

Corridor 41-47

Davis - Prescott

Introduction

Corridor 41-47 extends eastward in west central Arizona, beginning near the junction of Corridors 27-41 and 41-46 near Bullhead City, and ending east of Kingman where BLM-administered lands are no longer available (Figures 1 and 2). The width is 5,280 ft throughout the corridor, consistent with existing plans. The corridor was designated in a resource management plan prior to designation as a Section 368 corridor. Corridor 41-47 is designated multi-modal and can therefore accommodate both electrical transmission and pipeline projects. The corridor spans 31.3-miles, with 13.7 miles designated on BLM-administered lands. The corridor's area is 8,270 acres or 12.9 square miles. It is entirely in Mohave County, Arizona, under the jurisdiction of the BLM Colorado River District and the Kingman Field Office. This corridor is entirely in Region 1.

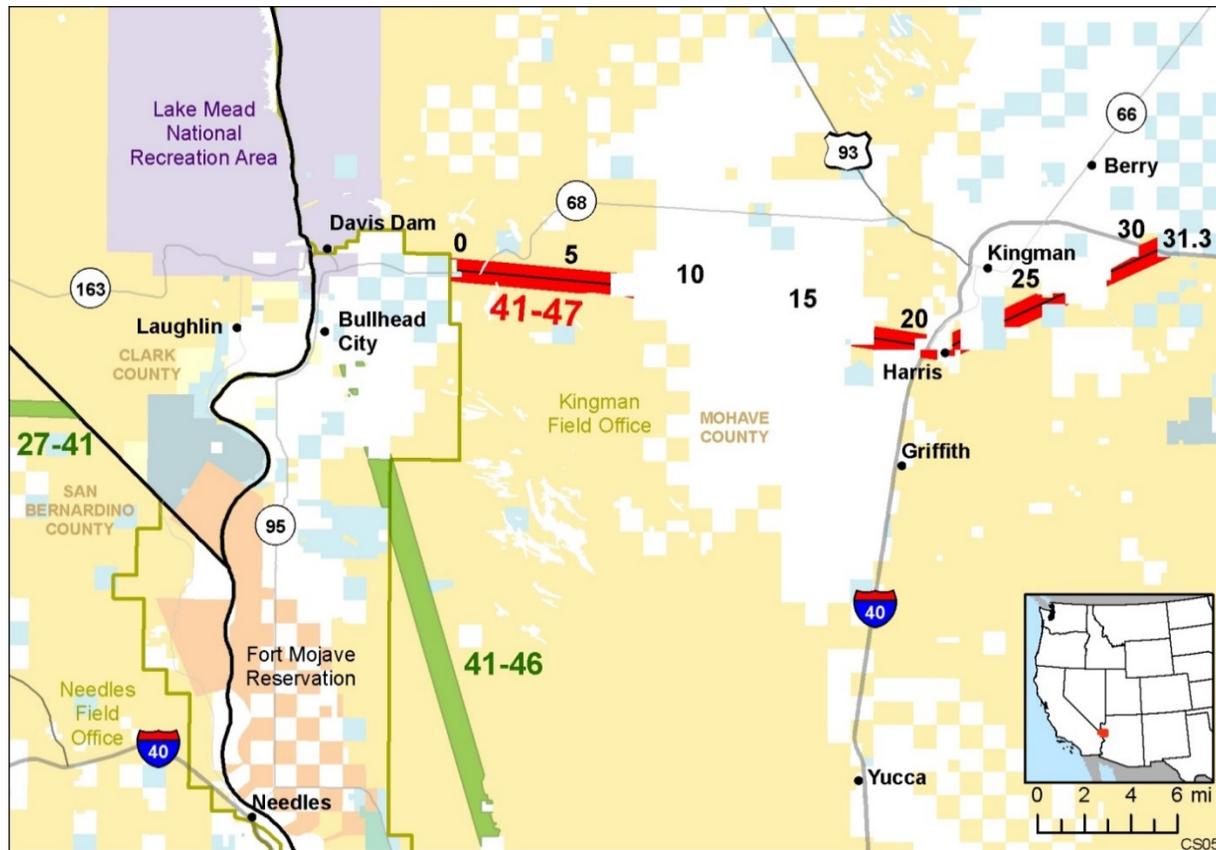
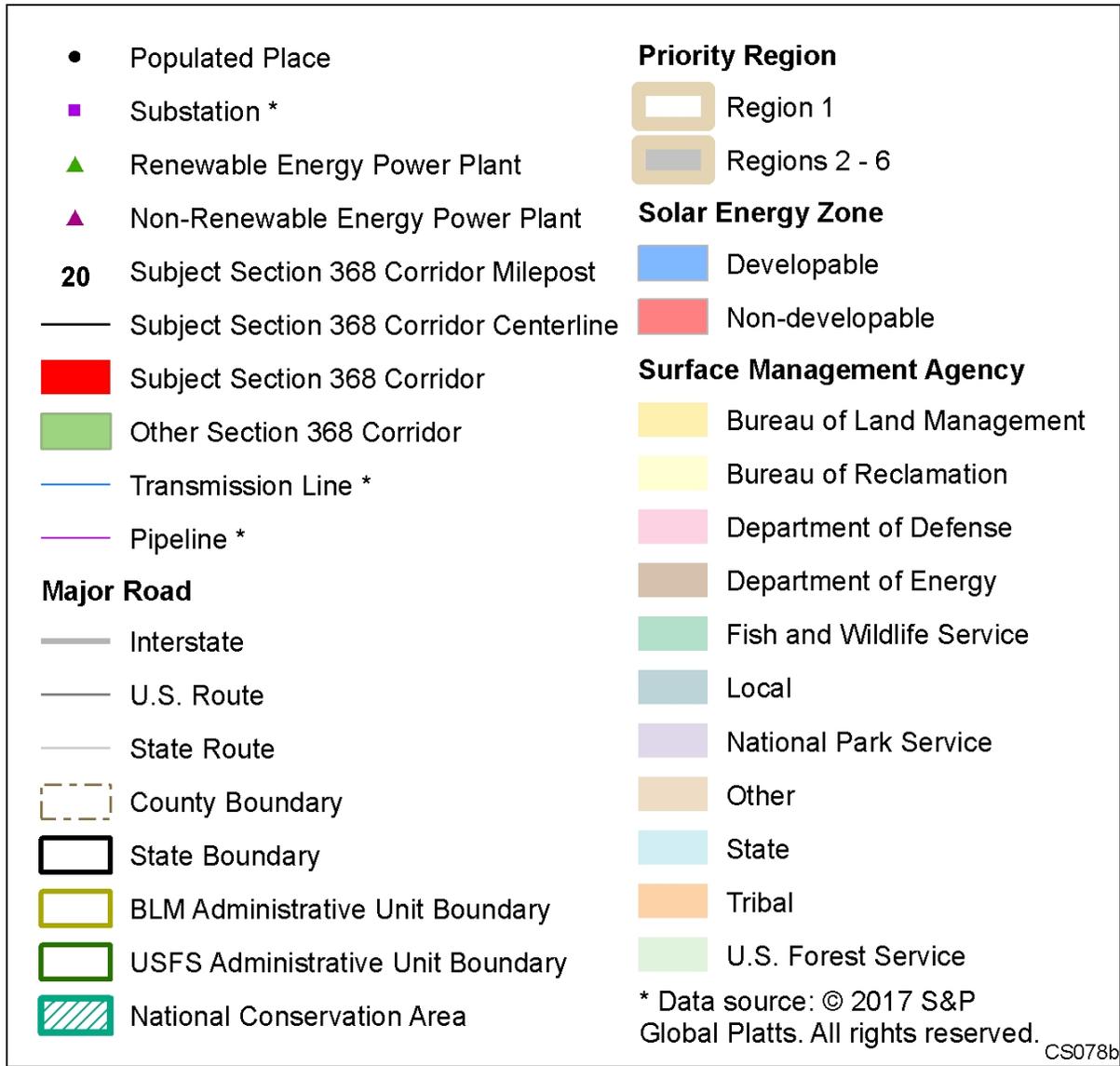


