages in the Bill Williams River to flood the refuge
- BWRNWR is preparing a study of vegetation within the refuge

3.14.2 Reasonably Foreseeable Future Actions

Ongoing projects anticipated to continue or projects currently anticipated to begin within the next 5 years include:

- Army Corps of Engineers in cooperation with the Bill Williams River Corridor Steering Committee (including the BWRNWR) will continue to provide managed water flows in the Bill Williams River to Lake Havasu
- BWRNWR will continue the study of vegetation within the refuge
- BWRNWR will continue to maintain existing riparian vegetation plantations and establish new plantation, if possible
- BWRNWR will rear two native fish, bony tail chub and razorback sucker, in a cove within the refuge until released back to the river
- BLM will update wash signs along SR 95 at Standard Wash and Bill Williams River
- ADOT will continue maintenance of SR 95 and associated bridges
- La Paz County will continue to maintain the Bill Williams River Road

- Western and SWTC will maintain their transmission lines and access roads, including those identified in the BLM ROW
- BWRNWR and BLM land will continue to be used for recreation

3.14.3 Cumulative Impacts Resource Analysis

This section analyzes whether the Proposed Action, when combined with other past, present, or reasonably foreseeable future projects in the area, would result in either short-term or long-term environmental impacts. Short-term impacts are related primarily to project construction, while long-term impacts are related primarily to maintenance and operation of the completed project. This section analyzes the same resources that were evaluated in detail for the Proposed Action (sections 3.2 through 3.13).

Land Use and Ownership

Historically prior to development within the area, the project site was an undisturbed desert landscape bisected by the Bill Williams River. Vegetation consisted of scattered stands of creosotebush., cat claw, palo verde, and riparian vegetation along the river. Recent projects have not required a change in land ownership or land use as these projects occurred on lands owned or managed by the sponsoring agency. These projects have been completed in manners that were consistent with management plans. Future projects are consistent with existing land management plans and would not require a change in land use or ownership. The past, present, and reasonably foreseeable future projects would not cause an incremental effect to changes in land use and ownership when combined with implementation of the Proposed Action. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in a significant cumulative impact for land use.

Visual Resources

Previous projects have not substantially impacted the visual character or quality of the area. The Proposed Action would be consistent with the Phase I reconstruction of the transmission line and the reconstruction of the SWTC line. Future projects may make some man-made features more prominent in the landscape such as new pavement and signage that is more visually evident in

the landscape; however, these impacts would be minor and would not substantially impact the visual quality or character of the area. The identified, reasonably foreseeable future projects would not cause an incremental effect to changes in visual resources or contribute to a change in the landscape character when combined with implementation of the Proposed Action. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in a significant cumulative impact for visual resources.

Biological Resources

Significant cumulative biological impacts due to the Proposed Action coupled with past, present, and reasonably foreseeable future actions are not anticipated. Past, present, and reasonably foreseeable future actions include transmission line reconstructions, road improvements, facility improvements, and habitat enhancements on the Bill Williams River.

Transmission line reconstructions, road improvements, and facility improvements were authorized or conducted by a public entity in which the biological impacts are analyzed. Given this level of analysis and the nature of the activities no significant cumulative biological impacts are anticipated. Habitat enhancements have potential to work cumulatively with the transmission line relocation resulting in a larger contiguous patch of riparian habitat for species.

Present actions resulting in concurrent construction activities can result in combined or extended disturbance times that may impact biological resources. It is not anticipated any of the foreseeable future actions would be constructed concurrently with the Proposed Action; therefore, cumulative impacts as a direct result of concurrent construction activities are not reasonably certain to occur.

Cumulative impacts can result from increased visitor usage of an area. Although areas along the Colorado River have been and will likely be improved to facilitate visitor access, the Proposed Action would not result in increased usage of these areas. All access roads improved by the Proposed Action would be outside the Colorado River recreation areas and would also be gated

or otherwise closed to public access; therefore, cumulative impacts from increased access are not reasonably certain to occur.

Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact to biological resources.

Soils

Cumulative effects to soils from the Proposed Action in addition to past, present, and reasonably foreseeable future actions are not anticipated given state requirements for erosion protection. Localized effects to soil would occur from any project with ground-disturbing activity. However, substantial cumulative effects such as chronic, broad-scale soil erosion are not anticipated because projects with disturbances of 1 acre or more require an AZPDES permit and a project-specific SWPPP. A project-specific SWPPP requires the implementation of erosion-control measures to reduce soil erosion on and downstream of a project site before, during, and after construction activities, thereby containing soil disturbance to the project site. SWPPPs typically require a minimum of 70% restoration of vegetation in disturbance areas prior to removing all other erosion protection devices. The vegetation restoration efforts for each project would promote on-site infiltration of water runoff, thereby reducing soil erosion. Thus, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future actions would result in significant cumulative impact to soil resources.

Water Resources

Incremental effects to floodplains and water resources due to the Proposed Action coupled with past, present, and reasonably foreseeable future actions are not anticipated given state and Federal requirements for protection of floodplains and water quality. Past, current, or future projects that would generate substantial impacts to the floodplain elevation would require a Letter of Map Revision to modify the existing Federal Emergency Management Agency map depicting the regulated 100-year floodplain. Most past, current, and reasonably foreseeable future projects in the area have not or would not affect the floodplain because they would not

encroach on the regulated floodplain or would not negatively modify the floodplain elevation. Projects occurring in the vicinity of the floodplain, such as ADOT bridge maintenance efforts, do not typically require floodplain modification because the structure is not being expanded. Reclamation's on-going flowage restoration project would positively influence the floodplain because distribution of nutrients, sediments, and water would occur at more natural levels since the construction of the Alamo Dam in the 1980s. Past, present, and foreseeable future projects causing disturbances of 1 acre or more require an AZPDES permit with a sufficient SWPPP to reduce pollutants from entering receiving waters and to ensure the protection of water resources in the greater vicinity. Projects occurring over waterbodies such as ADOT bridge and maintenance projects also require containment plans to reduce or eliminate construction debris and waste from entering watercourses, thereby reducing construction effects to water resources. Some actions may have a positive effect on water resources such as relocating the portion of the Parker–Planet Tap 69-kV Transmission Line away from wetland and riparian areas and BWRNWR vegetation restoration efforts vegetation study plan, and rearing of native fish populations, as well as Reclamation's plan to continue to restore flows in the Bill Williams River. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future actions would result in significant cumulative impact to floodplains or water resources.

Cultural Resources

Past projects would have been conducted in accordance with Federal and state laws and would not have resulted in impacts to cultural resources. Present and reasonably foreseeable future projects that could have an incremental effect to cultural resources include the maintenance of the transmission line between Parker and Bagdad, and the continued use and maintenance of the access roads. As described in Section 3.7, activities associated with the implementation of the Proposed Action would not, by themselves, result in adverse effects to cultural resources provided the mitigation measures are followed. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact to cultural resources provided roads passing through archaeological sites remain unimproved and are used only under dry conditions.

Public Health and Safety

Noticeable effects of the Proposed Action as well as past, present, or reasonably foreseeable future projects would not contribute to an incremental effect to public health and safety as the owner, operator, and crews must comply with OSHA and agency regulations. The design and electrical standards of transmission lines would minimize long- and short-term exposure to electrical and electromagnetic effects. Also, as described in Section 3.8, activities involved in implementing the Proposed Action would not, by themselves, result in serious injuries to visitors to the area or interfere with emergency response capabilities or resources.

Even though the reasonably foreseeable future USFWS and BLM projects designed to attract recreation use are primarily directed towards activities at Lake Havasu, increasing the number of people recreating in the vicinity would cause more individuals to seek out new and different forms of recreation available within the BWRNWR. Although public recreation access to the Parker–Planet Tap 69-kV Transmission Line is not specifically restricted, it is more difficult than other local areas due to rugged desert mountain habitat, thick riparian vegetation, barriers at access routes to prevent motorized travel under the transmission line, and long-distances on primitive roads to access the area. Therefore, an increase in visitor population to the Lake Havasu facilities is expected to have no discernable effect to visitors frequenting the Parker–Planet Tap 69-kV Transmission Line ROW. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact for public health and safety.

Noise

The majority of the areas associated with the past and present projects have few sensitive customers. Noise associated with construction of these projects would have been localized and had a short-term effect on both sensitive receptors and wildlife. As discussed in Section 3.9, construction and operation of the Proposed Action would not result in any potentially significant noise impacts. Temporary noise may affect the Hillside Bay Mobile Park during construction of the transmission line but would be short term in nature. The majority of the future projects would occur in unpopulated areas; they would not generate substantial noise increases to the

public and would be in accordance with Federal and state laws. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact for noise.

Solid Wastes and Hazardous Materials

According to a review of ADEQ and EPA databases, past projects have not resulted in any spills or contamination of the project area. All projects, whether past, present, or reasonably foreseeable future projects, that may involve solid waste or the use of hazardous materials would require the transportation, storage, and disposal of solid wastes and hazardous wastes be done in accordance with Federal and state laws. There are no known hazardous materials sites within the project area; therefore, future projects would not impact any contaminated sites or prevent implementation of any cleanup activities. The past, present, or reasonably foreseeable future projects that involve solid wastes or hazardous materials would not contribute to a substantial risk of contamination when combined with implementation of the Proposed Action. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in a significant cumulative impact for solid waste or hazardous materials.

Fuels/Fire Management

The past, present, and reasonably foreseeable future projects that could have an incremental effect to Fuels/Fire Management include the USFWS plantations, the increased water flows released from Alamo Dam by Reclamation, the recreation permitted on the BWRNWR, and the recreation infrastructure improvements to sites on Lake Havasu. The first two projects may potentially affect the vegetation, and therefore, fuel flammability, the last two may affect fire ignition potential due to increased visitation.

As discussed in Section 3.11, most of the land outside the riparian area associated with the Bill Williams River consists of desert vegetation, with inherently low levels of fuel. Conversely, the riparian areas are much more densely vegetated with trees and shrubs. Should the USFWS continue its program of planting honey mesquite, paloverde, ironwood, and catclaw acacia in existing openings to compete with the invasive tamarisk, it would continue converting meadows

to more continuous forested vegetation and a more uniform fuel type. Tree and shrub fuels are inherently less "flashy" compared to the grasses characteristic of the meadows, but fires in heavier fuels are more difficult to control. The result would be a negligible increase in fuel loading.

Similarly, the purpose of increased water flows from Alamo Dam is to provide more moisture to preserve native species in the riparian area associated with the Bill Williams River. USFWS casual observations indicate the increased flows has extended the native vegetation stands and increased the density of vegetation upstream (USFWS 2009a). The increase in quantity of fuels is partially offset by improved plant moisture. This impact is seen in the riparian area only. Uplands have not been affected. No noticeable increase in flammability would occur.

As mentioned earlier, recreation improvements on Lake Havasu are not anticipated to have a noticeable effect to visits to the vicinity of the transmission line, which would have a similar negligible effect to wildfire ignition potential. The inclusion of lightning protection for the conductor as well as for individual structures and the change from wood to metal structures in the Proposed Action would reduce the risk of lightning strikes and the potential for subsequent fire ignition.

Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact for fire and fuels management.

Energy Policy

The recent and reasonably foreseeable future projects that could have an incremental effect to energy policy include the recent reconstruction of segments of the transmission line between Parker and Bagdad.

The Proposed Action would complete an upgrade of the entire transmission line between the Parker Substation to Bagdad to a single configuration. As discussed in Section 3.12, the Proposed Action would construct a more durable transmission line requiring less maintenance and, due to the larger conductor, would improve the efficiency of providing power to customers.

The result is a substantial improvement of energy efficiency that should continue for the projected life of the new facility. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact for energy policy.

Intentional Destructive Acts

The past, present, and reasonably foreseeable future projects that could have an incremental effect to Intentional Destructive Acts include the construction of segments of the transmission line between Parker and Bagdad, and the projects attracting increased recreation use. As discussed in Section 3.13, the Parker–Planet Tap 69 kV Transmission Line in its current configuration is not likely to be considered a lucrative target for specifically targeted Intentional Destructive Acts. The reconstruction of the entire transmission line from Parker to Bagdad would strengthen the infrastructure, making it even less susceptible for targeting.

Similarly, an increase in ordinary vandalism from increased recreation traffic is not anticipated because not much increase in traffic would be expected due to the remoteness of the transmission line. Also, the impact of casual Intentional Destructive Acts such as target practice directed towards insulators, would be reduced by the new "plinking resistant" polymer insulators. Therefore, it is not anticipated that any incremental effects from the Proposed Action combined with other past, present, or reasonably foreseeable future projects would result in significant cumulative impact for Intentional Destructive Acts.

4.0 AGENCIES AND TRIBES CONSULTED

The following is a list of agencies contacted for this Proposed Action:

FEDERAL

US Army Corps of Engineers
Bureau of Land Management, LHFO
Bureau of Reclamation, Phoenix Area Office
Bureau of Reclamation, Southern California Area Office
US Fish and Wildlife Service

TRIBAL

Chemehuevi Reservation
Colorado River Indian Tribe
Cocopah Tribe
Fort Mojave Indian Tribe
Hopi Tribe
Hualapai Tribe
Yavapai-Prescott Indian Tribe

TOWN

Town of Parker

STATE

Arizona Department of Environmental Quality
Arizona Department of Transportation, Yuma District
Arizona Game and Fish Department
Arizona State Land Department
Arizona State Parks, State Historic Preservation Office
California Historic Preservation Office

COUNTY

La Paz County, Arizona
Mohave County, Arizona
San Bernardino County, California

CONSERVATION ORGANIZATION

Center for Biological Diversity, Arizona
Sky Island Alliance, Arizona

See Appendices C and E for a sample project scoping letter, scoping mailing list, public notice of availability newspaper advertisements, and various agency response letters.

5.0 PROJECT PREPARERS AND CONTRIBUTORS

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Amanda Dodson	Geologist

US Fish and Wildlife Service, Bill Williams River National Wildlife Refuge

Richard Gilbert	Manager
Stan Culling	Wildlife Refuge Specialist

Bureau of Reclamation

Mark Slaughter	Natural Resource Specialist

US Army of Corps Engineer

William Miller	LA District Regulator

AZTEC Engineering

Greg Wold	Project Manager
Mike Shirley	Project Principal, Quality Control
Karim Dada	Quality Control
Larry Lindner	NEPA Compliance, Quality Control
Barbara Macnider	Cultural Resources, Quality Control
Mike Myers	Biological Resources, Quality Control
Alex Smith	Biological Resources
Justin Hoppmann	Hazardous Materials and Solid Waste, Socioeconomic/EJ, Visual Resources, Land Use
Amanda Gagnon	Water Resources, Geology and Soils
Carl Gordon	GIS/Graphics
David Shu	Air Quality, Noise Resources
Diana Dunn	Technical Publications Specialist

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7.0 APPENDIX A – RESOURCE PROTECTION MEASURES

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Resource Protection Measures	Responsible Party	Time of Implementation
Construction Management		
• Ensure all crews entering construction site have been provided training to recognize and respond to occurrences of cultural and natural resources and optimally protect the environment.	APS/Western	Prior to construction and refresher training as needed at weekly tailgate meetings
• APS will prepare and conduct a safety program in compliance with all applicable Federal, State, and local safety standards and requirements. The safety program will include, but not be limited to, standard health and safety practices in accordance with the Occupational Safety and Health Administration's policies and procedures for accident prevention, use of protective equipment, medical care of injured employees, safety education, fire protection, and general health and safety of employees and the public.	APS/Western	Prior to and during construction
• Existing access roads will be used when possible. Overland travel will be restricted to that which is absolutely necessary to complete the project.	APS/Contractor	During construction
• Vehicles operating on all non-public access roads (i.e., the access road along the Western utility corridor) will observe a speed limit of 15 mph or less.	APS/Contractor	During construction
• No pets or firearms will be allowed on the construction site.	APS/Contractor	During construction
• Access roads not needed after construction will be gated or bermed to deter public use of the roads.	APS/Contractor	After construction
Biological Resources		
• Construction activities will occur during the fall and winter (October 1 to April 30) to avoid impacts to breeding riparian birds.	APS/Contractor/Western	During construction
• A survey to identify active migratory bird nests will be conducted by a qualified biologist if construction activities continue into March 1 and April 30. If a nest is found construction activities within the transmission line span will cease until the birds have fledged, as determined by a qualified biological monitor.	Western	Prior to construction
• Helicopter use in the BWRNWR between Structures 3/1 and 7/1 must be coordinated with the refuge staff to ensure that flight paths avoid breeding areas associated with the Yuma clapper rail.	APS/Contractor/Western	During construction

• A single helicopter flyover of the Aubrey Hills and Bill Williams Mountains would occur prior to the start of lambing to determine if the sheep are in this area. The flight should be at least 500 feet above ground level to minimize any adverse effects to the ewes and lambs. If bighorn sheep are present during this flyover, then the helicopter will not fly lower than 500 feet over these hills during the rest of the construction. Regardless of whether sheep are present or not during this flyover, the helicopter (used to bring in hardware and set structures) and all personnel shall approach the work area from the south and follow along the river to the extent practicable.	APS/Contractor/Western	During construction
• Construction will minimize all vegetation removal to the extent possible.	APS/Contractor	During construction
• Vegetation trimming in the riparian area known locally as Mosquito Flats will be kept to the minimum necessary required to move the existing transmission line and construct the rerouted transmission line near the existing Bill Williams River Road.	APS/Contractor	During construction between Structures 4/4 and 4/6
• Vegetation trimming will not occur where the transmission line corridor crosses the Bill Williams River.	APS/Contractor	During construction between Structures 6/2 and 6/3
• All disturbed soil, other than surfaces intended for permanent access roads, will be seeded with native species free of invasive seed. Seeding within the boundary of the BWRNWR will be accomplished with native seed gathered within the refuge in a mixture agreed to by BWRNWR and BLM.	APS/Contractor	After construction
• Fixed-model visual markers for birds will be attached to the overhead ground wires on the spans across the Bill Williams River (from Structures 6/2 to 6/3) and the span from Structures 7/1 to SWCT #1.	APS/Contractor	During construction
• Prior to entering the project area, all personnel will be required to undergo an environmental education program. This program will be conducted to inform workers of sensitive species that could be encountered and measures to minimize impacts. The worker education program will focus on the Southwestern willow flycatcher, yellow-billed cuckoo, Yuma clapper rail, and Sonoran desert tortoise (Appendix F).	APS/Contractor	Prior to construction
• Construction vehicles will proceed at slow speeds in the project area to avoid running over tortoises.	APS/Contractor	During and after construction
• Construction personnel will check under parked vehicles to search for tortoises resting in the shade before moving the vehicle.	APS/Contractor	During construction

• Should desert tortoises be encountered and/or killed by project activities, the BLM Lake Havasu Field Office biologist (928.505.1246) will be contacted immediately to determine the proper handling of the desert tortoise.	APS/Contractor	Immediately after occurrence
• All equipment will be washed prior to entering the work site.	APS/Contractor	Prior to and during construction
• On Arizona State Lands, salvage or replant cactus and other protected plants.	APS/Contractor	During construction
Cultural Resources		
• Within eligible archaeological sites, all vehicles will be restricted to the existing road bed, the existing public parking area or the previously disturbed area within 100 feet of Structures 5/3 and 5/4.	APS/Contractor	During Construction
Water Resources		
• Adhere to the conditions of Nationwide Permit 14 during construction to ensure that impacts to waters of the US are minimized to the maximum extent possible.	APS/Contractor	During construction
• Provide environmental training to work crews regarding waters of the US, including wetlands and their importance and the purpose for the "no work zone."	APS/Contractor	Prior to construction
• Clearly mark the wetland boundary with visible flagging prior to construction to demarcate a "no work zone." No work will occur in the demarcated "no work zone."	APS/Contractor/Western	Prior to construction at Structure 4/4
• For Structure 4/4, construct the 14-foot-wide access road and 25-foot × 25-foot assembly area south of the structure near the existing disturbed footpath to minimize disturbance to vegetation.	APS/Contractor	During construction at Structure 4/4
• Monitor all construction work at Structure 4/4 to ensure wetlands are avoided.	APS/Contractor/Western	During construction at Structure 4/4
• Equipment will not be stored within 500 feet of a water body.	APS/Contractor	During construction
• Erosion, sediment, material stockpile, and dust control Best Management Practices will be used on site. Fill or runoff from work areas will be prevented from entering waterways.	APS/Contractor	During construction

Restoration		
• APS will prepare a SWPPP that will address restoration of disturbed areas.	APS/Contractor	Prior to construction
Hazardous Materials and Waste		
• All equipment will be properly tuned and maintained to avoid leaks of fluids.	APS/Contractor	Prior to, during, and after construction
• All trash and waste items generated by construction or crew activities will be properly contained and removed from the project area on a daily basis.	APS/Contractor	During construction
• Service and refueling procedures will not be conducted within 500 feet of a seep, wash, or any other water body.	APS/Contractor	During construction
• Whenever practicable, treated wood poles and crossarms removed during the project will be recycled or transferred to the public for some uses.	APS/Contractor	During and after construction
• Treated wood poles and croassarms transferred to a recycler, landfill, or the public will be accompanied by a written consumer information sheet on treated wood as provided by Western.	APS/Contractor/Western	After construction
• Treated wood product scrap or poles and crossarms that cannot be donated or reused will be properly disposed in a landfill that accepts treated wood and has signed Western's consumer information sheet receipt.	APS/Contractor	After construction
• Petroleum products, fresh cement, or deleterious materials will be prevented from entering waterways.	APS/Contractor	During construction
• Prepare a spill containment plan to ensure that any accidental spills happening during construction are appropriately contained and remediated, and that the appropriate agencies are notified. The plan will be submitted to the Contractors Office Representative for approval 14 days prior to start of work.	APS/Contractor	Prior to construction
• In the event of a spill, workers will immediately cease work, begin spill clean-up operations, and notify appropriate agencies.	APS/Contractor	Immediately after occurrence
• Comply with all Federal, state, and local regulations.	APS/Contractor	During and after construction
Air Quality		
• Comply with all Federal, state, and local air quality regulations.	APS/Contractor	During and after construction

8.0 APPENDIX B – WESTERN'S CONSTRUCTION STANDARDS 13 ENVIRONMENTAL QUALITY PROTECTION; AND STANDARD MITIGATION MEASURES FOR CONSTRUCTION, OPERATION, AND MAINTENANCE OF TRANSMISSION LINES

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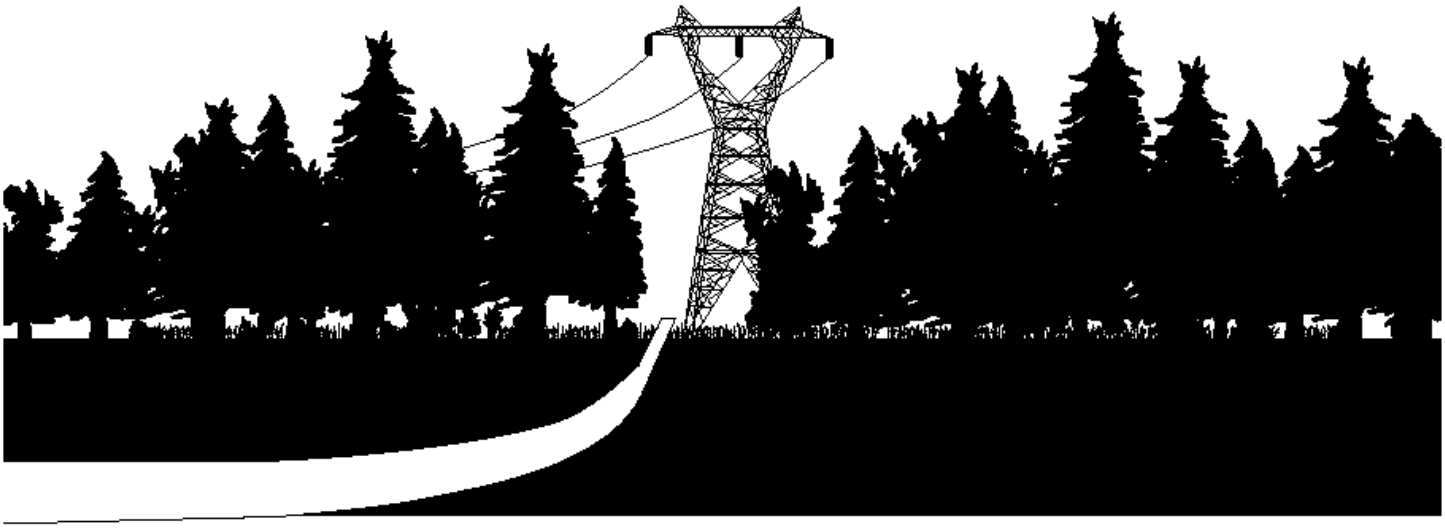
Western
AREA POWER
ADMINISTRATION

CONSTRUCTION STANDARDS

STANDARD 13

ENVIRONMENTAL QUALITY PROTECTION



June 2003

SAFETY
A HABIT TO LIVE BY

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

TABLE OF CONTENTS

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.1--CONTRACTOR FURNISHED DATA

1. RECYCLED MATERIAL QUANTITY REPORT: Submit quantities for recycled material listed in Section 13.6, "Recycled Material Quantities", to the COR after completion and prior to submittal of final invoice.

2. PRODUCTS CONTAINING RECOVERED MATERIAL REPORT: Provide the COR the following information for purchases of items listed in Section 13.7, "Use of Products Containing Recovered Material":

   (1) Quantity and cost of listed items with recovered material content and quantity and cost of listed items without recovered material content after completion and prior to submittal of final invoice.

   (2) Written justification 7 days prior to purchase of listed items if recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

3. RECLAIMED REFRIGERANT RECEIPT: A receipt from the reclaimer stating that the refrigerant was reclaimed, the amount and type of refrigerant, and the date shall be submitted to the COR after completion and prior to submittal of final invoice in accordance with Section 13.8.5, “Refrigerants And Receipts”.

4. WASTE MATERIAL QUANTITY REPORT: Submit quantities of total project waste material disposal as listed below to the COR after completion and prior to submittal of final invoice in accordance with Section 13.8.8, “Waste Material Quantity Report”.

   (1) Sanitary Wastes: Volume in cubic yards or weight in pounds.

   (2) Hazardous or Universal Wastes: Weight in pounds.

   (3) PCB Wastes: Weight in pounds.

   (4) Other regulated wastes (e.g., lead-based paint or asbestos): Weight in pounds (specify type of waste in report).

5. SPILL PREVENTION NOTIFICATION AND CLEANUP PLAN (Plan): Submit the Plan as described in Section 13.10.2, "Spill Prevention Notification and Cleanup Plan”, to the COR for approval 14 days prior to start of work. Approval of the Plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

6. TANKER OIL SPILL PREVENTION AND RESPONSE PLAN: Submit the Plan as described in Section 13.10.3, "Tanker Oil Spill Prevention and Response Plan”, to the COR for approval 14 days prior to start of work. Approval of the Plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

7. PESTICIDE USE PLAN: Submit one copy of a pesticide use plan as described in Section 13.11.3, “Pesticide Use Plan”, to the COR for approval 14 days prior to use. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Within seven days

after application, submit a written report in accordance with Standard 2 – Sitework, Section 2.1.1.5, "Soil-Applied Herbicide".

8. TREATED WOOD POLE AND MEMBERS RECYCLING CONSUMER INFORMATION RECEIPT: Submit treated wood pole and members consumer receipt forms to the COR after completion and prior to submittal of final invoice (see 13.12, "Treated Wood Poles and Members Recycling or Disposal").

9. PREVENTION OF AIR POLLUTION: Submit a copy of permits, if required, from Federal, State, or local agencies to the COR 14 days prior to the start of work.

10. ASBESTOS LICENSES OR CERTIFICATIONS: Submit a copy of licenses and/or certifications for asbestos work as described in 13.14, "Handling and Management of Asbestos Containing Material" paragraph a., to the COR prior to work. Submit copies of certificates of disposal and/or receipts for waste to the COR after completion and prior to submittal of final invoice.

11. LEAD PAINT NOTICES: Submit a copy of lead paint notices as described in 13.15, "Material with Lead-based Paint" paragraph b., to the COR upon completion and prior to submittal of final invoice. Submit copies of certificates of disposal and/or receipts for waste to the COR after completion and prior to submittal of final invoice.

12. WATER POLLUTION PERMITS: Submit copies of any water pollution permits as described in 13.16, "Prevention of Water Pollution" paragraph b., to the COR prior to work.

13. PCB TEST REPORT: Submit a PCB test report as described in 13.17, "Testing, Draining, Removal, and Disposal of Oil-filled Electrical Equipment" paragraph b., prior to draining, removal, or disposal of oil or oil-filled equipment that is designated for disposal.

14. OIL AND OIL-FILLED ELECTRICAL EQUIPMENT RECEIPT: Obtain and submit a receipt for oil and oil-filled equipment transported and disposed, recycled, or reprocessed as described in 13.17, "Testing, Draining, Removal, and Disposal of Oil-filled Electrical Equipment", to the COR upon completion and prior to submittal of final invoice.

15. OSHA PCB TRAINING RECORDS: Submit employee training documentation records to the COR 14 days prior to the start of work as described in 13.18.1.

16. CLEANUP WORK MANAGEMENT PLAN: Submit a Cleanup Work Management Plan as described in 13.18, "Removal of Oil-contaminated Material" paragraph b., to the COR for approval 14 days prior to the start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

17. POST CLEANUP REPORT: Submit a Post-Cleanup Report as described in 13.18, "Removal of Oil-contaminated Material" paragraph g., to the COR upon completion and prior to submittal of final invoice.

SECTION 13.2--ENVIRONMENTAL REQUIREMENTS

Comply with Federal, State, and local environmental laws and regulations. The sections in this Standard further specify the requirements.

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.3--LANDSCAPE PRESERVATION

1. GENERAL: Preserve landscape features in accordance with the contract clause titled "Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements."

2. CONSTRUCTION ROADS: Location, alignment, and grade of construction roads shall be subject to the COR's approval. When no longer required, construction roads shall be restored to their original condition. Surfaces of construction roads shall be scarified to facilitate natural revegetation, provide for proper drainage, and prevent erosion. If revegetation is required, then use regionally native plants.

3. CONSTRUCTION FACILITIES: Shop, office, and yard areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent and prevent impact on sensitive riparian areas and flood plains. Storage and construction buildings, including concrete footings and slabs, shall be removed from the site prior to contract completion. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion. If revegetation is required, then use regionally native plants.

SECTION 13.4--PRESERVATION OF CULTURAL AND PALEONTOLOGICAL RESOURCES

1. GENERAL: Do not remove or alter cultural artifacts or paleontological resources (fossils). Cultural artifacts are of potential scientific or cultural importance and include bones, tools, historic buildings, and features. Paleontological resources can be of scientific importance and include mineralized animals and plants or trace fossils such as footprints. Both cultural and paleontological resources are protected by Federal Regulations during Federal construction projects.

2. KNOWN CULTURAL OR PALEONTOLOGICAL SITES: Following issuance of notice to proceed, Western will provide two sets of plan and profile drawings showing sensitive areas located on or immediately adjacent to the transmission line right-of-way and/or facility. These areas shall be considered avoidance areas. Prior to any construction activity, the avoidance areas shall be marked on the ground in a manner approved by the COR. Instruct employees, subcontractors, and others that vehicular or equipment access to these areas is prohibited. If access is absolutely necessary, first obtain approval from the COR. Ground markings shall be maintained throughout the duration of the contract. Western will remove the markings during or following final cleanup. For some project work, Western will require an archaeological, paleontological or tribal monitor at or near cultural or paleontological site locations. The contractor will work with the monitor to identify avoidance areas.

3. UNKNOWN CULTURAL OR PALEONTOLOGICAL SITES: On rare occasions cultural or paleontological sites may be discovered during excavation or other earth-moving activities.

   (1) Reporting: If evidence of a cultural or paleontological site is discovered, immediately notify the COR and give the location and nature of the findings. Stop all activities within a 50-foot radius of the discovery and do not proceed with work within that radius until directed to do so by the COR.

   (2) Care of Evidence: Do not damage artifacts or fossils uncovered during construction.

4. CONTRACT ADJUSTMENTS: Where appropriate by reason of delays caused by a discovery, the Contracting Officer may make adjustments to contract requirements.

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.5--NOXIOUS WEED CONTROL

1. GENERAL: Comply with Federal, state, and local noxious weed control regulations. Provide a "clean vehicle policy" while entering and leaving construction areas to prevent transport of noxious weed plants and/or seed. Transport only construction vehicles that are free of mud and vegetation debris to staging areas and the project right-of-way.

SECTION 13.6--RECYCLED MATERIAL QUANTITIES

1. GENERAL: Record quantities of the following material by category that is salvaged, recycled, reused, or reprocessed:

   (1) Transformers, Breakers: Weight without oil.

   (2) Electrical Conductors: Length in feet and Type (for example, ACSR, Copper, and gauge).

   (3) Structural Steel: Weight in pounds or tons.

   (4) Aluminum Buswork: Weight in pounds or tons.

   (5) Other Metals: Weight in pounds or tons.

   (6) Oil: Gallons (separate by type - less than 2 ppm PCB, 2 to 50 ppm PCB, and 50 or greater ppm PCB).

   (7) Gravel, Asphalt, Or Concrete: Weight in pounds or tons.

   (8) Batteries: Weight in pounds.

   (9) Wood Poles and Crossarms: Weight in pounds.

2. RECYCLED MATERIAL QUANTITY REPORT: Submit quantities for recycled material listed above to the COR after completion and prior to submittal of final invoice.

SECTION 13.7--USE OF PRODUCTS CONTAINING RECOVERED MATERIAL

1. GENERAL: If the products listed below are obtained as part of this project, purchase the items with the highest recovered material content possible unless recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

   (1) Construction Products:

   - Building Insulation Products
   - Carpet
   - Carpet cushion
   - Cement and concrete containing coal fly ash or ground granulated blast furnace slag
   - Consolidated and reprocessed latex paint
   - Floor Tiles
   - Flowable fill
   - Laminated Paperboard
   - Patio Blocks
   - Railroad grade crossing surfaces
   - Shower and restroom dividers/partitions

- Structural Fiberboard

(2) Landscaping Products:

- Compost made from yard trimmings or food waste
- Garden and soaker hoses
- Hydraulic Mulch
- Lawn and garden edging
- Plastic lumber landscaping timbers and posts

(3) Non-paper Office Products:

- Binders, clipboards, file folders, clip portfolios, and presentation folders
- Office recycling containers
- Office waste receptacles
- Plastic desktop accessories
- Plastic envelopes
- Plastic trash bags
- Printer ribbons
- Toner cartridges

(4) Paper and Paper Products:

- Commercial/industrial sanitary tissue products
- Miscellaneous papers
- Newsprint
- Paperboard and packaging products
- Printing and writing papers

(5) Park and Recreation Products:

- Park benches and picnic tables
- Plastic fencing
- Playground equipment
- Playground surfaces
- Running tracks

(6) Transportation Products:

- Channelizers
- Delineators
- Flexible delineators
- Parking stops
- Traffic barricades
- Traffic cones

(7) Vehicular Products:

- Engine coolants
- Re-refined lubricating oils
- Retread tires

(8) Miscellaneous Products:

- Awards and plaques
- Industrial drums
- Manual-grade strapping
- Mats
- Pallets
- Signage
- Sorbents

(9) For a complete listing of products and recommendations for recovered content, see http://www.epa.gov/cpg/products.htm

2. PRODUCTS CONTAINING RECOVERED MATERIAL REPORT: Provide the COR the following information for purchases of those items listed above:

(1) Quantity and cost of listed items with recovered material content and quantity and cost of listed items without recovered material content after completion and prior to submittal of final invoice.

(2) Written justification 7 days prior to purchase of listed items if recovered material content products are not available: 1) competitively within a reasonable time frame; 2) that meet performance criteria defined in the Standards or Project Specifications; or 3) at a reasonable price.

SECTION 13.8--DISPOSAL OF WASTE MATERIAL

1. GENERAL: Dispose or recycle waste material in accordance with applicable Federal, State and Local regulations and ordinances. In addition to the requirements of the Contract Clause “Cleaning Up”, remove all waste material from the construction site. No waste shall be left on Western property, right-of-way, or easement. Burning or burying of waste material is not permitted.

2. HAZARDOUS, UNIVERSAL, AND NON-HAZARDOUS WASTES: Manage hazardous, universal, and non-hazardous wastes in accordance with State and Federal regulations.

3. USED OIL: Used oil generated from the Contractor activities shall be managed in accordance with used oil regulations.

4. RECYCLABLE MATERIAL: Reduce wastes, including excess Western material, by recycling, reusing, or reprocessing. Examples of recycling, reusing, or reprocessing include reprocessing of solvents; recycling cardboard; and salvaging scrap metals.

5. REFRIGERANTS AND RECEIPTS: Refrigerants from air conditioners, water coolers, refrigerators, ice machines and vehicles shall be reclaimed with certified equipment operated by certified technicians if the item is to be disposed. Refrigerants shall be reclaimed and not vented to the atmosphere. A receipt from the reclaimer stating that the refrigerant was reclaimed, the amount and type of refrigerant, and the date shall be submitted to the COR after completion and prior to submittal of final invoice.

6. HALONS: Equipment containing halons that must be tested, maintained, serviced, repaired, or disposed must be handled according to EPA requirements and by technicians trained according to those requirements.

7. SULFUR HEXAFLOURIDE (SF6): SF6 shall be reclaimed and not vented to the atmosphere.

8. WASTE MATERIAL QUANTITY REPORT: Submit quantities of total project waste material disposal as listed below to the COR after completion and prior to submittal of final invoice.

   (1) Sanitary Wastes: Volume in cubic yards or weight in pounds.

   (2) Hazardous or Universal Wastes: Weight in pounds.

   (3) PCB Wastes: Weight in pounds.

   (4) Other regulated wastes (e.g., lead-based paint or asbestos): Weight in pounds (specify type of waste in report).

SECTION 13.9--CONTRACTOR'S LIABILITY FOR REGULATED MATERIAL INCIDENTS

1. GENERAL: The Contractor is solely liable for all expenses related to spills, mishandling, or incidents of regulated material attributable to his actions or the actions of his subcontractors. This includes all response, investigation, cleanup, disposal, permitting, reporting, and requirements from applicable environmental regulation agencies.

2. SUPERVISION: The actions of the Contractor employees, agents, and subcontractors shall be properly managed at all times on Western property or while transporting Western's (or previously owned by Western) regulated material and equipment.

SECTION 13.10--POLLUTANT SPILL PREVENTION, NOTIFICATION, AND CLEANUP

1. GENERAL: Provide measures to prevent spills of pollutants and respond appropriately if a spill occurs. A pollutant includes any hazardous or non-hazardous substance that when spilled, will contaminate soil, surface water, or ground water. This includes any solvent, fuel, oil, paint, pesticide, engine coolants, and similar substances.

2. SPILL PREVENTION NOTIFICATION AND CLEANUP PLAN (Plan): Provide the Plan to the COR for approval 14 days prior to start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Include the following in the Plan:

   (1) Spill Prevention measures. Describe the work practices or precautions that will be used at the job site to prevent spills. These may include engineered or manufactured techniques such as installation of berms around fuel and oil tanks; Storage of fuels, paints, and other substances in spill proof containers; and management techniques such as requiring workers to handle material in certain ways.

   (2) Notification. Most States and the Environmental Protection Agency require by regulation, that anyone who spills certain types of pollutants in certain quantities notify them of the spill within a specific time period. Some of these agencies require written follow up reports and cleanup reports. Include in the Plan, the types of spills for which notification would be made, the agencies notified, the information the agency requires during the notification, and the telephone numbers for notification.

   (3) Employee Awareness Training. Describe employee awareness training procedures that will be implemented to ensure personnel are knowledgeable about the contents of the Plan and the need for notification.

   (4) Commitment of Manpower, Equipment and Material. Identify the arrangements made to respond to spills, including the commitment of manpower, equipment and material.

(5) If applicable, address all requirements of 40CFR112 pertaining to Spill Prevention, Control and Countermeasures Plans.

3. TANKER OIL SPILL PREVENTION AND RESPONSE PLAN: Provide a Tanker Oil Spill Prevention and Response Plan as required by the Department of Transportation if oil tankers with volume of 3,500 gallons or more are used as part of the project. Submit the Tanker Oil Spill Prevention and Response Plan to the COR for approval 14 days prior to start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations.

SECTION 13.11--PESTICIDES

1. GENERAL: The term "pesticide" includes herbicides, insecticides, rodenticides and fungicides. Pesticides shall only be used in accordance with their labeling.

2. ENVIRONMENTAL PROTECTION AGENCY REGISTRATION: Use EPA registered pesticides.

3. PESTICIDE USE PLAN: The plan shall contain: 1) a description of the pesticide to be used, 2) where it is to be applied, 3) the application rate, 4) a copy of the label, and 5) a copy of required applicator certifications. Submit two copies of the pesticide use plan to the COR for approval 30 days prior to the date of intended application. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. Within seven days after application, submit a written report in accordance with Standard 2 – Sitework, Section 2.1.1.5, "Soil-Applied Herbicide".

SECTION 13.12--TREATED WOOD POLES AND MEMBERS RECYCLING OR DISPOSAL

Whenever practicable, treated wood poles and members removed during the project shall be recycled or transferred to the public for some uses. Treated wood poles and members transferred to a recycler, landfill, or the public shall be accompanied by a written consumer information sheet on treated wood as provided by Western. Obtain a receipt form, part of the consumer information sheet, from the recipient indicating that they have received, read, and understand the consumer information sheet. Treated wood products transferred to right-of-way landowners shall be moved off the right-of-way. Treated wood product scrap or poles and members that cannot be donated or reused shall be properly disposed in a landfill that accepts treated wood and has signed Western's consumer information sheet receipt. Submit treated wood pole and members consumer receipt forms to the COR after completion and prior to submittal of final invoice.