Figure 1. Corridor 41-47



Key

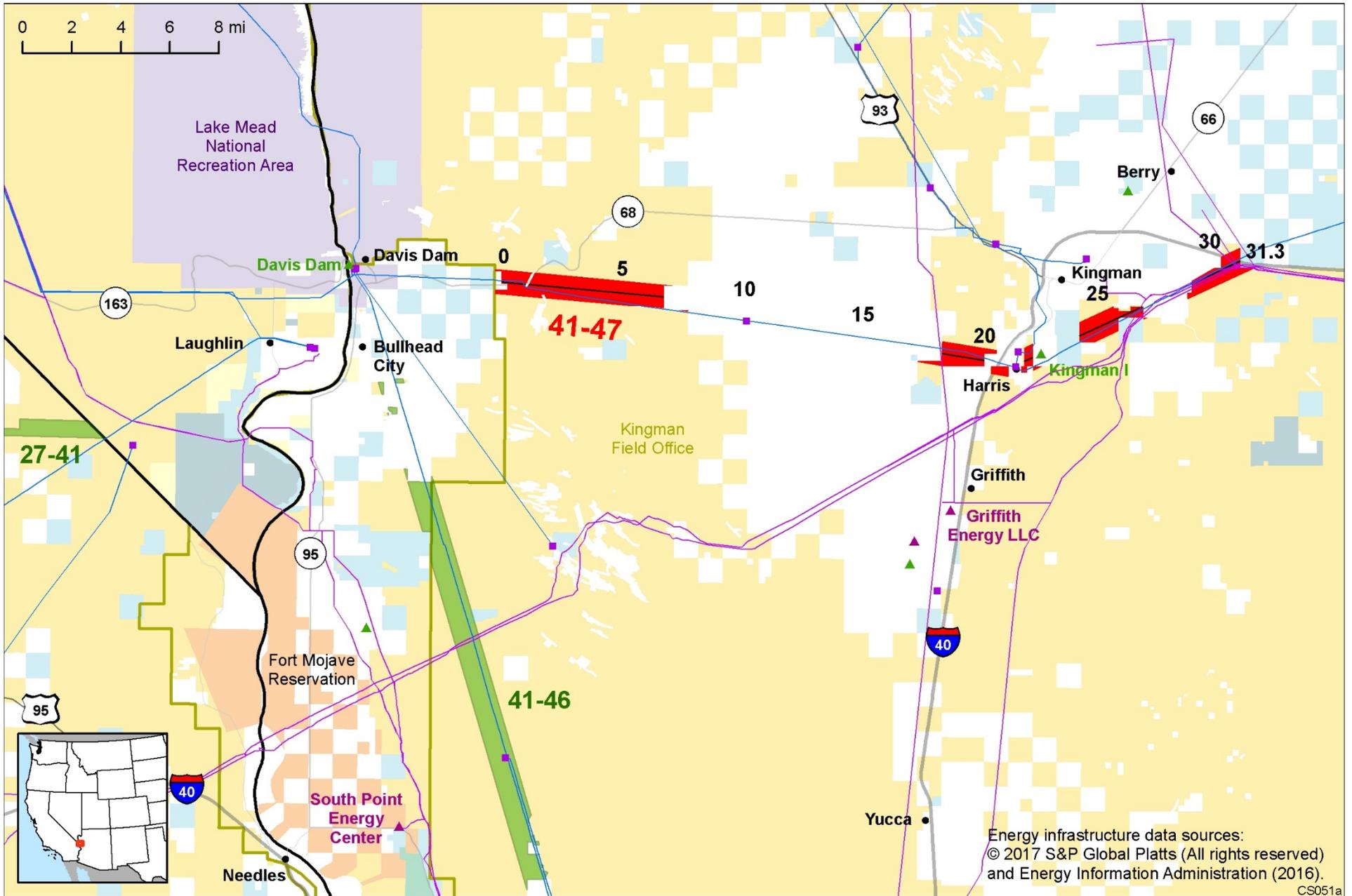


Figure 2. Corridor 41-47, Including Existing Energy Infrastructure

Corridor Rationale

During scoping for the WWEC PEIS, routes generally following this corridor were suggested by the Arizona Public Service Company; National Grid; New Mexico Energy, Minerals, and Natural Resources Department; and Western Utility Group. The corridor was designated to include existing infrastructure and to provide a pathway for additional energy transport.

Existing Infrastructure: The entire corridor is occupied by existing infrastructure. This infrastructure includes transmission lines owned by Mohave Electric Cooperative Inc. (69 kV) and Western Area Power Administration (69 and 230 kV), and another transmission line whose owner and capacity are unknown. Seven natural gas pipelines owned by El Paso Natural Gas Company (4.5-, 24-, 24-, and 36-inch diameters), Questar Pipeline Company (16-inch diameter), and Transwestern Pipeline Company, LLC (two 30-inch-diameter lines) are in the corridor from MP 26.4 to MP 31.3. The Kingman 1 power plant (wind and solar) is within an undesignated corridor segment at MP 22, La Senita (solar) power plant is 4.5 miles north of MP 26.4, and Davis Dam (hydroelectric) is 5.8 miles west of the western end of the corridor.

Potential Future Development: The February 2014 Summary of Pending BLM Projects lists a 600-kV transmission line for Corridors 41-47 and 47-231, but this line was not mentioned during interviews for the Corridor Study. Platts data show conceptual routes for planned projects by Tucson Electric Power Company and Western Area Power Administration that are near the corridor or cross it. Proposed out-of-state transmission projects that could affect this corridor include the Southwest Intertie Project, TransWest Express Transmission Project, and Zephyr Power Transmission Project.

Corridor of Concern Status

Corridor 41-47 is a corridor of concern. Concerns regarding impacts on the Black Mountain population of Desert Tortoise were identified in the Settlement Agreement (however, the USFWS determined that listing of the Black Mountain population of Desert Tortoise under ESA was not warranted). This concern is highlighted in yellow in the Corridor Analysis table below. While Desert Tortoise habitat exists near the corridor, the mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid Desert Tortoise habitat.

Corridor Abstract Update

New data have been added to the Section 368 Energy Corridor Mapping Tool since the release of the draft abstracts in September 2016. A GIS view identifying high-, medium-, and low-conflict areas consistent with the screening criteria in 43 CFR 2804.35(a)-(c) has also been added to the mapping tool. A complete description of the mapping tool; the high-, medium-, and low-conflict areas; and a list of the GIS data sources are included in the report for the Region 1 Regional Review.

Additions to the corridor analysis table, based on input from stakeholders and additional Agency analysis, include special-status species, specially designated areas, visual resources, and interagency operating procedures.

Revisions, deletions, or additions to Section 368 energy corridors would be made only during the land use planning process through a plan amendment or a plan revision. However, the Settlement Agreement sets forth a systematic process for the Agencies to review Section 368 energy corridors and provide recommendations for revisions, deletions, or additions to the corridors. There were stakeholder recommendations in the 2014 RFI to reroute this corridor to avoid the Black Mountain population of Desert Tortoise and Sonoran Desert Tortoise Category I and II Habitat. There were no suggestions for corridor revision,

deletion, or addition in response to the release of the draft abstracts. On the basis of Agency analysis of these issues, corridor revision, deletion, or addition is not recommended for Corridor 41-47.

Corridor Analysis

The corridor analysis table below identifies concerns affecting Corridor 41-47, the locations of the concerns within the corridor, and the results of the analysis of the concerns by the Agencies. Concerns are checked if they are known to apply to the corridor.

Energy Planning Opportunities

- Appropriate and acceptable uses
- WVEC purpose (e.g., renewable energy)
- Transmission and pipeline capacity opportunity

Energy Planning Concerns

- Physical barrier
- Jurisdictional concern
- Corridor alignment and spacing
- Transmission and pipeline capacity concerns

Land Management Responsibilities and Environmental Concerns

- Acoustics
- Air quality
- Climate change
- Cultural resources
- Ecological resources
- Environmental justice
- Hydrological resources
- Lands and realty
- Lands with wilderness characteristics

- Livestock grazing
- Paleontology
- Public access and recreation
- Socioeconomics
- Soils/erosion
- Specially designated areas
- Tribal concerns
- Visual resources
- Wild horses and burros

Interagency Operating Procedures

REGION 1 CORRIDOR 41-47 – ANALYSIS TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Concern	Corridor Location (by Milepost [MP])	Source: Context	Agency Review and Analysis
ENERGY PLANNING OPPORTUNITIES							
<i>WVEC Purpose</i>							
41-47 .001	BLM	Kingman FO	Mohave, AZ	Renewable-energy potential	Entire corridor	RFI: the corridor could be a pathway to Las Vegas or California, but is not identified as a priority by Arizona utilities or solar developers.	Opportunity exists for the corridor to accommodate transmission tied to renewable-energy development.
ENERGY PLANNING CONCERNS							
<i>Corridor Alignment and Spacing</i>							
41-47 .002	BLM	Kingman FO	Mohave, AZ	Multiple transmission line and pipeline projects	MP 21.5 to MP 31.3	GIS Analysis: multiple transmission line and pipeline projects within and crossing the corridor.	Proposed project siting and collocation alternatives to address impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