SECTION 13.13--PREVENTION OF AIR POLLUTION

1. GENERAL: Ensure that construction activities and the operation of equipment are undertaken to reduce the emission of air pollutants. Submit a copy of permits, if required, from Federal, State, or local agencies to the COR 14 days prior to the start of work.

2. MACHINERY AIR EMISSIONS: The Contractor and subcontractor machinery shall have, and shall use the air emissions control devices required by Federal, State or Local Regulation or ordinance.

3. DUST ABATEMENT: Dust shall be controlled. Oil shall not be used as a dust suppressant. Dust suppressants shall be approved by the COR prior to use.

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.14--HANDLING AND MANAGEMENT OF ASBESTOS CONTAINING MATERIAL

1. GENERAL: Obtain the appropriate Federal, State or local licenses or certifications prior to disturbing any regulated asbestos-containing material. Submit a copy of licenses and/or certifications for asbestos work to the COR prior to work. Ensure: 1) worker and public safety requirements are fully implemented and 2) proper handling, transportation, and disposal of asbestos containing material.

2. TRANSPORTATION OF ASBESTOS WASTE: Comply with Department of Transportation, Environmental Protection Agency, and State and Local requirements when transporting asbestos wastes.

3. CERTIFICATES OF DISPOSAL AND RECEIPTS: Obtain certificate of disposals for waste if the waste is a hazardous waste or receipts if the waste is a non-hazardous waste. Submit copies to the COR after completion and prior to submittal of final invoice.

SECTION 13.15--MATERIAL WITH LEAD-BASED PAINT

1. GENERAL: Comply with all applicable Federal, State and local regulations concerning work with lead-based paint, disposal of material painted with lead-based paint, and management of these material. OSHA and General Industry Standards apply to worker safety and right-to-know issues. Federal EPA and State agencies regulate waste disposal and air quality issues.

2. TRANSFER OF PROPERTY: If lead-based paint containing equipment or material is to be given away or sold for reuse, scrap, or reclaiming, a written notice shall be provided to the recipient of the material stating that the material contains lead-based paint and the Hazardous Waste regulations may apply to the waste or the paint in some circumstances. The new owner must also be notified that they may be responsible for compliance with OSHA requirements if the material is to be cut, sanded, abraded, or stripped of paint. Submit a copy of lead paint notices to the COR upon completion and prior to submittal of final invoice.

3. CERTIFICATES OF DISPOSAL AND RECEIPTS: Obtain certificate of disposals for waste if the waste is a hazardous waste or receipts if the waste is a non-hazardous waste. Submit copies to the COR after completion and prior to submittal of final invoice.

SECTION 13.16--PREVENTION OF WATER POLLUTION

1. GENERAL: Ensure that surface and ground water is protected from pollution caused by construction activities and comply with applicable regulations and requirements.

2. PERMITS: Ensure that:

   (1) Streams, and other waterways or courses are not obstructed or impaired, unless the appropriate Federal, State or local permits have been obtained;

   (2) A National Pollutant Discharge Elimination System (NPDES) Permit for the Prevention of Stormwater Pollution from Construction Projects is obtained if required by State or Federal regulation; and

   (3) A dewatering permit is obtained from the appropriate agency if required for construction dewatering activities.

   (4) Submit copies of any water pollution permits to the COR prior to work.

3. EXCAVATED MATERIAL AND OTHER CONTAMINANT SOURCES: Control runoff from excavated areas and piles of excavated material, construction material or wastes (to include truck washing and concrete wastes), and chemical products such as oil, grease, solvents, fuels, pesticides, and pole treatment compounds. Excavated material or other construction material shall not be stockpiled or deposited near or on streambanks, lake shorelines, ditches, irrigation canals, or other areas where run-off could impact the environment.

4. MANAGEMENT OF WASTE CEMENT OR WASHING OF CEMENT TRUCKS: Do not permit the washing of cement trucks or disposal of excess cement in any ditch, canal, stream, or other surface water. Cement wastes shall be disposed in accordance with all Federal, State, and local regulations. Cement wastes shall not be disposed on any Western property, right-of-way, or easement; nor on any streets, roads, or property without the owner's consent.

5. STREAM CROSSINGS: Crossing of any stream or other waterway shall be done in compliance with Federal, State, and local regulations. Crossing of some waterways may be prohibited by landowners, State or Federal agencies or require permits.

SECTION 13.17--TESTING, DRAINING, REMOVAL, AND DISPOSAL OF OIL-FILLED ELECTRICAL EQUIPMENT

1. SAMPLING AND TESTING OF INSULATING OIL FOR PCB CONTENT: Sample and analyze the oil of electrical equipment for PCB's. Use analytical methods approved by EPA and applicable State regulations. Decontaminate sampling equipment according to documented good laboratory practices (these can be contractor developed or EPA standards). Use only laboratories approved by Western. The COR will furnish a list of approved laboratories.

2. PCB TEST REPORT: Provide PCB test reports that contain the information below for disposing of oil-filled electrical equipment. Submit the PCB test report prior to draining, removal, or disposal of oil or oil-filled equipment that is designated for disposal.

   - Name and address of the laboratory
   - Description of the electrical equipment (e.g. transformer, breaker)
   - Serial number for the electrical equipment.
   - Date sampled
   - Date tested
   - PCB contents in parts per million (ppm)
   - Unique identification number of container into which the oil was drained (i.e., number of drum, tank, tanker, etc.)

3. OIL CONTAINING PCB: Comply with the Federal regulations pertaining to PCBs found at Title 40, Part 761 of the U.S. Code of Federal Regulations (40 CFR 761).

4. REMOVAL AND DISPOSAL OF INSULATING OIL AND OIL-FILLED ELECTRICAL EQUIPMENT: Once the PCB content of the oil has been identified from laboratory results, the oil shall be transported and disposed, recycled, or reprocessed according to 40 CFR 761 (if applicable), Resource Conservation and Recovery Act (RCRA) "used oil", and other applicable regulations. Used oil may be transported only by EPA-registered used oil transporters. The oil must be stored in containers that are labeled "Used Oil." Use only U.S. transporters and disposal sites approved by Western.

5. OIL AND OIL-FILLED ELECTRICAL EQUIPMENT RECEIPT: Obtain and submit a receipt for oil and oil-filled equipment transported and disposed, recycled, or reprocessed to the COR upon completion and prior to submittal of final invoice.

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.18--REMOVAL OF OIL-CONTAMINATED MATERIAL

1. GENERAL: Removing oil-contaminated material includes excavating, stockpiling, testing, transporting, cleaning, and disposing of these material. Personnel working with PCBs shall be trained in accordance with OSHA requirements. Submit employee training documentation records to the COR 14 days prior to the start of work.

2. CLEANUP WORK MANAGEMENT PLAN: Provide a Cleanup Work Management Plan that has been approved by applicable Federal, State, or Local environmental regulation agencies. Submit the plan to the COR for approval 14 days prior to the start of work. Approval of the plan is for the purpose of determining compliance with the specifications only and shall not relieve the Contractor of the responsibility for compliance with all Federal, State, and Local regulations. The plan shall address on-site excavation of contaminated soil and debris and include the following:

   - Identification of contaminants and areas to be excavated
   - Method of excavation
   - Level of personnel/subcontractor training
   - Safety and health provisions
   - Sampling requirements including quality control, laboratory to be used
   - Management of excavated soils and debris
   - Disposal methods, including transportation to disposal

3. EXCAVATION AND CLEANUP: Comply with the requirements of Title 40, Part 761 of the U.S. Code of Federal Regulations (40 CFR 761).

4. TEMPORARY STOCKPILING: Excavated material, temporarily stockpiled on site, shall be stored on heavy plastic and covered to prevent wind and rain erosion at a location designated by the COR.

5. SAMPLING AND TESTING: Sample contaminated debris and areas of excavation to ensure that contamination is removed. Use personnel with experience in sampling and, in particular, with experience in PCB cleanup if PCBs are involved. Use analytical methods approved by EPA and applicable State regulations.

6. TRANSPORTION AND DISPOSAL OF CONTAMINATED MATERIAL: The Contractor shall be responsible and liable for the proper loading, transportation, and disposal of contaminated material according to Federal, State, and local requirements. Use only U.S. transporters and disposal sites approved by Western.

7. POST CLEANUP REPORT: Provide a Post-Cleanup Report that describes the cleanup of contaminated soils and debris. Submit the report to the COR upon completion and prior to submittal of final invoice. The report shall contain the following information:

   - Site map showing the areas cleaned
   - Description of the operations involved in excavating, storing, sampling, and testing, and disposal
   - Sampling and analysis results including 1) Name and address of the laboratory, 2) sample locations, 3) sample dates, 4) analysis dates, 5) contents of contaminant (e.g. PCB or total petroleum hydrocarbons) in parts per million (ppm)
   - Certification by the Contractor that the cleanup requirements were met
   - Copies of any manifests, bills of lading, and disposal certificates
   - Copies of correspondence with regulatory agencies that support completion of the cleanup

STANDARD 13 - ENVIRONMENTAL QUALITY PROTECTION

SECTION 13.19—CONSERVATION OF NATURAL RESOURCES

1. GENERAL: Federal law prohibits the taking of endangered, threatened, proposed or candidate wildlife and plants, and destruction or adverse modification of designated Critical Habitat. Federal law also prohibits the taking of birds protected by the Migratory Bird Treaty Act. "Take" means to pursue, hunt, shoot, wound, kill, trap, capture or collect a protected animal or any part thereof, or attempt to do any of those things.

2. KNOWN OCCURRENCE OF PROTECTED SPECIES OR HABITAT: Following issuance of the notice to proceed, and prior to the start of construction, Western will provide training to all contractor and subcontractor personnel involved in the construction activity. Untrained personnel shall not be allowed in the construction area. Western shall provide two sets of plan and profile drawings showing sensitive areas located on or immediately adjacent to the transmission line right-of-way and/or facility. These areas shall be considered avoidance areas. Prior to any construction activity, the avoidance areas shall be marked on the ground in a manner approved by the COR. If access is absolutely necessary, first obtain permission from the COR, noting that a Western and/or other government or tribal agency biologist may be required to accompany personnel and equipment. Ground markings shall be maintained through the duration of the contract. Western will remove the markings during or following final inspection of the project.

3. UNKNOWN OCCURRENCE OF PROTECTED SPECIES OR HABITAT: If evidence of a protected species is found in the project area, the contractor shall immediately notify the COR and provide the location and nature of the findings. The contractor shall stop all activity in the vicinity of the protected species or habitat and not proceed until directed to do so by the COR.

4. CONTRACT ADJUSTMENTS: Where appropriate by reason of delays caused by a discovery, the Contracting Officer may make adjustments to contract requirements.

Western's Standard Mitigation Measures for Construction, Operation, and Maintenance of Transmission Lines

Mitigation

Measure

1. The contractor shall limit the movement of its crews and equipment to the right-of-way (ROW), including access routes. The contractor shall limit movement on the ROW so as to minimize damage to grazing land, crops, or property, and shall avoid marring the land.

2. When weather and ground conditions permit, the contractor shall obliterate all contractor-caused deep ruts that are hazardous to farming operations and to movement of equipment. Such ruts shall be leveled, filled, and graded, or otherwise eliminated in an approved manner. In hay meadows, alfalfa fields, pastures, and cultivated productive lands, ruts, scars, and compacted soils shall have the soil loosened and leveled by scarifying, harrowing, discing, or other approved methods. Damage to ditches, tile drains, terraces, roads, and other features of the land shall be corrected. Before final acceptance of the work in these agricultural areas, all ruts shall be obliterated, and all trails and areas that are hard-packed as a result of contractor operations shall be loosened, leveled, and reseeded. The land and facilities shall be restored as nearly as practicable to their original conditions.

3. Water bars or small terraces shall be constructed across all ROW and access roads on hillsides to prevent water erosion and to facilitate natural revegetation.

4. The contractor shall comply with all Federal, State, and local environmental laws, orders, and regulations. Prior to construction, all supervisory construction personnel and heavy equipment operators will be instructed on the protection of cultural and ecological resources.

5. The contractor shall exercise care to preserve the natural landscape and shall conduct its construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's construction operations and equipment. The edges of clearings and cuts through tree, shrubbery, or other vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Where such clearing occurs in the Lake Mead National Recreation Area, the contractor shall consult with the on-site Park Representative.

6. On completion of the work, all work areas except access roads shall be scarified or left in a condition which will facilitate natural revegetation, provide for proper drainage, and prevent erosion. All destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired by the contractor.

7. Construction staging areas shall be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. On abandonment, all storage and construction

buildings, including concrete footings and slabs, and all construction materials and debris shall be removed from the site. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural revegetation, provide for proper drainage, and prevent erosion.

8. Borrow pits shall be excavated so that water will not collect and stand therein. Before being abandoned, the sides of borrow pits shall be brought to stable slopes, with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area giving a natural appearance. Waste piles shall be shaped to provide a natural appearance.

9. Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter contaminants, debris, any other objectionable pollutants and wastes into streams, flowing or dry watercourses, lakes, and underground water sources. Such pollutants and waste include, but are not restricted to refuse, garbage, cement, concrete, sanitary waste, industrial waste, radioactive substances, oil and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.

10. Dewatering work for structure foundations or earthwork operations adjacent to, or encroaching on, streams or watercourses, shall be conducted in a manner to prevent muddy water and eroded materials from entering the streams or watercourses by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.

11. Excavated material or other construction materials shall not be stockpiled or deposited near or on stream banks, lake shorelines, or other watercourse perimeters where they can be wasted away by high water or storm runoff or can in any way encroach upon the actual watercourse itself.

12. Waste waters from concrete batching, or other construction operations shall not enter streams, watercourses, or other surface waters without the use of such turbidity control methods as settling ponds, gravel-filter entrapment dikes, approved flocculating processes that are not harmful to fish, recirculation systems for washing of aggregates, or other approved methods. Any such waste waters discharged into surface waters shall be essentially free of settleable material. For the purpose of these specifications, settleable material as defined as that material which will settle from the water by gravity during a 1-hour quiescent detention period.

13. The contractor shall utilize such practicable methods and devices as are reasonably available to control, present, and otherwise minimize atmospheric emissions or discharges of air contaminants.

14. The emission of dust into the atmosphere will not be permitted during the manufacture, handling, and storage of concrete aggregate, and the contractor shall use such methods and equipment as necessary for the collection and disposal, or prevention, of dust during these operations. The contractor's methods of storing and handling cement and pozzolans shall also include means of eliminating atmospheric discharges of dust.

15. Equipment and vehicles that show excessive emissions of exhaust gases due to poor engine adjustments, or other inefficient operating conditions, shall not be operated until repairs or adjustments are made.

16. The contractor shall prevent any nuisance to persons or damage to crops, cultivated fields, and dwellings from dust originating from his operations. Oil and other petroleum derivatives shall not be used for dust control. Speed limits shall be enforced, based on road conditions, to reduce dust problems.

17. To avoid nuisance conditions due to construction noise, all internal combustion engines used in connection with construction activity shall be fitted with an approved muffler and spark arrester.

18. Burning or burying waste materials on the ROW or at the construction site will be permitted if allowed by local regulations. The contractor shall remove all other waste materials from the construction area. All materials resulting from the contractor's clearing operations shall be removed from the ROW.

19. The contractor shall make all necessary provisions in conformance with safety requirements for maintaining the flow of public traffic and shall conduct its construction operations to offer the least possible obstruction and inconvenience to public traffic.

20. Western will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing a ROW, to the mutual satisfaction to the parties involved.

21. Structures will be carefully located to avoid sensitive vegetative conditions, including wetlands, where practical.

22. ROW will be located to avoid sensitive vegetation conditions including wetlands where practical, or, if they are linear to cross them at the least sensitive feasible point.

23. Removal of vegetation will be minimized to avoid creating a swath along the ROW.

24. Topsoil will be removed, stockpiled, and respread at all heavily disturbed areas not needed for maintenance access.

25. All disturbed areas not needed for maintenance access will be reseeded using mixes approved by the landowner or land management agency.

26. Erosion control measures will be implemented on disturbed areas, including areas that must be used for maintenance operations (access ways and areas around structures).

27. The minimum area will be used for access ways (12 feet to 15 feet wide, except where roadless construction is used).

28. Structures will be located and designed to conform with the terrain. Leveling and benching of the structure sites will be the minimum necessary to allow structure assembly and erection.

29. ROW will be located to utilize the least steep terrain and, therefore, to disturb the smallest area feasible.

30. Careful structure location will ensure spanning of narrow flood prone areas.

31. Structures will not be sited on any potentially active faults.

32. Structure sites and other disturbed areas will be located at least 300 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs.

33. New access ways will be located at least 300 feet, where practical, from rivers, ponds, lakes, and reservoirs.

34. At crossings of perennial streams by new access ways, culverts of adequate size to accommodate the estimated peak flow of the stream will be installed. Construction areas will minimize disturbance of the stream banks and beds during construction. The mitigation measures listed for soil/vegetation resources will be performed on areas disturbed during culvert construction.

35. If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts will be installed using the same measures as for culverts on perennial streams.

36. Blasting will not be allowed.

37. Power line structures will be located, where practical, to span small occurrences of sensitive land uses, such as cultivated areas. Where practicable, construction access ways will be located to avoid sensitive conditions.

38. ROW will be purchased at fair market value and payment will be made of full value for crop damages or other property damage during construction or maintenance.

39. The Power line will be designed to minimize noise and other effects from energized conductors.

40. The precise location of all structure sites, ROW, and other disturbed areas will be determined in cooperation with landowners or land management agencies.

41. Crossing of operating railroads by construction vehicles or equipment in a manner that would cause delays to railroad operations will be avoided. Construction will be coordinated with railroad operators. Conductors and overhead wire string operations would use guard structures to eliminate delays.

42. Before construction, Western will perform a Class III (100 percent of surface) cultural survey on all areas to be disturbed, including structure sites and new access ways. These surveys will be coordinated with the appropriate land owner or land management agency. A product of the survey will be a Cultural Resources Report recording findings and suggesting mitigation measures. These findings will be reviewed with the State Historic Preservation Offices and other appropriate agencies, and specific mitigation measures necessary for each site or resource will be determined. Mitigation may include careful relocation of access ways, structure sites, and other disturbed areas to avoid cultural sites that should not be disturbed, or data recovery.

43. The contractor will be informed of the need to cease work in the location if cultural resource items are discovered.

44. Construction activities will be monitored or sites flagged to prevent inadvertent destruction of any cultural resource for which the agreed mitigation was avoidance.

45. Construction crews will be monitored to the extent possible to prevent vandalism or unauthorized removal or disturbance of cultural artifacts or materials from sites where the agreed mitigation was avoidance.

46. Should any cultural resources that were not discovered during the Class III Survey be encountered during construction, ground disturbance activities at that location will be suspended until the provisions of the National Historic Preservation Act and enabling legislation have been carried out.

47. Construction activities will be monitored or significant locations flagged to prevent inadvertent destruction of any paleontological resource for which the agreed mitigation was avoidance.

48. Clearing for the access road will be limited to only those trees necessary to permit the passage of equipment.

49. The access road will follow the lay of the land rather than a straight line along the ROW where steep features would result in a higher disturbance.

9.0 APPENDIX C – SCOPING EFFORT

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Department of Energy
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AZ 85005-6457

November 13, 2009

Mr. Richard Gilbert
Manager
Bill Williams River National Wildlife Refuge
60911 N. Highway 95
Parker, AZ 85344-9528

RE: Parker – Planet Tap 69-kV Transmission Line Rebuild, Upgrade, and Realty Action
DOE/EA 1685

Dear Mr. Gilbert:

The U.S. Department of Energy's Western Area Power Administration (Western), in association with Arizona Public Service, proposes to rebuild, and upgrade the existing Parker – Planet Tap 69-kV Transmission Line as well as perfect its right-of-way (ROW) documentation. It is located near Parker Dam within San Bernardino County, California; La Paz County and Mohave County, Arizona. This line, built with wooden structures in 1947, has deteriorated and cracked due to age and weathering causing frequent maintenance service, requires electrical equipment improvements, and lacks passable access roads to many structures. The portion from the Parker Dam Switchyard to Buckskin Tap was rebuilt prior to the discovery that the right-of-way had lapsed. The Proposed Action would improve the reliability of electrical service to customers in the Parker, Arizona area.

The Parker-Planet Tap 69-kV Transmission Line alignment crosses U.S. Bureau of Land Management (BLM) Lake Havasu Field Office, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service Bill Williams River National Wildlife Refuge, Arizona State Land Department, Western, and private lands. The existing ROW consists of a 100-foot-wide ROW for the transmission line and a 50 foot wide ROW for access roads.

The major scope of work for this project consists of the following items:

- Removal of existing wooden H-frame structures and single circuit conductors.
- Erection of new steel monopole or H-frame structures and turning structures.
- Installation of a combination of single and double circuit 69-kV conductors.
- String an overhead fiber optic or static ground wire or some combination.
- Re-routing approximately one mile of the transmission line away from riparian habitat located in the Bill Williams River National Wildlife Refuge.
- Re-routing approximately a quarter mile of the transmission line as it approaches the Parker Dam Switchyard to avoid other transmission lines.
- Improvements to existing access roads, as required, to allow vehicle and equipment access to new or existing structures.
- Construction of new spur roads to new or existing structures.

As part of the project tasks, Western will address the following highlighted issues:

- **Real Property**: Western plans to apply for, and BLM plans to issue, a new ROW grant for this existing line across federal lands, because the old ROW grant expired. Western will submit an updated right-of-way application to BLM.
- **Cultural Resource Inventory**: Western has contracted to have a Class III archaeological survey conducted for the selected route. Western will consult with the State Historic Preservation Offices for both Arizona and California regarding this project.
- **Biological Resources**: Western has contracted to prepare a biological study for the for the selected route. Western will evaluate the habitat, threatened and endangered species, and sensitive species that may be impacted by the project.
- **National Environmental Policy Act (NEPA):** Western, at the request of the BLM, will prepare an Environmental Assessment (EA) to evaluate project-related impacts to resources in the area. The EA will evaluate the preferred alternative and the "No Build" alternative for the planned transmission line and access road improvements. The BLM as a cooperating agency would issue a Documentation of NEPA adequacy if they were to adopt the EA.

Based on the completion of the NEPA EA and property issues to the satisfaction of the stakeholders, the upgrade of the transmission line and improvements to the switchyards are anticipated to be complete by the summer of 2011.

This letter serves as our agency's invitation to review the project based upon the scope of work outlined above. If you have any specific concerns or suggestions pertaining to this specific project, please let us know. Please address your comments or concerns to Greg Wold via mail at AZTEC, 4561 E. McDowell Road, Phoenix, AZ 85008; via e-mail at gwold@aztec.us; via phone at 602.458.7481, or via fax at 602.454.0403. Please submit your comments by **December 14, 2009**.

Thank you for your time and Western appreciates your continued assistance. If you have any questions, please contact Mr. Matthew Bilsbarrow at 602.605.2536, or Mr. Greg Wold at 602.458.7481.

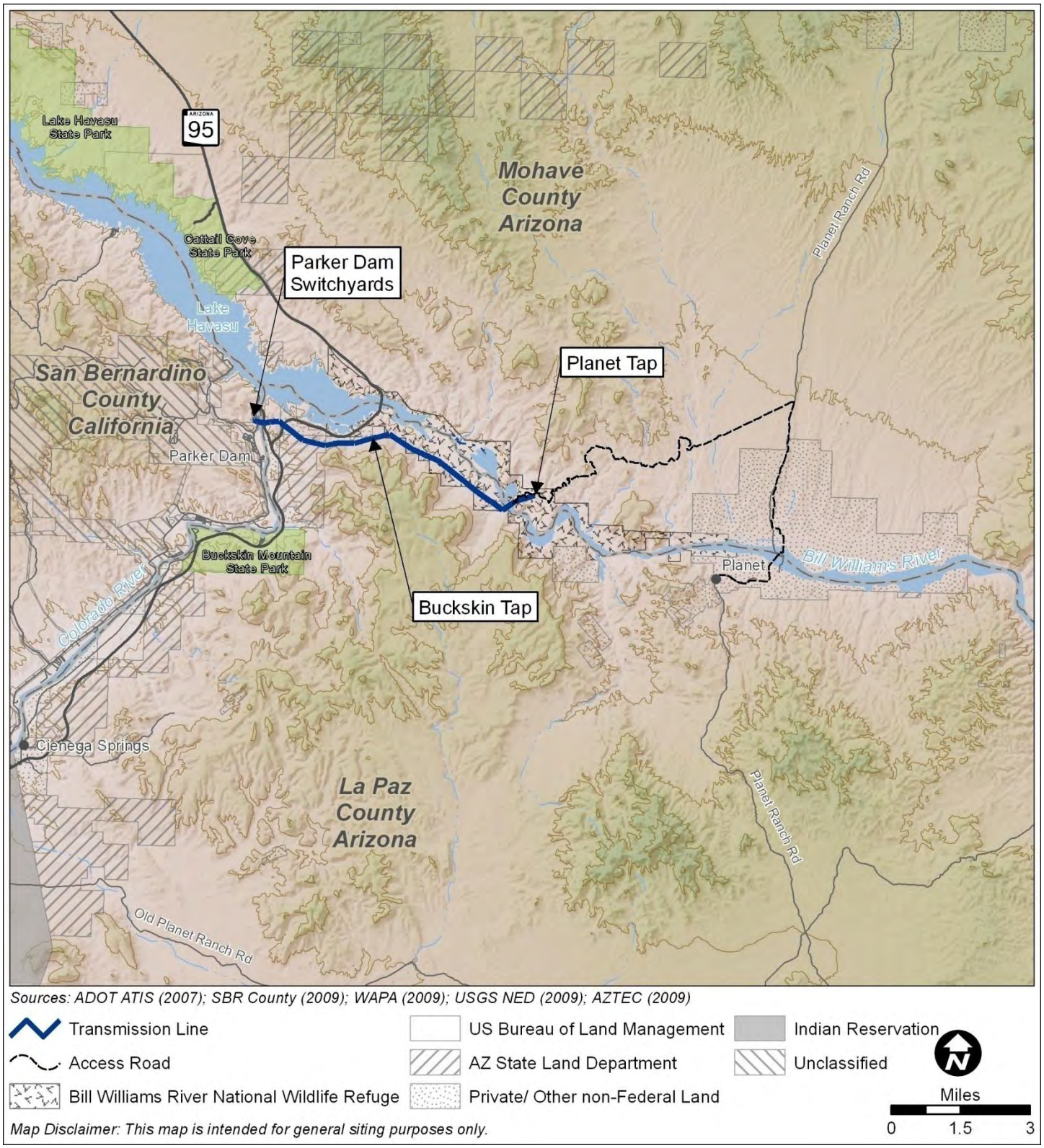
Sincerely,

John R. Holt
Environmental Manager

Attachments: Figure 1 – Location Map
Figure 2 – Project Vicinity Map

c: Mr. Todd Rhoades, Western
Mr. Matthew Bilsbarrow, Western
Ms. Ramon McCoy, BLM

Parker–Planet Tap 69 kV Transmission Line Rebuild, Upgrade and Realty Action



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Combined Scoping List				
Title	**First Name**	**Last Name**	**Position**	**Company**
Notification Agencies				
Ms.	Sandy	Pierce	District 1 Supervisor	La Paz County
Ms.	Donna J.	Hale	County Clerk	La Paz County
Mr.	Scott	Bernhart	Community Development Director	La Paz County
Mr.	Thomas	Simmons	Public Works Director	La Paz County
Ms.	Joan-Marie	King	Planning & Zoning	La Paz County
Ms.	Janice	Shelton	Superintendent of Schools	La Paz County Schools
Mr.	Don	Lowery	Sheriff	La Paz County Sheriff's Office
Mr.	Buster D.	Johnson	District 3 Supervisor	Mohave County
Mr.	Ron	Walker	County Manager	Mohave County
Mr.	Michael P.	Hendrix, PE	Public Works Director	Mohave County
Ms.	Susie	Parel-Duranceau	Community & Economic Director	Mohave County
Ms.	Christine	Ballard	Planning and Zoning Director	Mohave County
Mr.	Michael D.	File	Superintendent of Schools	Mohave County Schools
Mr.	Tom	Sheahan	Sheriff	Mohave County Sheriff's Office
Mr.	Brad	Mitzelfelt	District 1 Supervisor	San Bernardino County
Ms.	Laura	Welch	County Clerk	San Bernardino County
Mr.	Mitch	Slagerman	Community Development Director	San Bernardino County
Mr.	Granville	Bownman	Public Works Director	San Bernardino County
Mr.	Pat	Dennen	Fire Chief	San Bernardino County
Mr.	Kevin	Blakeslee	Deputy Director	San Bernardino County Flood Control
Mr.	Dawn	Benton, Jr.	Chairperson	San Bernardino County Flood Control Zone 6
Mr.	Rod	Hoops	Sheriff	San Bernardino County
Mr.	Gary	Thomas	Superintendent of Schools	San Bernardino County
Mr.	Steve	Madoneczky	Mayor	Town of Parker
Ms.	Lori	Wedemeyer	Town Manager	Town of Parker
Ms.	Candy	Cockrell	Town Clerk	Town of Parker

Title	First Name	Last Name	Position	Company
Mr.	Rod	Mendoza	Chief of Police	Town of Parker
Mr.	Larry	Starr	Fire Chief	Town of Parker
Mr.	Guy	Gorman	Planning & Community Development Director	Town of Parker
Ms.	Maria	Baier	State Land Commissioner	Arizona State Land Department
Mr.	Ruben	Ojeda	Right of Way Manager	Arizona State Land Department
Mr.	Larry	Parks	Lieutenant	Arizona Department of Public Safety
Mr.	Jack G.	Lane	Chief	Arizona Department of Public Safety, Highway Patrol Division
Mr.	Paul	Patane	District Engineer	Arizona Department of Transportation Yuma District
Mr.	Eldred	Enas	Chair	Colorado River Indian Tribes
Mr.	Tim	Williams	Chair	Fort Mojave Tribe
Sir or Madam			Chairperson	Hopi Tribe
Mr.	Ernest	Jones Sr.	President	Yavapai-Prescott Indian Tribe
Mr.	Charles	Wood	Chairperson	Chemehuevi Tribe
Mr.	Richard	Gilbert	Manager	Bill Williams River National Wildlife Refuge
Mr.	Mark	Slaughter	Natural Resource Specialist	Bureau of Reclamation
Cooperating Agencies				
Mr.	Richard	Gilbert	Manager	Bill Williams River National Wildlife Refuge
Ms.	Marjorie	Blaine	LA District Regulator	US Army Corps of Engineers
Ms.	Ramone	McCoy	Field Manager	BLM, Lake Havasu Field Office
Ms.	Becky	Heich	District Manager	BLM, Lake Havasu Field Office
Ms.	Patricia	Taylor	Assistant Field Manager	BLM, Lake Havasu Field Office
Mr.	Joe	Liebhauser	Director of Resource Management Office	Bureau of Reclamation
Conservation Organizations				
Mr.	Jay	Lininger		Center for Biological Diversity
Ms.	Janice	Przybyl		Sky Island Alliance

PROOF OF PUBLICATION

(2015.5 C.C.P.)

This Space is for the County Clerk's Filling Stamp

STATE OF CALIFORNIA,

COUNTY OF RIVERSIDE

I am a citizen of the United States and a resident of the County Aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of the

Palo Verde Valley Times

a newspaper of general circulation, printed

and published **BI-WEEKLY**

in the **CITY OF BLYTHE**

COUNTY OF RIVERSIDE, and which newspaper has been adjudged a newspaper of general circulation by the Superior

Court of the COUNTY OF RIVERSIDE,

State of California, under the date of JUNE 20, 1952, CASE NUMBER 54744; that the notice, of which the annexed has a printed copy (set in type not smaller than nonpareil) has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

Pub.: DECEMBER 2, 2009

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

DATED AT BLYTHE, CALIFORNIA

DECEMBER 3, 2009

Signature

PROOF OF PUBLICATION

PUBLIC ANNOUNCEMENT

AZTEC

TEARSHEET ATTACHED

Palo Verde Valley Times

153 S. Broadway, Blythe, California 92225

AFFIDAVIT OF PUBLICATION

STATE OF ARIZONA

COUNTY OF LA PAZ, ss

Tina Parriera
of said county, being duly sworn, deposes and says: that he/she is and at all times herein mentioned was a citizen of the United States, over the age of twenty-one years, and is competent to be a witness on the trial of the above entitled action, and that he/she is not a party to, nor interested in the above entitled matter.

That he/she is the Authorized Agent for the:

PARKER PIONEER
(published weekly) and which is a weekly newspaper of general circulation, published and circulated in the said County of La Paz, and is published for the dissemination of local news and intelligence of a general character, and has a bona fide subscription list of paying subscribers, and said newspaper has been established and published in the City of Parker, County of La Paz, State of Arizona, for at least one year before the publication of the first insertion of this notice and said newspaper is not devoted to the interests of, or published for the entertainment of any particular class, professions, trade, calling, race or denomination, or any number thereof.

PUBLIC ANNOUNCEMENT

of which the annexed is a printed copy, was published in said newspaper at 1 time(s), commencing on the 2nd day of December, 2009 and ending on the 2nd of December, 2009 all above days inclusive, and in the regular and entire issue of said newspaper proper, and not in a supplement and said notice was published therein on the following dates, to-wit:

December 2, 2009

Subscribed and sworn to before me the 2nd day of December, 2009.

Notary Public in and for the county of La Paz, State of Arizona

December 10, 2010
My Commission Expires:

LISA MONROE
Notary Public - Arizona
Mohave County
My Comm. Expires Dec 10, 2010

Notice of Proof of Publication

STATE OF ARIZONA

COUNTY OF MOHAVE, ss

Tina Parriera,
being duly sworn, says that during the publication of the notice, as herein mentioned, she was and now is an Authorized Agent of **Today's News-Herald**, a seven-times weekly newspaper published on Sunday, Monday, Tuesday, Wednesday, Thursday, Friday and Saturday of each and every week at the City of Lake Havasu City, in Mohave County, State of Arizona. That said newspaper was printed and published as aforesaid on the following dates, to-wit:

PUBLIC ANNOUNCEMENT

Published date(s):

December 2, 2009

of which the annexed copy is a printed and true copy, was printed and inserted in each and every copy of said newspaper, printed and published on the dates aforesaid, and in the body of said newspaper and not in a supplement there. Subscribed and sworn to before me this 2nd day of December, 2009.

Notary Public

December 10, 2010
My Commission Expires

LISA MONROE
Notary Public - Arizona
Mohave County
My Comm. Expires Dec 10, 2010

AFFIDAVIT OF PUBLICATION

Kingman Daily Miner

3015 Stockton Hill Road, Kingman, AZ 86401
web: www.kingmandailyminer.com · e-mail: legals@kingmandailyminer.com
Phone (928) 753-6397, ext. 242 · Fax (928) 753-5661
"Serving Kingman since 1882"

STATE OF ARIZONA)
County of Mohave) ss.

I, **Melinda Mauser**, being first duly sworn on her oath says:
That she is the Legals Clerk of THE KINGMAN DAILY MINER
An Arizona corporation, which owns and publishes the Miner,
a Daily Newspaper published in the City of Kingman, County of Mohave,
Arizona, that the notice attached hereto, namely,

Public Announcement
K0044359

Has, to the personal knowledge of affiant, **4th** day of **December, 2009**
to the **4th** day of **December, 2009** inclusive without change, interruption
or omission, amounting in **1** insertions, made of the following dates;
12/4/2009

By: _____
Legal Clerk, **4th** Day of **December, 2009**

State of Arizona

County of Mohave

On this 4 day of December, 2009

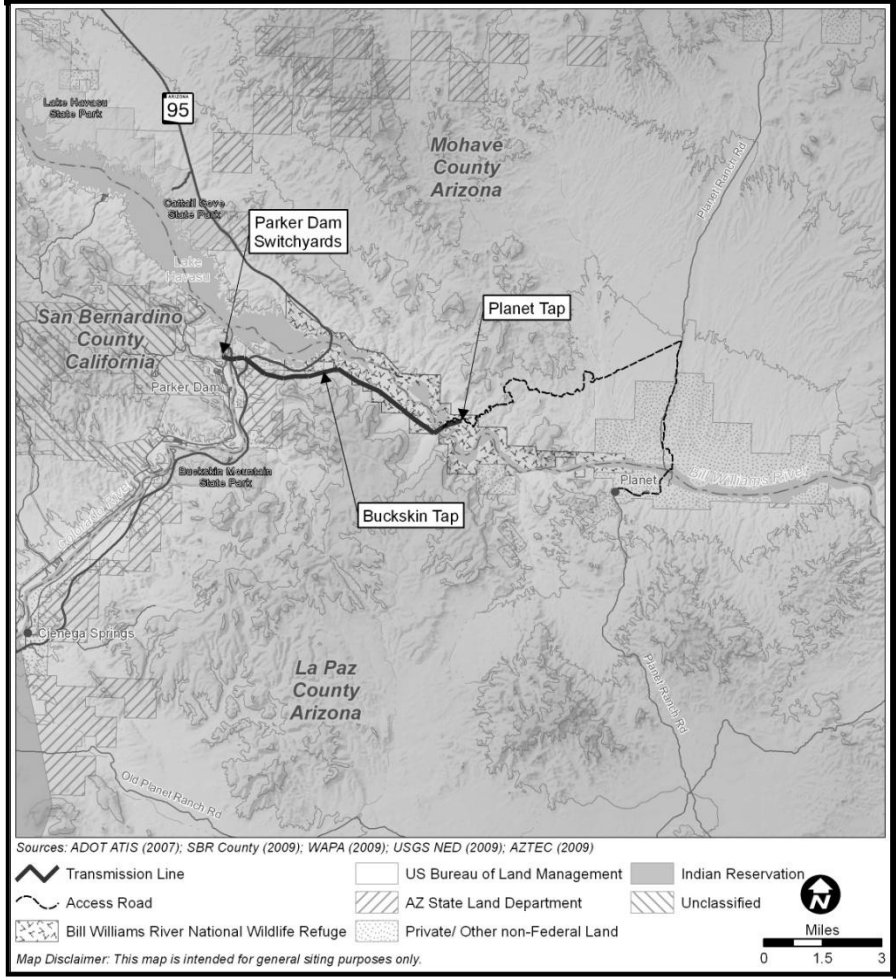
Legal Clerk, whom I know personally to be
the person who signed the above document
and she proved she signed it.

_____
Notary Public
My Commission Expires August 9, 2011

OFFICIAL SEAL
COLLEEN A. MACHADO
NOTARY PUBLIC - State of Arizona
MOHAVE COUNTY
My Comm. Expires Aug. 9, 2011

PUBLIC ANNOUNCEMENT

Parker – Planet Tap 69-kV Transmission Line Rebuild, Upgrade, and Realty Action



U.S. Department of Energy's Western Area Power Administration (Western), in cooperation with the U.S. Bureau of Land Management, is preparing an environmental assessment (EA) detailing the proposed rebuilding and improvements to the existing 7.1-mile long, Parker – Planet Tap 69-kV transmission line located near Parker Dam within San Bernardino County, California; and La Paz and Mohave Counties, Arizona. This line was built around 1947 and has deteriorated due to aging and weathering. The transmission line requires frequent maintenance, electrical improvements, and lacks access roads to structures. The project would improve the reliability of electrical service to customers in the Parker, Arizona area.

Western in conjunction with Arizona Public Service proposes to rebuild the line with steel monopoles or H-frames instead of the existing wooden H-frame structures, install two power lines on some portions, and re-route a small segment of the line to minimize impacts of future maintenance activities to riparian vegetation located within the Bill Williams River National Wildlife Refuge. Western also plans improvements to existing access roads, as required, for vehicles and equipment to access the new or existing structures. Western plans to re-apply for this existing transmission line's right-of-way, which was inadvertently closed.

The project would involve the Colorado and Bill Williams Rivers and their associated floodplains and ephemeral washes in the project area. Floodplains will be analyzed and the findings documented in the EA.

If you are interested in learning more about the project or would like a copy of the EA, contact Mr. Matthew Bilsbarrow at 602.605.2536 or e-mail at bilsbarrow@wapa.gov by **January 4, 2010.** Western plans to issue an EA in March, 2010 for a 2-week pre-approval review.

10.0 APPENDIX D – PHASE I SUPPORTING DOCUMENTS

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WAPA F 1400.59#
(7-91)

United States Government **Department of Energy**

memorandum

Western Area Power Administration

DATE: OCT 30 2008

REPLY TO ATTN OF: G0420 (Bilsbarrow)

SUBJECT: Categorical Exclusion for the Parker Dam Buckskin Tap 69-kV Transmission Line Rebuild and Upgrade Project in San Bernardino County, California and La Paz County, Arizona.

TO: J. Holt, G0400, Phoenix, AZ

Western has determined that the Parker Dam Buckskin Tap 69-kV Transmission Line Rebuild and Upgrade Project in San Bernardino County, California and La Paz County, Arizona will have no adverse affect and should not be considered a major Federal action. Attached is a copy of the completed Categorical Exclusion.

John R. Holt
Environmental Manager

attachment

cc: (w/ attachment)

J. Bridges, A7400, Lakewood, CO
M. Schriner, A7400, Lakewood, CO

G0420 (Bilsbarrow) 2 copies
G5605 (Cristelli)
G5636 (Rhoades)

FILE: 5440.04 PAD BUK TL

RECORD OF CATEGORICAL EXCLUSION DETERMINATION

A. **Proposed Action:** Western Area Power Administration (Western) plans to rebuild and upgrade the existing 2.6-mile-long Parker Dam - Buckskin Tap 69-kV Transmission Line mostly within the existing 100-foot-wide right-of-way in order to maintain and improve the reliability of electrical service to our customers located along the Lower Colorado River. A 0.25-mile-long section located in California will be placed in a new location on Western-owned land. Rebuilding entails replacing wooden H-frame structures with steel monopoles within the right-of-way, although not necessary using the same pole locations. It also includes blading new and existing access roads within the transmission line right-of-way or established 50-foot-wide road rights-of-ways. Upgrading involves replacing the existing conductors with more efficient ones and adding a second circuit (i.e., a second set of three conductors) to the new pole structures. It also includes adding a protective lightning arrest wire, which may substituted by a fiber optic line used for electrical utility communication purposes only. At present, this line exceeds its designed lifespan (50 years), requires above-average operation and maintenance efforts, and lacks capacity and reliability to meet present and future demands.

We anticipate using a helicopter as well as dozers, graders, backhoes, tractors, bucket trucks, augers, cranes, trailer-mounted cranes, hydraulic cranes, 50 to 10-ton capacity cranes, concrete trucks, dump trucks, trailer-trucks, crew trucks, compressors, air compressors, hydro lifts, pullers, tensioners, and reel-stringing trailers to accomplish the work. Construction is scheduled to begin November 1, 2008 and end by May 1, 2009 if not sooner near Buckskin Tap area and in the staging area and by May 15, 2009 in the Parker Dam area.

The attached map shows the project area location. The corresponding U.S.G.S. topographic maps are Gene Wash and Monkeys Head. The line crosses through portions of Sections 3 and 4 in Township 2 North, Range 27 East on the San Bernardino Baseline and Meridian; and Sections 15, 16, 22, 23 and 24 in Township 11 North, Range 18 West on the Gila and Salt River Baseline and Meridian.

The following project components occur in California:

- Constructing a new, 1150-foot-long (5 structures), 69-kV transmission line located 300 feet south of the existing transmission line in order to make connections in the switchyard, safely pass under existing transmission lines, and cross rough terrain;
- Removing the existing 800-foot-long (2 structures), 69-kV transmission line between the Parker Dam 69-kV Switchyard and the Colorado River;

- Building ca. 500 feet of new access roads between the existing Lower 230-kV Switchyard and the existing 69-kV Switchyard in order to reach new structure locations;

The components located in California occur on Western-owned land. The land for one structure is currently California State Lands, and Western is in the process of acquiring it through condemnation. In California, the project's ground disturbance covers 9.5 acres.

The following project components occur in Arizona:

- Rebuilding the existing 2.5-mile-long (ca. 34 structures) 69-kV transmission within the existing right-of-way between the Colorado River and Buckskin Tap;
- Re-blading and widening existing gravel transmission line access roads and adding culverts where necessary in order to create a passable route for construction vehicles and equipment. The existing access road wanders in and out of the existing transmission line right-of-way;
- Building new spur access roads from either an existing access road or the nearest road to either a new pole location or an isolated portion of an existing access road; Locally available rock materials will be used for the road bed.
- Use of a 2.45-acre staging area located situated in the Bill Williams River National Wildlife Refuge adjacent to an existing maintained gravel road.

The components situated in Arizona occur on U.S. Fish and Wildlife Service (2.4 acres), U.S. Bureau of Land Management (77.3 acres), Arizona State Land Department (23.7 acres) and private (25.1 acres) lands. In Arizona, the project's ground disturbance covers 128.5 acres.

B. Categorical Exclusion Applied: 10 CFR, Part 1021, Subpart D, Appendix B, B4.12: "Construction of electric powerlines approximately 10 miles in length or less that are not for the integration of major new generation resources into a main transmission system."

C. Regulatory Requirements in 10 CFR 1021.410 (b):

1. The proposed action fits within a class of actions that is listed in Appendix B to Subpart D.

   a. The proposed action was reviewed for the requirements of the Endangered Species Act, the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and all applicable Department of Energy Orders.

   b. The proposed action does not require the siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities.

c. The proposed action does not disturb hazardous substances, pollutants, contaminates, or CERLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled and unpermitted releases.

d. The proposed action was reviewed and surveyed for impacts to cultural and sensitive biological resources. Cultural and sensitive biological resources have been determined to not be affected.

2. There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and

3. The proposal is not "connected" to other actions with potentially significant impacts, is not related to other proposed actions with cumulatively significant impacts, and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

D. Determination: Based on my review of information conveyed to me and in my possession (or attached) concerning the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1A), I have determined that the proposed action fits within the specified class of actions, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

E. Special Conditions:

1. Follow the conservation measures presented in Pages 16-18 of the *Draft Biological Assessment: Western's Parker to Buckskin Tap 69-kV Transmission Line Rebuild and Upgrade Project San Bernardino County California, and La Paz County, Arizona* prepared by Transcon and dated September 2008. Four of the measures are highlighted below with adjustments in brackets.
   a. A pre-construction survey for desert tortoises will be conducted, one day prior to the start of ground-disturbing construction activities [located outside the switchyard fence in California].
   b. If a desert tortoise is observed in the project area all work shall cease in the immediate area, the project biologist, the Regional Environmental Manager and the Contracting Officer Representative notified.
   c. Construction will occur during the fall and winter (10/1 to 4/30) to avoid impacts to migratory birds [in the Bill Williams River Wildlife Refuge and near suitable habitat for the Yuma clapper rail, cuckoo, southwest willow flycatcher].
   d. Helicopter use in the Bill William Wildlife Refuge between 3/1 and 7/31 must be coordinated with the Refuge staff to ensure that flight paths avoid breeding area associated with the Yuma Clapper Rail.

2. Follow the conditions of the project's Clean Water Act Nationwide Permit #12 documentation presented in *Parker-Planet Tap 69-kV Transmission Line Project: Documentation Supporting Compliance with the Clean Water Act* dated October 30, 2008 and a letter from Marjorie Blaine to John Holt dated September 16, 2008 regarding the Colorado River crossing.

John R. Holt
NEPA Compliance Officer

10/30/08
Date

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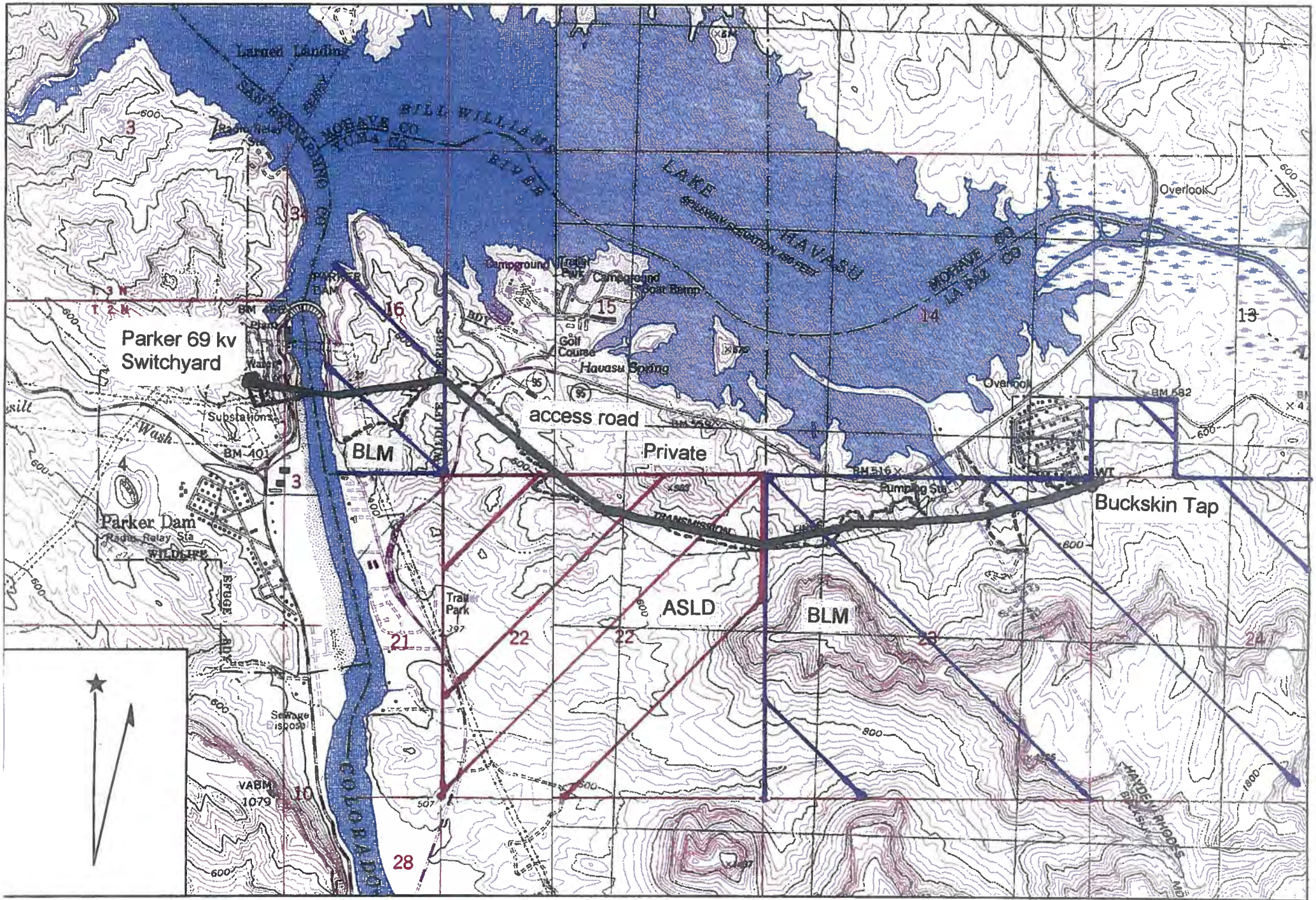
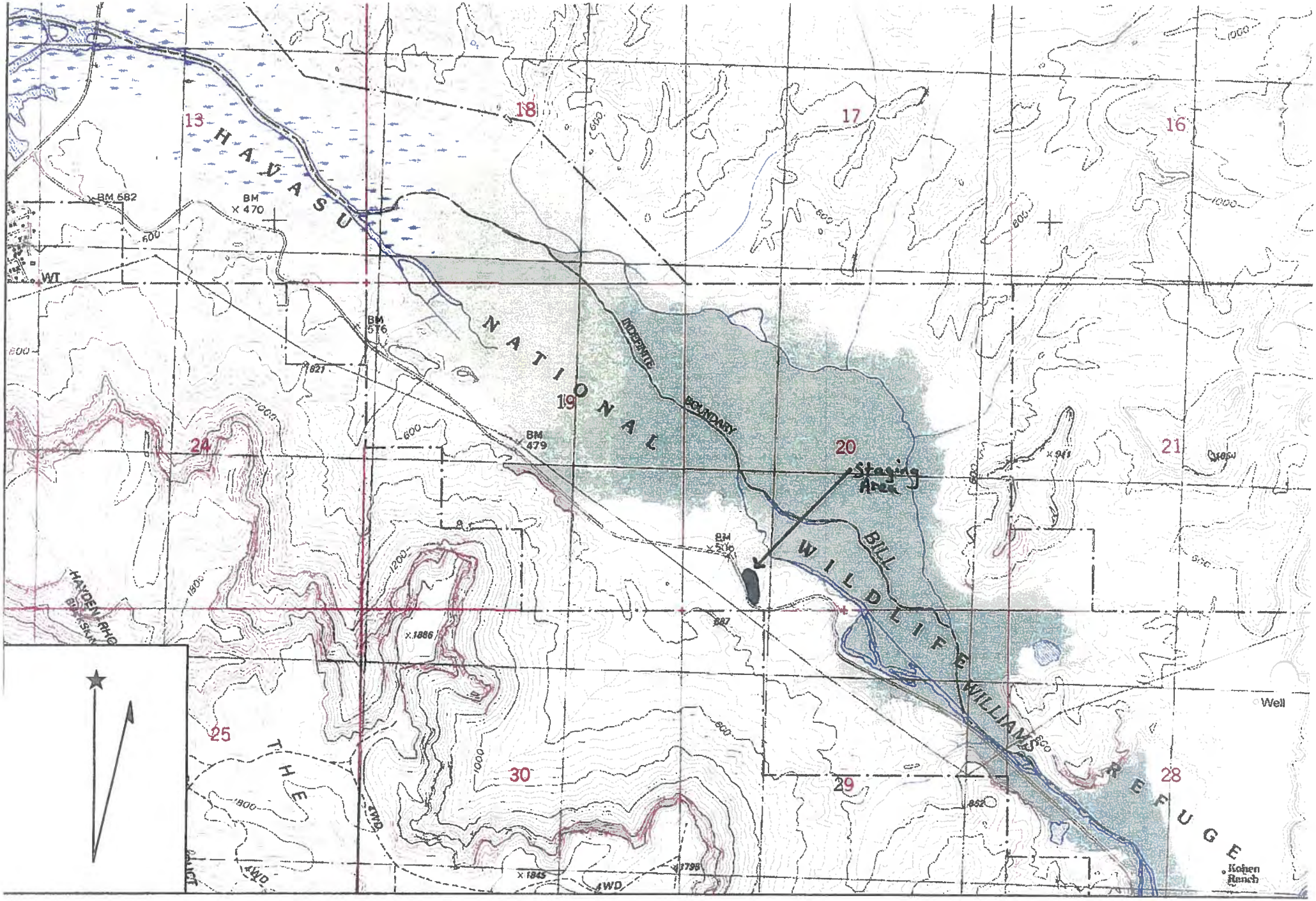


Name: MONKEYS HEAD
Date: 7/16/2007
Scale: 1 inch equals 2000 feet

Location: 11 0765145 E 3797876 N
Caption: Parker to Buckskin Tap
69 kV Transmission Line



Name: MONKEYS HEAD
Date: 7/30/2007
Scale: 1 inch equals 2000 feet

Location: 11 0770411 E 3797106 N
Caption: Buckskin Tap to Planet Tap
69 kV Transmission Line

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

September 29, 2008

In Reply Refer To: WAPA070820A

Bradley Warren
Acting Regional Manager
Department of Energy
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AX 85005-6457

Re: Rebuilding and Upgrading the Parker Dam-Buckskin Tap 69 kV Transmission Line Located North of Parker in San Bernardino County, California and La Paz County, Arizona

Dear Mr. Warren:

Thank you for continuing consultation with me, pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act, regarding the proposed rebuild and upgrade of the Parker to Buckskin Tap 69-kV transmission line in San Bernardino County, California and La Paz County, Arizona. The Department of Energy, Western Area Power Administration (WAPA), is the federal agency responsible for Section 106 compliance for the subject undertaking and is requesting my comments on its identification of an Area of Potential Effects (APE).

Previously in this consultation (SHPO letter of August 30, 2007) I concurred that your determination of an Area of Potential Effects was appropriate, pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d). This concurrence was for the portion of the APE in California only. I recommended at that time that you consult with the Arizona State Historic Preservation Officer regarding the portion of the undertaking located in Arizona and that you initiate consultation regarding this project with the appropriate Native American Tribes in both states. At this time you are requesting my comments on your efforts to identify historic properties in the APE, your evaluations of eligibility for the National Register of Historic Places (NRHP) of those historic properties identified in the APE, and your determination of a finding of effect.

In addition to your letter of September 15, 2008, you have submitted the following report as documentation of your efforts to identify historic properties in the APE:

- *Draft Cultural Resources Inventory Report Western's Parker to Planet Tap 69-kV Transmission Line, Parker to Buckskin Tap Segment, San Bernardino County,*

California and La Paz County, Arizona (Matthew D. Peters; Transcon Environmental, Inc.: September 2008).

After reviewing your letter of September 15, 2008, and supporting documentation, I have the following comments:

1) I concur that your efforts to identify historic properties have been appropriate pursuant to 36 CFR Part 800.4(b).

2) I further concur that **the section of the Parker Planet Tap Transmission Line located within the State of California** is *not* eligible for the National Register of Historic Places.

3) I further concur that the **Parker Dam District** (CA-SBR-10395H) is eligible for the National Register of Historic Places under criterion A.

4) I further concur that your finding of No Adverse Effect is appropriate pursuant to 36 CFR Part 800.5(b). Please note that my concurrence on this finding is based on my review of the project elements in California only, and is provisional based on the review and comments by the Arizona State Historic Preservation Officer on those project elements located within the State of Arizona.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the Western Area Power Administration may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact William Soule, Associate State Archeologist at phone 916-654-4614 or email wsoule@parks.ca.gov.

Sincerely,

ORIGINAL SIGNED BY SUSAN STRATTON FOR:

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

cc:

Mary E. Barger
Federal Preservation Officer
Department of Energy
Western Area Power Administration
P.O. Box 281213
Lakewood, CO 80228-8213

2008-1523(3806)

prep ltr

Department of Energy
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AZ 85005-6457

OCT 21 2008

OCT 22 2008

Mr. James Garrison
State Historic Preservation Officer
Arizona State Parks
1300 West Washington Street
Phoenix, Arizona 85007

RE: Rebuilding and Upgrading the Parker Dam - Buckskin Tap 69-kV Transmission Line located north of Parker in San Bernardino County, California and La Paz County, Arizona (SHPO-2008-1523).

Dear Mr. Garrison:

Thank you for your office's letter dated September 29, 2008 regarding Western Area Power Administration's (Western) Parker Dam to Buckskin Tap 69-kV Transmission Line rebuild and upgrade project. In the letter you chose not to concur with our determinations of eligibility and finding of effect for this project. We revisited our eligibility determination for Site AZ L:12:1(ASU), reiterate our finding of **no adverse effect on historic properties** per 36 CFR § 800.5, and seek your concurrence pursuant to Section 106 of the National Historic Preservation Act. Western is the lead federal agency for this multijurisdictional undertaking that also involves the U.S. Fish and Wildlife Service (FWS) the U.S. Bureau of Land Management (BLM), Lake Havasu City Field Office and the Arizona State Land Department (ASLD). In order to expedite consultation, Western combined multiple steps in the Section 106 process per 36 CFR § 800.3(g) and seeks your agreement to continue to do so for this undertaking.

I. **Description of the Undertaking** – This project was described in our September 15, 2008 letter to your office and consulting parties. The only change is that construction is now scheduled to begin November 1, 2008 and end by May 1, 2009 if not sooner in the Buckskin Tap area and by May 15, 2009 in the Parker Dam area.

II. **Methodology and Reporting** – Western previously sent your office and consulting parties an inventory form for the Parker-Planet Tap 69-kV Transmission Line prepared by historian Kurt Schweigert and a copy of the survey report titled *Draft Cultural Resources Inventory Report, Western's Parker to Planet Tap 69-kV Transmission Line, Parker to Buckskin Tap Segment, San Bernardino County, California and La Paz County, Arizona* prepared by Transcon Environmental, Inc. in September, 2008. We are revising the report to correct minor issues such as the map scales and will forward your office a copy of the final report. The consultant states that Site AZ L:12:1 (ASU) does not belong in the report's table titled "Sites Located within the Survey Area," because they did not locate it.

Western continues to consult with Indian tribes regarding this undertaking. We sent out letters in mid-September and followed up with phone calls. As of this time, we have not heard of any concerns. We received a letter from the Hopi Tribe concurring with our finding of no adverse effect.

III. Resources Located, Identified, and Evaluated (Significance Criteria Considered) –

The following cultural resources were identified in Arizona:

The 7.1-mile-long Parker Planet Tap Transmission Line is not eligible for inclusion in the National Register of Historic Places under any criterion. It was designed by the U.S. Bureau of Reclamation and built in 1943 as part of the larger Parker to Bagdad Copper line. It is not a key element either of the Parker and Davis Projects, and Bagdad Copper Mine played a minor role in the state's copper industry. The Planet Tap to Bagdad segment of this transmission line was transferred to private operators in the 1980s. The Parker to Planet Tap 69-kV Transmission Line crosses FWS, BLM, ASLD, and private lands in Arizona. Western spoke with FWS, BLM, and ASLD and they agreed with this determination.

Site AZ L:12:21 (ASM) is not eligible for inclusion in the National Register under any criteria. The site is an historic-period open dump that may be associated with the Civilian Conservation Corps (CCC) and the U.S. Army based on a comment present on the transmission line construction drawings dated 1943. However, a specific camp could not be identified as the source of the trash, and temporally diagnostic artifacts range from the 1940s to the 1980s indicating that later, non-CCC non-Army trash was added. It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Site AZ L:12:22 (ASM) is not eligible for inclusion in the National Register under any criteria. It is an historic-period waste pile located near a state highway. A source for the trash could not be determined and, further archival research would be unlikely identify one. It occurs on private land.

Site AZ L:12:1 (ASU) is eligible for inclusion in the National Register under Criterion D (Information Potential), and other criteria may apply. It reportedly contains a cobble-lined trail segment, a rock ring, and a low-density chipped stone scatter situated on two ridge tops covered with desert pavement. It covers 2.4 acres. In advance of a borrow pit activities, Arizona State University (ASU) collected a sample of surface artifacts and excavated portions of both features. Subsurface artifacts or feature expressions were not observed during the excavations. It occurs on FWS land. Western spoke with FWS, and they agreed with this determination.

Isolated Occurrences 3 and 4 are not eligible for inclusion in the National Register under any criteria. They are small scatters of historic-period food and beverage cans and lack association with an important historic context. They occur on BLM land. Western spoke with BLM, and they agreed with this determination.

Isolated Occurrence 5 is not eligible for inclusion in the National Register under any criteria. It is a rock pile located next to the transmission line access road and near the mapped alignment of a road shown on a 1919 General Land Office map. It is thought to be a road or trail marker. It occurs on ASLD land. Western spoke with ASLD, and they agreed with this determination.

IV. **Effects Determination and Compliance Decision** – Effects determinations are the responsibility of the lead agency. Western considered the nature of the undertaking and the presence of historic properties that posses the qualities of integrity and meet at least one of the other criteria necessary to be considered for inclusion in the National Register of Historic Places.

Western determined that this undertaking will **not adversely affect historic properties** because the planned staging area occurs within a non-contributing, previously disturbed portion of Site AZ L:12:1 (ASU). Evidence of the site was not observed on the ground surface within the staging area. Based on previous test excavation results, subsurface features are unlikely to be present at the site. The staging area occurs at the base of a ridge, and the only artifacts and features previously recorded at the site occur on ridge tops.

Please concur with our determinations of eligibility and finding of **no adverse effect.** If you have any questions please contact Mr. Matthew Bilsbarrow at (602) 605-2536, Ms. Mary Barger at (602) 605-2524, or Mr. John Holt (602) 605-2592.

Sincerely,

Deborah K. Emler

Deborah K. Emler
Acting Regional Manager

enclosure (map)

Concur.
for SHPO
Oct. 28, 2008

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Lake Havasu Field Office
2610 Sweetwater Avenue
Lake Havasu City, AZ 86406
www.blm.gov/az/

TAKE PRIDE IN AMERICA

October 7, 2008

In Reply Refer To:
8100(AZ 330)

Matthew Bilsbarrow, RPA
Environmental Planner
Western Area Power Admin/DOE
Desert Southwest Region
615 South 43rd Ave/ PO Box 6457
Phoenix, Arizona 85009

Dear Mr. Bilsbarrow:

It is my understanding that Western Area Power Administration (Western) agreed to act as lead federal agency for the consultation process after discussions with the U.S. Fish and Wildlife Service (FWS) and the U.S. Bureau of Land Management (BLM), Lake Havasu City Field Office. In order to expedite consultation, Western combined multiple steps in the Section 106 process per 36 CFR 800.3(g) and now seeks BLM's agreement to continue this undertaking.

Western considered the effects on cultural resources of rebuilding and upgrading the Parker Dam to Buckskin Tap 69-kV Transmission Line as required by Section 106 of the National Historic Preservation Act. The BLM concurs with Western determination that the undertaking will have **no adverse effect on historic properties** identified in Arizona per 36 CFR 800.5.

If you have any questions on this project please contact Archaeologist, George Ward Shannon, Jr., Ph.D., at (928) 505-1255 or by email at George_Shannon@blm.gov.

Sincerely,

David Jaynes

David Jaynes
Acting Field Manager

640
db 11/14/08

Department of Energy
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AZ 85005-6457

SEP 18 2008

Steven Spangle, Field Supervisor
U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite #103
Phoenix, Arizona 85021-4951

SUBJECT: Determination of May Affect, Not Likely to Adversely Affect Endangered, Threatened, Candidate, Proposed or Sensitive Species, or Critical Habitats for the Upgrade & Rebuild of the Parker Dam Buckskin Tap 69-kV Transmission Line.

Dear Mr. Spangle:

Western Area Power Administration (Western) requests informal consultation regarding endangered, threatened, candidate, proposed or sensitive species or critical habitat which may be impacted by rebuilding and upgrading the Parker Dam to Buckskin Tap 69-kV Transmission Line in California and Arizona. For your review, we've enclosed a biological assessment prepared by Transcon Environmental dated September 2008. We will adopt the proposed conservation measures listed on Pages 16-18, and we propose a finding of may affect, not likely to adversely effect, because of the presence of Mohave tortoise habitat in California. We understand that a portion of this project occurs within your jurisdiction.

Survey Results and Recommendations

The following species or their critical habitat were identified in California:

The biological survey identified Mohave tortoise and Razorback sucker habitat, however, the habitats' quality is low. The survey did not identify Southwest Willow Flycatcher habitat in the project area portion of the Colorado River. Any impacts to the Razorback sucker would be avoided and any impacts to the Mohave tortoise would be reduced by implementing the proposed conservation measures.

The following species or their critical habitat were identified in Arizona:

The biological survey identified Razorback sucker and Yuma clapper rail habitat. The Razorback sucker habitat's quality is low. Any impacts to the Razorback sucker would be avoided by implementing the proposed conservation measures. Western will coordinate with Bill Williams River National Wildlife Refuge staff to avoid impacts to Yuma clapper rail during their breeding season.

Project Description

Western plans to rebuild and upgrade the existing Parker Dam - Buckskin Tap 69-kV Transmission Line mostly within the existing 100-foot-wide right-of-way in order to maintain and improve the reliability of electrical service to our customers located along the Lower Colorado River. A 0.25-mile-long section located in California will be placed in a new location on Western-owned land. Rebuilding entails replacing wooden H-frame structures with steel monopoles within the right-of-way, although not necessary using the same pole locations. It also includes blading new and existing access roads within the transmission line right-of-way or established 50-foot-wide road rights-of-ways. Upgrading involves replacing the existing conductors with more efficient ones and adding a second circuit (i.e., a second set of three conductors) to the new pole structures. It also includes adding a protective lightning arrest wire, which may substituted by a fiber optic line used for electrical utility communication purposes only. At present, this line exceeds its designed lifespan (50 years), requires above-average operation and maintenance efforts, and lacks capacity and reliability to meet present and future demands of our customers.

Construction is scheduled to begin on October 15, 2008, and must be completed by the following April in order to minimize impacts to threatened and endangered species, such as the Yuma clapper rail. We anticipate using a helicopter as well as dozers, graders, backhoes, tractors, bucket trucks, augers, cranes, trailer-mounted cranes, hydraulic cranes, 50 to 100-ton capacity cranes, concrete trucks, dump trucks, trailer-trucks, crew trucks, compressors, air compressors, hydro lifts, pullers, tensioners, and reel-stringing trailers to accomplish the work.

The undertaking is shown on the enclosed map. The corresponding U.S.G.S. topographic maps are Gene Wash and Monkeys Head. The line crosses through portions of Sections 3 and 4 in Township 2 North, Range 27 East on the San Bernardino Baseline and Meridian; and Sections 15, 16, 22, 23 and 24 in Township 11 North, Range 18 West on the Gila and Salt River Baseline and Meridian.

<u>The following project components occur in California:</u>

- Constructing a new, 1150-foot-long (5 structures), 69-kV transmission line located 300 feet south of the existing transmission line in order to make connections in the switchyard, safely pass under existing transmission lines, and cross rough terrain;
- Removing the existing 800-foot-long (2 structures), 69-kV transmission line between the Parker Dam 69-kV Switchyard and the Colorado River;
- Building ca. 500 feet of new access roads between the existing Lower 230-kV Switchyard and the existing 69-kV Switchyard in order to reach new structure locations;

The components located in California occur on Western-owned land. The land for one structure is currently California State Lands, and Western is in the process of acquiring it through condemnation. In California, the undertaking's area of potential effects for ground disturbance covers 9.5 acres.

The following project components occur in Arizona:

- Rebuilding the existing 2.5-mile-long (ca. 34 structures) 69-kV transmission within the existing right-of-way between the Colorado River and Buckskin Tap;
- Re-blading and widening existing gravel transmission line access roads and adding culverts where necessary in order to create a passable route for construction vehicles and equipment; The existing access road wanders in and out of the existing transmission line right-of-way;
- Building new spur access roads from either an existing access road or the nearest road to either a new pole location or an isolated portion of an existing access road; Locally available rock materials will be used for the road bed.
- Use of a 2.45-acre staging area located situated on Fish and Wildlife Service land adjacent to an existing maintained gravel road.

The components situated in Arizona occur on FWS (2.4 acres), U.S. Bureau of Land Management (77.3 acres), Arizona State Land Department (23.7 acres) and private (25.1 acres) lands. In Arizona, the undertaking's area of potential effect for ground disturbance covers 128.5 acres.

If you have any questions please contact Mr. Matthew Bilsbarrow at (602) 605-2536 bilsbarrow@wapa.gov or Mr. John Bridges at (720) 962-7255, bridges@wapa.gov.

Sincerely,

John R. Holt
Environmental Manager

enclosures (map, report)

cc w/enclosures (map, report)

Mr. Dick Gilbert, Manager
U.S. Fish and Wildlife Service
Bill William River National Wildlife Refuge
60911 Highway 95
Parker, AZ 85344

Mr. Steve Politsch, Manager
U.S. Bureau of Land Management
Lake Havasu City Field Office
2610 Sweetwater Avenue
Lake Havasu City, Arizona 86406

Mr. Ruben Ojeda, ROW Manager
Arizona State Land Department
1616 West Adams
Phoenix, Arizona 85007

Mr. Larry Voyles, Director
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, AZ 85086

Mr. James McGinnis, Chief Officer
Arizona Department of Agriculture
Office of Review and Investigation
1688 West Adams
Phoenix, Arizona 85007

Department of Energy
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AZ 85005-6457

SEP 1 8 2008

Diane Noda, Field Supervisor
U.S. Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, California 93003

SUBJECT: Determination of May Affect, Not Likely to Adversely Affect Endangered, Threatened, Candidate, Proposed or Sensitive Species, or Critical Habitats for the Upgrade & Rebuild of the Parker Dam Buckskin Tap 69-kV Transmission Line.

Dear Ms. Noda:

Western Area Power Administration (Western) requests informal consultation regarding endangered, threatened, candidate, proposed or sensitive species or critical habitat which may be impacted by rebuilding and upgrading the Parker Dam to Buckskin Tap 69-kV Transmission Line in California and Arizona. For your review, we've enclosed a biological assessment prepared by Transcon Environmental dated September 2008. We will adopt the proposed conservation measures listed on Pages 16-18, and we propose a finding of may affect, not likely to adversely effect, because of the presence of Mohave tortoise habitat in California. We understand that a portion of this project occurs within your jurisdiction.

Survey Results and Recommendations

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Project Description

Western plans to rebuild and upgrade the existing Parker Dam - Buckskin Tap 69-kV Transmission Line mostly within the existing 100-foot-wide right-of-way in order to maintain and improve the reliability of electrical service to our customers located along the Lower Colorado River. A 0.25-mile-long section located in California will be placed in a new location on Western-owned land. Rebuilding entails replacing wooden H-frame structures with steel monopoles within the right-of-way, although not necessary using the same pole locations. It also includes blading new and existing access roads within the transmission line right-of-way or established 50-foot-wide road rights-of-ways. Upgrading involves replacing the existing conductors with more efficient ones and adding a second circuit (i.e., a second set of three conductors) to the new pole structures. It also includes adding a protective lightning arrest wire, which may substituted by a fiber optic line used for electrical utility communication purposes only. At present, this line exceeds its designed lifespan (50 years), requires above-average operation and maintenance efforts, and lacks capacity and reliability to meet present and future demands of our customers.

Construction is scheduled to begin on October 15, 2008, and must be completed by the following April in order to minimize impacts to threatened and endangered species, such as the Yuma clapper rail. We anticipate using a helicopter as well as dozers, graders, backhoes, tractors, bucket trucks, augers, cranes, trailer-mounted cranes, hydraulic cranes, 50 to 100-ton capacity cranes, concrete trucks, dump trucks, trailer-trucks, crew trucks, compressors, air compressors, hydro lifts, pullers, tensioners, and reel-stringing trailers to accomplish the work.

The undertaking is shown on the enclosed map. The corresponding U.S.G.S. topographic maps are Gene Wash and Monkeys Head. The line crosses through portions of Sections 3 and 4 in Township 2 North, Range 27 East on the San Bernardino Baseline and Meridian; and Sections 15, 16, 22, 23 and 24 in Township 11 North, Range 18 West on the Gila and Salt River Baseline and Meridian.

<u>The following project components occur in California:</u>

- Constructing a new, 1150-foot-long (5 structures), 69-kV transmission line located 300 feet south of the existing transmission line in order to make connections in the switchyard, safely pass under existing transmission lines, and cross rough terrain;
- Removing the existing 800-foot-long (2 structures), 69-kV transmission line between the Parker Dam 69-kV Switchyard and the Colorado River;
- Building ca. 500 feet of new access roads between the existing Lower 230-kV Switchyard and the existing 69-kV Switchyard in order to reach new structure locations;

The components located in California occur on Western-owned land. The land for one structure is currently California State Lands, and Western is in the process of acquiring it through condemnation. In California, the undertaking's area of potential effects for ground disturbance covers 9.5 acres.

The following project components occur in Arizona:

- Rebuilding the existing 2.5-mile-long (ca. 34 structures) 69-kV transmission within the existing right-of-way between the Colorado River and Buckskin Tap;
- Re-blading and widening existing gravel transmission line access roads and adding culverts where necessary in order to create a passable route for construction vehicles and equipment; The existing access road wanders in and out of the existing transmission line right-of-way;
- Building new spur access roads from either an existing access road or the nearest road to either a new pole location or an isolated portion of an existing access road; Locally available rock materials will be used for the road bed.
- Use of a 2.45-acre staging area located situated on Fish and Wildlife Service land adjacent to an existing maintained gravel road.

The components situated in Arizona occur on FWS (2.4 acres), U.S. Bureau of Land Management (77.3 acres), Arizona State Land Department (23.7 acres) and private (25.1 acres) lands. In Arizona, the undertaking's area of potential effect for ground disturbance covers 128.5 acres.

If you have any questions please contact Mr. Matthew Bilsbarrow at (602) 605-2536 bilsbarrow@wapa.gov or Mr. John Bridges at (720) 962-7255, bridges@wapa.gov.

Sincerely,

John R. Holt

John R. Holt
Environmental Manager

enclosures (map, report)

cc w/enclosures (map, report)

Mr. Dick Gilbert, Manager
U.S. Fish and Wildlife Service
Bill William River National Wildlife Refuge
60911 Highway 95
Parker, AZ 85344

11.0 APPENDIX E – AGENCY RESPONSES

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Department of Energy SHPO-2008-1523(77290
Western Area Power Administration
Desert Southwest Customer Service Region
P.O. Box 6457
Phoenix, AZ 85005-6457

MAR 12 2010

RECEIVED
MAR 15 2010
PJ 3/18/10

Mr. James Garrison
State Historic Preservation Officer
Arizona State Parks
1300 West Washington Street
Phoenix, Arizona 85007

RE: Parker Planet Tap 69-kV Transmission Line Rebuild, Upgrade and Realty Action located north of Parker in La Paz and Mohave Counties, Arizona (SHPO-2008-1523).

Dear Mr. Garrison:

WAPA FWS BOR BLM

Western Area Power Administration (Western) agreed to act as lead Federal agency for the consultation process after discussions with the U.S. Fish and Wildlife Service (FWS) Bill Williams River National Wildlife Refuge, U.S. Bureau of Reclamation Lower Colorado Region Office, and the U.S. Bureau of Land Management (BLM) Lake Havasu City Field Office. In order to expedite consultation, Western combined multiple steps in the Section 106 process per 36 CFR § 800.3(g) and seeks your agreement to continue to do for this undertaking. Western considered the effects on cultural resources of rebuilding and upgrading the Buckskin Tap to Planet Tap 69-kV Transmission Line and completing a realty action for the Parker Planet Tap 69-kV Transmission Line as required by Section 106 of the National Historic Preservation Act. Western determined that the undertaking will have **no adverse effect on historic properties** per 36 CFR § 800.5. We're providing this documentation and seeking your concurrence with this finding of effect.

I. **Description of the Undertaking** – Western plans to rebuild and upgrade the existing Buckskin Tap Planet Tap 69-kV Transmission Line mostly within the former right-of-way in order to maintain and improve the reliability of electrical service to our customers. A ca. 0.5-mile-long section located in the Bill Williams River National Wildlife Refuge will be placed in a new location adjacent to an existing road for easier maintenance and reduced impacts to riparian habitat. Western plans to apply for a new right-of-way for the transmission line and access roads, because the old right-of-way document was inadvertently closed by BLM in the 1980s. The new right-of-way application requests a width of 100 feet for the transmission line and a width of 50 feet for access roads.

Rebuilding entails replacing wooden H-frame structures with steel H-frames or monopoles within the right-of-way, although not necessary in the same pole locations. It also includes using and improving new and existing access roads. Upgrading involves replacing the existing conductors with more efficient ones and adding a second circuit (i.e., a second set of three conductors) along a portion of the line to facilitate easier switching. It also includes adding a protective lightning arrest wire. At present, this line exceeds its designed lifespan (i.e., 50

years), requires above-average operation and maintenance efforts, and lacks capacity and reliability to meet present and future demands.

We anticipate using a helicopter as well as dozers, graders, backhoes, tractors, bucket trucks, augers, cranes, trailer-mounted cranes, hydraulic cranes, 50 to 100-ton capacity cranes, concrete trucks, dump trucks, trailer-trucks, crew trucks, compressors, air compressors, hydro lifts, pullers, tensioners, and reel-stringing trailers to accomplish the work. We plan to use a ca. 2.45-acre staging area located situated on the Bill Williams River National Wildlife Refuge that is currently used for public parking and is situated adjacent to an existing gravel road.

The undertaking is shown on the enclosed maps. The corresponding U.S.G.S. topographic maps are Gene Wash, Monkeys Head, and Castenada Hills SW. The line crosses through portions Sections 13, 15, 16 & 22-24 in Township 11 North Range 18 West, Sections 13, 19, 20, 22-24, 28 and 29 in Township 11 North Range 17 West, and Sections 9, 16-18, 20, 21, 28, 29 & 31-33 in Township 11 North Range 16 West on the Gila and Salt River Baseline and Meridian.

Construction is scheduled to begin on October 1, 2010, and must be completed by the following April in order to minimize impacts to threatened and endangered species.

II. Methodology and Reporting – Western sponsored the five enclosed documents relating to cultural resources for this undertaking:

1) an inventory form for the Parker-Planet Tap 69-kV Transmission Line prepared by historian Kurt Schweigert. Your office previously reviewed this document.
2) a revised copy of the survey report titled *Cultural Resources Inventory Report, Parker to Planet Tap 69-kV Transmission Line, Parker to Buckskin Tap Segment, San Bernardino County, California and La Paz County, Arizona* prepared by Transcon Environmental, Inc. in January 2009. We agreed to revise this document to correct minor issues in our October 21, 2008 letter to your office.
3) A survey report titled *Cultural Resources Inventory Report, Parker to Planet Tap 69-kV Transmission Line, Buckskin Tap to Planet Tap Segment, La Paz and Mohave Counties, Arizona* prepared by Transcon Environmental, Inc. in December 2009.
4) A survey report titled *Cultural Resources Inventory Report: Addendum 1, Parker to Planet Tap 69-kV Transmission Line, Buckskin Tap to Planet Tap Segment, La Paz and Mohave Counties, Arizona* prepared by Transcon Environmental, Inc. in March 2010.
5) A survey report titled *A Cultural Resource Survey and Inventory of the Planet Ranch Access Road to Planet Tap, La Paz and Mohave Counties, Arizona* prepared by PaleoWest Solutions in Archaeology dated February 22, 2010.

Western sponsored the enclosed outreach brochure to disseminate information presented in the technical reports to the public. It focuses on the cultural history in and around the Bill Williams River National Wildlife Refuge, and the refuge agreed to make it available at their visitor center. We welcome any comments on the brochure.

via telephone – MB 23 MAR 10 10:30 A.M.

Western is consulting with Indian tribes regarding this undertaking. These consultations are occurring concurrently with your office's review. We will forward you summaries of any responses that we receive.

III. Resources Located, Identified, and Evaluated (Significance Criteria Considered) – Western identified and evaluated three historic-period structures, seven sites, and 26 isolated occurrences (which include both structures and objects). One previously recorded site (AZ M:9:51 BLM) was not re-identified; it is presumed destroyed, because its plotted location is disturbed by mining activities. For convenience, the resources are organized by project component, and the documents listed above are referred to by number.

Across All Project Components

Please refer to the reports listed at Numbers 1, 2, 3, 4, and 5 above for more information about the resource described below:

The 65-mile-long Parker to Planet Tap to Bagdad Transmission Line (AZ L:12:20 ASM) is not eligible for inclusion in the National Register of Historic Places under any criterion. It was designed by the U.S. Bureau of Reclamation and built in 1943. It is not a key element either of the Parker and Davis Projects, and Bagdad Copper Mine played a minor role in the state's copper industry. The Parker to Planet Tap segment is owned by Western and consists of wooden H-frames and three-pole structures. The Planet Tap to Bagdad segment was transferred to private operators in the 1980s and rebuilt with single wood pole structures such that only the butts of the old wooden H-frames remain. The transmission line crosses FWS, BLM, ASLD, and private lands. Western spoke with FWS, BLM, and ASLD and they agreed with this determination.

Parker to Buckskin Tap Transmission Line Corridor

Please refer to the report listed at Number 2 above for more information about the resources described below:

Site AZ L:12:21 (ASM) is not eligible for inclusion in the National Register under any criteria. The site is an historic-period open dump that may be associated with the Civilian Conservation Corps (CCC) and the U.S. Army based on a comment present on the transmission line construction drawings dated 1943. However, a specific camp could not be identified as the source of the trash, and temporally diagnostic artifacts range from the 1940s to the 1980s indicating that later, non-CCC, non-Army trash was added. It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Site AZ L:12:22 (ASM) is not eligible for inclusion in the National Register under any criteria. It is an historic-period waste pile located near a state highway. A source for the trash could not be determined and, further archival research would be unlikely identify one. It occurs on private land.

Isolated Occurrences 3 and 4 are not eligible for inclusion in the National Register under any criteria. They are small scatters of historic-period food and beverage cans and lack association with an important historic context. They occur on BLM land. Western spoke with BLM, and they agreed with this determination.

Isolated Occurrence 5 is not eligible for inclusion in the National Register under any criteria. It is a rock pile located next to the transmission line access road and near the mapped alignment of a road shown on a 1919 General Land Office map. It is thought to be a road or trail marker. It occurs on ASLD land. Western spoke with ASLD, and they agreed with this determination.

Buckskin Tap to Planet Tap Transmission Line Corridor

Please refer to the reports listed at Numbers 2 and 3 above for more information about the resources described below:

Site AZ L:12:23 (ASM)/ AZ L:12:1 (ASU) is eligible for inclusion in the National Register under Criterion D (Information Potential) and other criteria may apply. It reportedly contains a cobble-lined trail segment, a rock ring, and a low-density chipped stone scatter situated on two ridge tops covered with desert pavement. It covers 2.4 acres. In advance of a borrow pit activities, Arizona State University (ASU) collected a sample of surface artifacts and excavated portions of both features. Subsurface artifacts or feature expressions were not observed during the excavations. The site is in poor condition, because over 90 percent of the site's surface area was mechanically bladed. It occurs on FWS land. Western spoke with FWS, and they agreed with this determination.

Rock piles or cairns recorded as Isolated Occurrences 1, 2, and 3 are not eligible for inclusion in the National Register under any criteria. Their age is indeterminate. They occur on FWS land.

Planet Ranch Access Road

Please refer to the report listed at Number 5 above for more information about the resources described below:

Site AZ M:9:20 (ASM) is eligible for inclusion in the National Register under Criterion D (Information Potential) and other criteria may apply. This north-south trail evident in desert pavement follows a prominent ridgeline along the west side of Mohave Wash and contains one chipped stone artifact. This trail is in excellent condition as it extends for over 960 meters and only broken into discontinuous segments by existing dirt roads in four places. It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Site AZ M:9:21 (ASM) is eligible for inclusion in the National Register under Criterion D (Information Potential). It contains ten tent platform features, three rock clusters, two latrine depressions, and an historic-period artifact concentration. The artifact assemblage indicates a late 1940s use as a base camp for construction or mining activities. It is in good condition,

although an existing access road crosses its southern end. It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Site AZ M:9:22 (ASM)/ AZ M:9:1(BLM) is eligible for inclusion in the National Register under Criterion D (Information Potential) and other criteria may apply. It currently contains a rock ring feature a trail, and a low-density prehistoric chipped stone artifact scatter that includes cores or bifaces. Five other rock ring features were previously mapped at this site, but were destroyed by road construction in the 1990s. It is in good condition, although an existing access road crosses its western end. It occurs on Planet Ranch, which is currently owned by the City of Scottsdale.

The Planet Townsite (AZ M:13:13 ASM) is eligible for inclusion in the National Register under Criterion D (Information Potential). It contains ruined, standing buildings and structures as well as historic-period artifact concentrations. Although not described in the report, two slag piles occur adjacent to and are cut by the access road (**Figures 1 & 2**). Based on archival sources, the town was active between 1867 and 1921 with a peak population of 500, and its residents were mostly workers with Planet Copper Mine. It is in good condition, although an existing access road crosses its southern end. It occurs on Planet Ranch, which is currently owned by the City of Scottsdale, and BLM land. Western spoke with BLM, and they agreed with this determination.

Mohave Wash 1919 GLO Road is not eligible for inclusion in the National Register under any criteria. This in-use, unimproved, braided, dirt, wagon or automobile road is a common type in the western deserts of Arizona. The report's authors state "it is unlikely that further archaeological investigation or historical research of this road will yield new or significant information on the local or regional history of the area" (Page 22). It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Section 17 1919 GLO Road is not eligible for inclusion in the National Register under any criteria. This in-use, unimproved, braided, dirt, wagon or automobile road is a common type in the western desert of Arizona. The report's authors state "it is unlikely that further archaeological investigation or historical research of this road will yield new or significant information on the local or regional history of the area" (Page 24). It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Trail segments recorded as Isolated Occurrences 11, 13-15, 20, and 21 are not eligible for inclusion in the National Register under any criteria. In comparison to the trail recorded as Site M:9:20 (ASM) described above, these trails represent relatively short, discontinuous segments and do not distinguish themselves from animal-created trails. They occur on Planet Ranch, which is currently owned by the City of Scottsdale, and BLM land. Western spoke with BLM, and they agreed with this determination.

An historic-period object recorded as Isolated Occurrence 5 is not eligible for inclusion in the National Register under any criteria. This metal survey marker dated 1916 is a common type associated with the cadastral survey of southern Arizona. It occurs on BLM land. Western spoke with BLM, and they agreed with this determination.

Prehistoric or historic-period objects recorded as Isolate Occurrences 1-4, 6-10 and 16-19 are not eligible for inclusion in the National Register under any criteria. They consist of solitary artifacts or a small group of related artifacts. They occur on BLM land. Western spoke with BLM, and they agreed with this determination.

IV. **Effects Determination and Compliance Decision** – Effects determinations are the responsibility of the lead Federal agency. Western considered the nature of the undertaking and the presence of historic properties that posses the qualities of integrity and meet at least one of the other criteria necessary to be considered for inclusion in the National Register of Historic Places. Western determined that this undertaking will **not adversely affect historic properties,** because undertaking-related, ground-disturbing impacts occur in previously disturbed areas where artifacts or features were not observed by studies listed above. For convenience, the following discussion is organized by project component.

Buckskin Tap to Planet Tap Transmission Line Corridor

Western plans to replace two structures (5/3 & 5/4), set up equipment during construction within 100 feet of each structure (**Figure 3**), and use a staging area located within Site AZ L:12:23(ASM) that is also used for visitor parking (**Figure 4**). Equipment and vehicles will approach Structure 5/3 from the west and Structure 5/4 from the east. Artifacts or features were not identified within these portions of the site, and the ground surface exhibits signs of previous vehicular and mechanical disturbance.

Planet Ranch Access Road

Western plans to drive rubber-tired and tracked vehicles on existing dirt roads across four sites: AZ M:9:20(ASM), AZ M:9:21 (ASM), AZ M:9:22 (ASM), and AZ M:13:13 (ASM). These roads do not require improvement, such as culverts, within site boundaries. Artifacts or features were not identified within road surface at these sites.

Please concur with our determinations of eligibility and finding of **no adverse effect.** If you have any questions please contact Environmental Planner Mr. Matthew Bilsbarrow at (602) 605-2536, Regional Historic Preservation Officer Ms. Mary Barger at (602) 605-2524, or me at (602) 605-2592.

CONCUR

23 MAR 10

Arizona State Historic Preservation Office

Sincerely,

John Holt

John Holt
Environmental Manager

enclosures (reports, maps, brochure)

United States Department of the Interior
U.S. Fish and Wildlife Service
Arizona Ecological Services Field Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

In Reply Refer to:

AESO/SE
22410-2010-I-0181

February 11, 2010

Mr. John R. Holt, Environmental Manager
Western Area Power Authority
Desert Southwest Customer Service region
P.O. Box 6457
Phoenix, Arizona 85005-6457

Dear Mr. Holt:

Thank you for your correspondence of January 5, 2010, received on January 7, 2010. This letter documents our review of the upgrade, rebuilding, and realty action for the Buckskin Tap to Planet Tap 69 kilovolt (kV) transmission line in La Paz and Mohave counties, Arizona, in compliance with section 7 of the Endangered Species Act of 1973 (ESA) as amended (16 U.S.C. 1531 et seq.). Your letter concluded that the proposed project may affect, but is not likely to adversely affect the endangered southwestern willow flycatcher (*Empidonax traillii extimus*), Yuma clapper rail (*Rallus longirostris yumanensis*), and the candidate western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Candidate species do not require review under section 7 of the ESA; however, we provide this technical assistance review at your request. We concur with your determinations and provide our rationale below.

Description of the Proposed Action

A complete description of the proposed action, including maps of the proposed project area, is included in your letter and the October 2009 access road biological evaluation (Del Sol Group 2009). The Western Area Power Authority (Western) proposes to rebuild the Buckskin Tap to Planet Tap 69-kV transmission line. In addition, an access easement is needed for approximately 15 miles of dirt road from Planet Ranch to the Planet Tap to access sections of the transmission line. The proposed action includes the following specific actions:

- Removing the existing wooden H-frame structures and single circuit conductors;
- Erecting new steel H-frame and monopole structures and turning structures;
- Installing a single circuit of 69 kV conductors;
- Installing a second circuit of 69 kV conductors from Planet Tap south across the Bill Williams River;
- Replacing switching equipment and placing it on south side of the Bill Williams River;

- Stringing an overhead ground wire;
- Improving access roads, as needed, to allow vehicles and equipment, such as a drill rig to reach pole locations;
- Creating new access roads to accommodate shifts in the Bill Williams River and recent flood deposits blocking previous access;
- Rerouting a portion of the transmission line to avoid an area of dense vegetation growing along the Bill Williams River. The existing line is 100 feet north of the Bill Williams Highway; it will be moved south adjacent to the road;
- Using a two-acre staging area located in a previously disturbed area within the Bill Williams River National Wildlife Refuge (NWR); and
- Reapplying for a right-of-way for the transmission line.

The project alignment is located on Bureau of Land Management, U.S. Fish and Wildlife Service NWR, State of Arizona, and private lands. It crosses the Bill Williams River at the upstream end of Planet Ranch (Biological Evaluation Figure 1).

Western will implement the following conservation measures as part of the proposed action:

- Construction activities will occur during the fall and winter (October 1 to April 30) to avoid impacts to breeding riparian birds;
- A survey to identify active migratory bird nests will be conducted by a qualified biologist if construction activities continue into March and April. If a nest is found, construction activities within that transmission line span (ca. 660 feet) will cease until the birds have fledged as determined by a qualified biologist monitor;
- Vegetation trimming in the riparian area known locally as Mosquito Flats will be kept to the minimum necessary required to remove the existing transmission line and construct the rerouted transmission line near the existing county road; and
- Vegetation trimming will not occur where the transmission line corridor crosses the Bill Williams River.

Western proposes to move an existing transmission line, located at Mosquito Flats, closer to the Bill Williams Highway (county road). The transmission line is presently located along the edge of a cottonwood (*Populus fremontii)* and willow (*Salix* sp.) stand. It will be moved approximately 50 to 100 feet south to the highway. Vegetation at the new site consists of blue palo verde (*Parkinsonia florida)* and mesquite (*Prosopis* sp.). Currently, vegetation is trimmed every one to two years near the existing line to reduce fire hazard. This cottonwood and willow habitat has been used by breeding willow flycatchers since 1993 (Ellis et al. 2008). Six nests were found in summer 2009 (Kathleen Blair, Bill Williams NWR. pers. comm. February 5, 2010). In 2009 it was estimated that eight to 12 yellow-billed cuckoos bred on the NWR (Kathleen Blair, Bill Williams NWR. pers. comm. February 5, 2010).

Little riparian vegetation will be impacted when Western moves this line located on the edge of the riparian vegetation. We anticipate that impacts from the proposed trimming will be similar to those that currently occur with routine trimming for fire hazard reduction (Kathleen Blair, Bill Williams NWR. pers. comm. February 5, 2010). Breeding willow flycatchers and yellow-billed cuckoos have not been affected by this routine trimming in the past.

The route needed to access the transmission line crosses the Bill Williams River on private land at Planet Ranch. The biological evaluation describes willow flycatcher and yellow-billed cuckoo habitat in the project easement as being marginal since vegetation stands are small and there was no surface water seen during the survey. The Arizona Game and Fish Department developed a multi-scaled model that combines Geographic Information System and willow flycatcher survey data to predict habitat breeding suitability (Hatten and Paradzick 2003). In 2005, AGFD applied this model to the Bill Williams River downstream of Alamo Dam to the eastern boundary of the Bill Williams NWR. The access road crossing at the east end of Planet Ranch was not rated as potential or suitable breeding habitat.

The proposed conservation measures to benefit breeding riparian birds would also eliminate adverse effects to these two species. There will be no construction activities during the summer willow flycatcher and yellow-billed cuckoo breeding seasons. Construction activities will have completed before these species have migrated north into the project area. Western will not remove or trim any vegetation in the Bill Williams River corridor during this project.

DETERMINATION OF EFFECTS

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the Yuma clapper rail, southwestern willow flycatcher, and western yellow-billed cuckoo for the following reasons:

Yuma Clapper Rail

There is no Yuma clapper rail habitat within the proposed project area. The project alignment passes primarily through upland areas with the exception of the Bill Williams River upstream of Planet Ranch. However, there is no suitable clapper rail habitat at that location.

Southwestern Willow Flycatcher and Western Yellow Billed Cuckoo

Willow flycatcher surveys have been completed on the Bill Williams NWR since 1993 (Ellis et al. 2008, McLeod et al. 2008, McLeod et al. 2009). Yellow-billed cuckoo surveys have been completed on the Bill Williams NWR since 1994 (Johnson et al. 2008). The proposed action involves work in two portions of the Bill Williams River corridor: an area referred to as Mosquito Flats and the Planet Ranch.

Thank you for your continued coordination. Further section 7 consultation is not required for this project at this time. These determinations may need to be reconsidered if project plans change, or if additional information on listed species distribution or abundance or critical habitat becomes available. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. Please refer to the consultation number 22410-2010-I-0181 in all future correspondence on this project.

Please contact Dave Smith (928) 226-0614 (x109) or Mary Richardson (602) 242-0210 (x242) if you require further assistance or have any questions,

Sincerely,

for Steven L. Spangle
Field Supervisor

cc: Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Refuge Manager, Bill Williams National Wildlife Refuge, Parker, AZ (Attn: K. Blair)

W:\Mary Richardson\4 marys review from Dave thru az admin\Buckskin Tap Planet Tap 69 kV transmission line concurrence letter 2 3 2010 mer edits.docx:cgg

Literature Cited

Del Sol Group. 2009. Biological evaluation for the Planet Tap access road upgrade project, La Paz and Mohave Counties, Arizona. Prepared for Western Area Power Administration, Phoenix, Arizona.

Ellis, L.A., D.M. Weddle, S.D. Stump, H.C. English, and A.E. Graber. 2008. Southwestern willow flycatcher final survey and monitoring report. Arizona Game and Fish Department, Research Technical Guidance Bulletin #10, Phoenix, Arizona, USA.

Hatten, J.R. and C.E. Paradzick. 2003. A multiscaled model of southwestern willow flycatcher breeding habitat. Journal of Wildlife Management 67(4):774-788.

Johnson, M.J., Durst, S.L., Calvo, C.M., Stewart, L., Sogge, M.K., Bland, G., and Arundel, T. 2008. Yellow-billed cuckoo distribution, abundance, and habitat use along the lower Colorado River and its tributaries. 2007 Annual Report: U.S. Geological Survey Open-File Report 2008-1177, 274 p. [http://pubs.usgs.gov/of/2008/1177/].

McLeod, M.A., T.J. Koronkiewicz, B.T. Brown, W.J. Langeberg, and S.W. Carothers. 2008. Southwestern willow flycatcher surveys, demography, and ecology along the lower Colorado River and tributaries, 2003–2007. Five-year summary report submitted to U.S. Bureau of Reclamation, Boulder City, NV by SWCA Environmental Consultants, Flagstaff, Arizona. 206 p.

McLeod, M.A., and T.J. Koronkiewicz. 2009. Southwestern Willow Flycatcher surveys, demography, and ecology along the lower Colorado River and tributaries, 2008. Annual report submitted to U.S. Bureau of Reclamation, Boulder City, Nevada by SWCA Environmental Consultants, Flagstaff, Arizona. 153 pp.

Subject: FW: Special Status Species for Rebuild of the Buckskin Tap to Planet Tap 69kV Transmission Line Project

>>> "Thomas Bommarito" <TBommarito@azgfd.gov> 4/16/2010 10:08 AM >>>
Dr. Mr. Holt:

The Arizona Game and Fish Department (Department) has reviewed the information provided on January 5, 2010, regarding the replacement and relocation of 69kV transmission lines. At this time we have no objections to this proposed project.

However, given the project description and our understanding of planned activities, we are providing the following comments for your consideration.

* We recommend that locations of old transmission lines and disturbed areas around new transmission lines be restored to reflect the surrounding natural habitat. The areas should be seeded with native plant species. To assist in that effort we recommend you coordinate with the Arizona Department of Agriculture, in accordance with the Arizona Native Plant Law. A reclamation plan is recommended for disturbed sites, where appropriate, including planting native, weed-free seed and vegetation.

Thank you for the opportunity to review and provide comments on this BA.
If you have any questions, please contact me at 928-341-4069.

Sincerely,

Tab Bommarito
AGFD # M10-01074800
_____

Thomas (Tab) Bommarito
Habitat Specialist
Arizona Game & Fish Department
9140 E. 28th Street
Yuma, AZ 85365
(928) 341-4069

JANICE K. BREWER
Governor

DONALD BUTLER
Director

Arizona Department of Agriculture

400 W. Congress St. #124 Tucson, Arizona 85701
(520)-628-6317 FAX (520)-628-6961

January 22, 2010

Matthew Bilsbarrow
Environmental Planner

Re: Rebuild, Upgrade & Realty Action for the Buckskin Tap-Planet Tap 69 kV Line.

Mr. Bilsbarrow:

The Department has reviewed the above referenced letters and maps concerning these upgrade projects in La Paz County and Mohave County, Arizona dated January 5, 2010.

It is based on the maps and information provided in the letters concerning these projects, that the Department of Agriculture feels there will be some impact on protected native plants. However, the proposed actions in the project areas concerning vegetation that will remain in place leads the Department to believe the impact will be minimal.

If any protected native plants are encountered in the project sites, we recommend that they be preserved or replanted adjacent to the work sites to the greatest extant feasible. If the contractors are authorized to remove any protected plants from State Trust land for replanting elsewhere, a permit from the Department of Agriculture is required.

In addition, the following recommendation is suggested:

- Minimize the removal of existing vegetation within the project area to the greatest extant possible.
- Salvage or replant cactus and other protected plants.
- Hazardous material generated (motor oil, paint, etc.) should be disposed of properly or used in a way that will minimize impact on vegetation.

We appreciate the opportunity to review the proposed actions. If you need further information, please contact me at (520) 628-6317, or e-mail me at mreimer@azda.gov.

Sincerely,

Michael Reimer

Michael Reimer, Investigator
Office of Special Investigations

www.azda.gov

Arizona Department of Transportation

Intermodal Transportation Division

206 South Seventeenth Avenue Phoenix, Arizona 85007-3213

Janice K. Brewer
Governor

John S. Halikowski
Director

Floyd Roehrich Jr.
State Engineer

December 14, 2009

John R. Holt
Department of Energy
P.O box 6457
Phoenix, AZ 85005-6457

Dear Mr. Holt:

In accordance with ADOT Policies and Procedures an encroachment permit is necessary for any work within ADOT right of way. Enclose for your use is an encroachment permit application, permit must be approved prior to construction. An approve traffic control plan will be required, approval shall occur only after the proper submittals and clearances have been received, reviewed, and approved.

Necessary documentation, a set of plans showing scope of work, proof of liability insurance by encroachment owner, additional permits from local governments or agencies.

If you have any questions please call the office at (928) 317-2106

Respectfully,

G Ramirez

Gerry Ramirez
Yuma District Permits

ARIZONA DEPARTMENT OF TRANSPORTATION
INTERMODAL TRANSPORTATION DIVISION
Highway Encroachment Permit Application
(Application for Permission to Use State Highway Right-of-Way)

FOR ADOT USE

PERMIT NUMBER:_____ ROUTE: _____ MILEPOST: _____

ADOT PROJECT NUMBER: _____ ADOT ENGINEERING STATION: _____

Name of Encroachment Owner	Name of Applicant *(If other than the Encroachment Owner)*
Address of Owner	Mailing Address
City:	City:
State Zip	State Zip
Phone:	Phone:
E-mail address:	Legal Relationship to Owner:

City (in or near) _____ Side of Highway: N ☐ S ☐ E ☐ W ☐ (check one)

Highway Route No. _____ Approximately _____ Feet N ☐ S ☐ E ☐ W ☐ (check one) of Milepost No _____

Applicant's Project No. _____ Project Duration : _____

Description of the proposed work or activity in the right-of-way: _____

The Encroachment Owner will be the Permittee. By signing this application, the Encroachment Owner/Permitee and the Applicant hereby acknowledges that the information given and statements made in this application are true and correct to the best of his/her knowledge. The Encroachment Owner agrees as the Permittee to accept the following General Obligations and Responsibilities as described on page 2 of the application. By accepting an approved encroachment permit, the Permittee agrees to the requirements described in the permit, to be responsible for all permit requirements, and to comply with ADOT's requirements as set out in the permit. An approved permit consists of this application, final supporting documentation approved by ADOT, and any requirements set by ADOT. If the Permittee disagrees with the requirements, the Permittee shall return the permit immediately to the District Office.

NO WORK SHALL TAKE PLACE INSIDE THE RIGHT OF WAY WITHOUT AN APPROVED PERMIT ON SITE.

_____ _____

Encroachment Owner *(Print Name and Sign)* **Applicant** *(Print Name and Sign)*

Date_____ Date_____

GENERAL OBLIGATIONS AND RESPONSIBLITIES

THE PERMITTEE AND/OR APPLICANT AGREES TO THE FOLLOWING:

1. Assume all legal liability and financial responsibility for the encroachment activity for the duration of the encroachment, including indemnify, defend, and hold ADOT and the State of Arizona and any of it's agents, directors, officers, employees harmless from and against any and all claims, actions, losses, liabilities, costs, damages, or expenses, including court costs, reasonable attorney's fees, and costs of claim processing and investigation, arising out of bodily injury or death of any person, or tangible or intangible property damage, caused, or alleged to be caused, in whole or in part, by the negligent or willful acts, or omissions of the Permittee, any of its directors, officers, agents, employees, or volunteers, or its contractor or subcontractors. This indemnity includes any claim or amount arising out of or recovered under the Workers' Compensation Law or arising out of the contractor's failure to conform to any federal, state or local law, statute, ordinance, rule, regulation or court decree. The Permittee is not responsible for claims arising solely from ADOT's negligent or willful acts or omissions. The Permittee and/or contractors and subcontracts may be required to procure insurance with specified limits naming the State of Arizona and ADOT as additional insureds.
2. Comply with Environmental Laws. A. Environmental Laws refers collectively to any and all federal, state, or local statute, law, ordinance, code, rule, regulation,
   permit, order, or decree regulating, relating to, or imposing liability or standards of conduct on a person discharging, releasing or threatening to discharge or release or causing the discharge or release of any hazardous or solid waste or any hazardous substance, pollutant, contaminant, water, wastewater or storm water, and specifically includes, but is not limited to: The Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act; the Comprehensive Environmental Response, Compensation and Liability Act, as amended; the Toxic Substances Control Act; the Clean Water Act (CWA); the Clean Air Act; the Occupational Safety and Health Act; the Arizona Water Quality Act Revolving Fund Act, the Arizona Hazardous Waste Management Act, any applicable National Pollutant Discharge Elimination System (NPDES) or Arizona Pollution Discharge Elimination System (AZPDES) permit, any applicable CWA Section 404 permit, or any local pretreatment or environmental nuisance ordinance.
   B. The Permittee specifically agrees that in the course of performing any activity for which this Permit is necessary:
      i. To comply with any and all Environmental Laws;
      ii. To ensure that no activity under this Permit shall cause ADOT to be in violation of any Environmental Laws;
      iii. That if the Permittee fails or refuses to comply with any Environmental Laws, or causes ADOT to be in violation of any Environmental Laws, ADOT may at its sole and unreviewable discretion, (1) revoke this Permit; (2) require the Permittee to undertake corrective or remedial action to address any release or threatened release or discharge of the hazardous substance, pollutant or contaminant, water, wastewater or storm water; and (3) expressly consents to entry of injunctive relief to enforce any listed remedies.
      iv. To indemnify ADOT for any losses, damages, expenses, penalties, liabilities or claims of any nature whatsoever suffered by or asserted against ADOT as a direct or indirect result of the disposal, escape, seepage, leakage, spillage, discharge, emission, or release of any hazardous waste, solid waste, hazardous substance, pollutant or contaminant, water, wastewater or storm water and losses, damages, expenses, penalties, liabilities and claims asserted or arising under the Environmental Laws, or for ADOT's costs in undertaking corrective action pursuant to an order of or settlement with a duly authorized regulatory agency or injured third party or for any penalties associated with Permittee's activities;
3. Be responsible for any repair or maintenance work to the encroachment for the duration of the encroachment;
4. Comply with ADOT's traffic control standards;
5. Obtain written approval from the abutting property owner (and/or underlying fee owner where ADOT owns its right of way by easement) if the encroachment encroaches on abutting property owned by someone other than the permittee (and/or on underlying fee land owned by someone other than the permittee where ADOT owns its right of way by easement).
6. Upon notice from ADOT, repair any aspect or condition of the encroachment that causes danger or hazard to the traveling public;
7. Remove the encroachment and restore the right-of-way to its original or better condition if ADOT cancels the encroachment permit, and terminates all rights under the permit;
8. Reimburse ADOT for costs incurred or deposit with ADOT money necessary to cover all costs incurred for activities related to the encroachment, such as inspections, restoring the right-of-way to its original or better condition, removing the encroachment, or repair encroachment to originally permitted condition;
9. Notify a new owner to apply for an encroachment permit, as required by Arizona Administrative Rule R17-3-502(D);
10. Apply for a new encroachment permit if the use of the permitted encroachment changes;
11. Keep a copy of the encroachment permit at the work site or site of encroachment activity;
12. Construct the encroachment according to plans that ADOT approves as part of the final permit;
13. Obtain required permits from other government agencies or political subdivisions;
14. Remove any defective materials, or materials that fail to pass ADOT's final inspection, and replace with materials ADOT specifies.
15. If the permit application is denied, applicant has a right to a hearing as prescribed in Arizona Administrative Rule, R17-3-509.

FOR ADOT USE

PERMIT TO USE STATE HIGHWAY RIGHT-OF-WAY

This application is approved as a permit and a permit is issued to the Permittee. Construction is authorized only for the period indicated below.

Authorized ADOT Name and Signature

Authorized ADOT Name and Signature

Issue Date _____ Permit work to be completed by: _____

ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT)
GUIDELINES
FOR ENCROACHMENT PERMITTTEE'S
STATE AND FEDERAL ENVIRONMENTAL REGULATIONS

The applicant must submit a signed statement from a qualified firm (see Appendix A) certifying that the applicant has complied with the following laws and regulations:

National Historic Preservation Act:
The applicant must certify that area of proposed incursion has been surveyed by a qualified archaeologist (36 CFR 61 – Attached) and that the proposed activity will not impact any historic or prehistoric cultural resource eligible for the National Register of Historic Places.

The applicant must also submit a signed statement from a qualified firm certifying with appropriate and updated training/certifications that the applicant has complied with the following laws and regulations:

Clean Air Act
If the applicant's work will include the demolition of any concrete facilities, the applicant must certify that they have met the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP). NESHAP notification is required 10 working days prior to demolition. In addition, it applies to more than just concrete structures

Clean Water Act:
Section 401/404
The applicant must certify that either:

a) The proposed work will not involve discharges to Waters of the US
b) Or that the activity qualifies for a notifying Nationwide Permit from the US Army Corps of Engineers (Corps) and that the applicant has received concurrence from the Corps to proceed with the work and will implement all required project specific mitigation measures, Section 404 General Conditions and State Water Quality 401 conditions.
c) Or that the activity qualifies for a non-notifying Nationwide Permit and that the work will comply with all Section 404 General Conditions and State Water Quality 401 conditions.
d) Or that the applicant has received an Individual Permit from the Corps and that the work will comply with all conditions of the Individual Permit.

Section 402
If the proposed work will exceed 1 acre of disturbance then the applicant must prepare a Storm Water Pollution Prevention Plan (SWPPP) for the project and submit a Notice of Intent (NOI) to the Arizona Department of Environmental Quality (ADEQ) and/or the U.S. Environmental Protection Agency (EPA). One copy of the SWPPP is to be submitted for comments by ADOT District Environmental Coordinator. The applicant will address comments in their SWPPP before commencing any construction. Upon project completion the applicant will submit a Notice of Termination (NOT) to the ADEQ and/or the EPA.

The Endangered Species Act:
The applicant must verify that the proposed project will not affect any species listed as Endangered, Threatened, or Candidate by the United States Fish and Wildlife Service under the Endangered Species Act. The applicant must also verify that the proposed project will not affect any species listed as Endangered, Threatened, or Candidate by the Arizona Game & Fish under the Arizona Natural Heritage Program (HDMS).

Arizona Native Plant Law:
If the applicant's project will remove or destroy protected native plants over an area of right-of-way that exceeds one-fourth acre the Permittee shall notify the Arizona Department of Agriculture at lease 60 days prior to the start of construction to afford commercial salvagers the opportunity to remove and salvage these plants.

If the Encroachment is for an Industrial Development ADOT reserves the right to request and review the Industrial SWPPPs that discharges into ADOT's drainage facilities or that discharge to an MS4, as per 40 CFR Part 122.26.

An audit may be performed on environmental self certified parties by ADOT. The environmental responsible party will provide all necessary document for compliance upon request.

June 2002
Revised April 2004
Revised March 2007

Appendix A to Part 61—Professional Qualifications Standards

In the following definitions, a year of full-time professional experience need not consist of a continuous year of full-time work but may be made up of discontinuous periods of full-time or part-time work adding up to the equivalent of a year of full-time experience.

(a) History. The minimum professional qualifications in history are a graduate degree in history or closely related field; or a bachelor's degree in history or closely related field plus one of the following:

(1) At least two years of full-time experience in research, writing, teaching, interpretation or other demonstrable professional activity with an academic institution, historical organization or agency, museum, or other professional institution; or

(2) Substantial contribution through research and publication to the body of scholarly knowledge in the field of history.

(b) Archeology. The minimum professional qualifications in archeology area a graduate degree in archeology, anthropology or closely related field plus:

(1) At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management:

(2) At least four months of supervised field and analytic experience in general North American archeology; and

(3) Demonstrated ability to carry research to completion.

In addition, to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

(c) Architectural history. The minimum professional qualifications in architectural history are a graduate degree in architectural history, art history, history preservation, or closely related field, with coursework in American architectural history; or a bachelor's degree in architectural history, art history, history preservation, or closely related field plus one of the following:

(1) At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic institution, historical organization or agency, museum, or other professional institution; or

(2) Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

(d) Architecture. The minimum professional qualifications in architecture are a professional degree in architecture plus at least two years of full-time professional experience in architecture; or a State license to practice architecture.

(e) Historic Architecture. The minimum professional qualifications in historic architecture are a professional degree in architecture of State license to practice architecture, plus one of the following:

(1) At least one year of graduate study in architectural preservation, American architectural history, preservation planning, or closely related field; or

(2) At least one year of full-time professional experience on historic preservation projects. Such graduate study or experience shall include detailed investigations of historic structures, preparation of historic structures research reports, and preparation of plans and specification for preservation projects.

Attachment "A"

Archaeological Clearance Notification

Cultural survey specifications and responsibilities:
In accordance with the Arizona State Historic Preservation Act, ADOT must consider the effects of its actions, including the issuance of permits, on historic properties. It is the Permittee's responsibility to obtain documents indicating that the proposed permit would not affect historic properties or, if it would affect such properties, to provide documentation attesting to the mitigation of those effects, prior to beginning excavation work within ADOT Rights of Ways. Such documentation may include concurrence on the effect from the State Historic Preservation Office or a data recovery plan approved by the Arizona State Museum (in the case of mitigative data recovery).

Archaeological Features:
The attention of the Permittee is directed to the Arizona Revised Statutes §41-841 through 846 and §41-861 through 865. Violation of A.R.S §41-841 through 845 is a Class 2 misdemeanor. Violation of A.R.S. §41-861 through 865 can be classified as either a Class 1 misdemeanor or a Class 5 felony..

Section 6(a) of the Federal Archaeological Resources Protection Act of 1979 specifies that no person may excavate, remove, damage or otherwise alter or deface any archaeological resource located on public (Federal) lands or Indian lands unless such activity is pursuant to a permit issued under Section 4 of the Act. Violations of this act are considered a felony, and are punishable by fine and imprisonment.

Although the permittee will be responsible to make every effort prior to construction to identify all cultural resources in a permit area, previously unidentified archaeological materials could be found during the construction of the permit. When historic or archaeological features are encountered or discovered during any activity related to construction of the permit, the permittee shall stop work immediately at that location, and shall take all reasonable steps to secure the preservation of those features.

The permittee shall immediately contact ADOT's Historic Preservation Team, listed below and the ADOT District Permits Office that issued the permit and make arrangements for the proper treatment of such resources. The permittee shall not resume work until he/she is so directed by the Arizona Department of Transportation.

Ruth L. Greenspan
Acting Technical Section Manager
Environmental Planning Group
Arizona Department of Transportation
1611 W. Jackson Street, MD EM02
Phoenix, Arizona 85007
(602)712-6266 (voice)
(602)712-3066 (FAX)

INSTRUCTIONS AND INFORMATION NEEDED TO PROCESS AN ARIZONA DEPARTMENT OF TRANSPORTATION ENCROACHMENT PERMIT

To use State Highway Right-of-Way, an Encroachment permit is required. The following instructions will assist you in the completion of your permit application.

1. **NAME OF ENCROACHMENT OWNER** - Owner of, or person authorized to accept responsibility, during and following construction, of the encroachment.

2. **ADDRESS OF OWNER** - Where owner or authorized agent resides, and can receive correspondence. The permit applicant receives the copy of the permits. If the owner is not also the applicant and prefers to receive a copy of the permit from ADOT please indicate this when submitting your application. Standard distribution is to send the copy to the applicant who has been authorized to work as an agent on behalf of the owner.

3. **CITY, STATE, & ZIP CODE** - Of owners address.

4. **PHONE** - Phone number at which the owner may be contacted during working hours. If contact only after working hours list times available.

5. **SIGNATURE OF OWNER** - The signature of owner or owners' agent authorized to accept responsibility for owner. If agent signature is used provide documentation of agent authorization signed by owner.

6. **NAME OF APPLICANT** - Name of individual or firm applying for a permit on behalf of the owner. The applicant should be the individual or firm responsible for design and/or construction operations and accountable for the conditions of the permit. The applicant may be the same as the owner. In that care only enter and sign as owner, the write in "SAME AS OWNER" on the name of applicant line.

   If the work under the approved permit is to be awarded by contract, the applicant will be responsible to ensure the conditions of the permit are met by the contractor awarded the work.

7. **LEGAL RELATIONSHIP TO OWNER** - Contractor, Engineer, Developer or other.

8. **MAILING ADDRESS** - Applicants address where correspondence is received and/or applicant resides. (Permit, when complete, will be forwarded to the applicant at the address provided.)

9. **CITY, STATE, ZIP CODE** - Of applicant's address.

10. **PHONE** - Phone number where the applicant can be reached during working hours.

11. **SIGNATURE OF APPLICANT** - Authorized agent of the owner, responsible and accountable for the conditions of the permit. Please print name to the right.

12. **CITY** - City, or closest City, where permit work will be constructed.

13. **PROJECT NUMBER** - To be completed by ADOT.

14. **HIGHWAY ROUTE NUMBER** - State Highway Route, example: SR 77, I-10, B-19.

15. **APPROXIMATE FEET FROM MILE POST AND IN WHAT DIRECTION** - Milepost markers are located along the sides of every highway. They are green and white sign panels marked with the word mile and a number. Using this as a guide, a distance can be measured in feet from the marker to the proposed site to provide this information. An example might be: 123- feet east of MP 279.

16. **WHICH SIDE OF HIGHWAY (N.S.E.W.)** – Location of the permit work. Is the permit work located on the North, South, East or West side of the Highway? (Please circle)

17. **HIGHWAY STATION – To be completed by ADOT.** (If work is for ADOT construction projects, the Applicant can provide the Stationing.)

18. **PURPOSE** – This section must be a complete description of the work or activity you propose to do or conduct within the State's Right-of-Way. Examples are: Construct a 30' Asphalt turnout with 30' radii including fence and gate; install a commercial driveway for Big Burger Foods, 40' Asphalt with 40' radii; install underground utilities, etc.

ADDITIONAL REQUIREMENTS AND POLICIES ARE:

All permit applications are to be accompanied by five copies of readable sketches, plans, or drawings containing the following information:

A. Description and plat of property giving property lot measurements.

B. Show all buildings, etc. on property with distance to highway right-of-way.

C. Show all dimension measurements, widths, lengths, etc. of proposed construction work, distance between turnouts and driveways. Show distances from side property and right-of-way lines. The location of the facility to be placed in the right of way should be indicated (tied down to an ADOT station).

D. Show size, material, etc. of all pipe, water, sewer lines, power line, etc. for any underground facilities, whether for utilities or drainage.

E. All permits which request changing the geometrics of a State Highway as recommended by the traffic analysis must have plans prepared by a registered professional engineer, registered in the State of Arizona. Access requests that do not require a traffic analysis may be drawn by a registered engineer; however, it is not a requirement.

F. Permit work that may adversely impact the existing drainage patterns may require a Drainage Impact Analysis. If existing drainage patterns will be altered and an impact to the upstream and/or downstream properties or drainage facilities in eminent, at a minimum the drainage study required for the building permit from the local agency shall be submitted for review by ADOT. If a more in-depth Analysis is needed the Permittee will be advised by ADOT and the necessary submittals will be required.

G. When the geometrics of a state highway are changed, the Permittee will submit to ADOT a certificate of compliance, certifying all materials and all work done under the permit was in compliance with the approved plans and all conditions and requirements of the permit. This certificate of compliance will be signed and sealed by a Registered Professional Engineer registered in the State of Arizona.

H. Any excavation within ADOT right of way will require compliance with the Arizona State Historic Preservation Act.

I. The average processing time for a routine encroachment permits (minor utility installations, residential driveways, etc.) is 4 to 6 weeks. Please allow at least three weeks before calling the ADOT office concerning the status of your permit. Permits requiring additional and/or in-depth reviews such as traffic impact assessment, drainage impacts, or right of way as examples, will increase processing time by approximately six to eight weeks. The time involved in evaluating the permits is in most cases relative to the quality of the documentation submitted by the Permittee.

J. When submitting your application please indicate the time needed to do the proposed work. Encroachment permits have a life of 90 days, for construction, however if the

work is of such size additional time is needed, that can be given consideration. When the permit has reached its expiration date and no work has been started the permit will automatically be canceled. If work has been started but not yet completed, an extension of time will be considered after the Permittee notifies the ADOT office in writing as to the reason for the delay and the amount of time needed for completion of work.

K. The Permittee agrees by acceptance of a permit to the specifications and conditions of the approved permit. Additionally, the Permittee agrees to properly maintain any encroachment placed within ADOT Right of Way. This responsibility included removal of snow, ice or debris, repair of surfaces and keeping the encroachment in a safe condition for the general public. The owner of the permit is responsible for future maintenance of the encroachment. If work within the right of way is required to maintain or repair the encroachment a permit will be taken out to do so. Utility companies are encouraged to apply for a Blanket Maintenance permit for their facilities. These permits generally have a life of one year, or equal to the life of the company liability insurance certificate.

L. Mail all copies of application and attachments to:

ADOT Permits
2243 E. Gila Ridge Road
Yuma, AZ 85365

12.0 APPENDIX F – SONORAN DESERT TORTOISE GUIDELINES

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GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES
ENCOUNTERED ON DEVELOPMENT PROJECTS
Arizona Game and Fish Department
Revised October 23, 2007

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

The Sonoran population of desert tortoises occurs south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 40° Celsius (105° Fahrenheit) unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to one-half mile, but no further than necessary from its original location. If a release site, or alternate burrow, is unavailable within this distance, and ambient air temperature exceeds 40° Celsius (105° Fahrenheit), the Department should be contacted to place the tortoise into a Department-regulated desert tortoise adoption program. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, will also be placed in desert tortoise adoption programs. *Managers of projects likely to affect desert tortoises should obtain a scientific collecting permit from the Department to facilitate temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- These guidelines do not apply to the Mojave population of desert tortoises (north and west of the Colorado River). Mojave desert tortoises are specifically protected under the Endangered Species Act, as administered by the U.S. Fish and Wildlife Service.

- These guidelines are subject to revision at the discretion of the Department. We recommend that the Department be contacted during the planning stages of any project that may affect desert tortoises.

- Take, possession, or harassment of wild desert tortoises is prohibited by state law. Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.