REGION 1 CORRIDOR 41-47 – ANALYSIS TABLE

ID	Agency	Agency Jurisdiction	County	Primary Concern	Corridor Location (by Milepost [MP])	Source: Context	Agency Review and Analysis
LAND MANAGEMENT RESPONSIBILITIES AND ENVIRONMENTAL CONCERNS							
<i>Ecology: Special Status Animal Species</i>							
41-47.003	BLM	Kingman FO	Mohave, AZ	Distribution of Black Mountain population of tortoises	MP 0 to MP 8	Settlement Agreement; RFI: Limited data are available on distribution of the Black Mountain population of tortoises. Listing as a distinct population is a possibility. Reroute to avoid population areas without existing transmission, and minimize additional transmission siting in these areas. Comment on corridor abstract: BLM should perform studies to determine the regional extent and specific identities of the “Black Mountain population” of tortoises, which will require genetic studies to determine geographical boundaries between the two species. Once these data are acquired, the BLM must then initiate formal consultation with the USFWS to determine if these tortoises warrant listing as a Threatened or Endangered distinct population.	USFWS determined that listing of this population of desert tortoise under ESA was not warranted. The Black Mountain population of Desert Tortoise is a BLM sensitive species, subject to conservation measures regardless of taxonomy. BLM will consult on ESA-listed and proposed species during individual project reviews. While Desert Tortoise habitat exists near the corridor (according to available GIS data, no habitat is mapped within the designated corridor), there is no nearby alternative route that would avoid tortoise habitat and provide a pathway for additional energy transport in a corridor with existing infrastructure.
41-47.004	BLM	Kingman FO	Mohave, AZ	Sonoran Desert Tortoise Category I or II Habitat	Corridor does not intersect Category I or II Habitat, but does come within 0.5 miles of Category II Habitat.	RFI: Reroute to avoid siting new facilities in Sonoran Desert Tortoise Category I and II Habitat without existing transmission, and minimize additional transmission siting in these areas.	BLM will consult on ESA-listed and proposed species during individual project reviews. While Desert Tortoise habitat exists near the corridor, there is no nearby alternative route that would avoid tortoise habitat and provide a pathway for additional energy transport in a corridor with existing infrastructure.
41-47.005	BLM	Kingman FO	Mohave, AZ	Arizona Game and Fish Department	MP 0.0 to MP 0.5, MP 0.8 to MP 2.8,	GIS Analysis: Corridor intersects Arizona missing linkages (Mt.	Impacts would be analyzed and mitigated as part of the project-

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ID	Agency	Agency Jurisdiction	County	Primary Concern	Corridor Location (by Milepost [MP])	Source: Context	Agency Review and Analysis
				(AGFD)-identified wildlife corridor	MP 3.2 to MP 4.0, MP 5.3 to MP 6.7, MP 16.7 to MP 18.8, and MP 22.3 to MP 24.5	Perkins – Warm Springs Linkage and Cerbat – Hualapai Linkage).	specific environmental review required under NEPA and other Federal laws. Impacts on habitat connectivity can be avoided, minimized, or mitigated through consultation with the USFWS during individual project reviews.
41-47.new1	BLM	Kingman FO	Mohave, AZ	Black Mountain Range and critical Desert Bighorn Sheep habitat	Not specified	Comment on abstract: Corridor traverses the Black Mountain Range and critical Desert Bighorn Sheep habitat.	Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Impacts on habitat and habitat connectivity can be avoided, minimized, or mitigated through consultation with the USFWS during individual project review.
Hydrology: Surface Water							
41-47.006	BLM	Kingman FO	Mohave, AZ	Intermittent Stream: Sacramento Wash	MP 11.6	GIS Analysis: Intermittent Stream: Sacramento Wash intersects undesignated corridor segment.	Linear ROWs can either span intermittent streams or be buried underneath them.
Lands and Realty: Rights-of-Way and General Land Use							
41-47.007	BLM	Kingman FO	Mohave, AZ	Land ownership	Scattered throughout corridor	GIS Analysis: A total of 64 acres which were originally designated as part of this corridor are no longer on Federal land, according to the 5/12/2015 version of Surface Management Agency data.	BLM would consider adjusting the corridor designation in a future RMP amendment to be consistent with the current jurisdiction, possibly during future project implementation.
41-47.008	BLM	Kingman FO	Mohave, AZ	BLM jurisdiction	MP 25.6 to MP 26.9	GIS Analysis: A 56-acre area in line with the corridor route is shown as BLM-administered in the 5/12/2015 version of Surface Management Agency data, but was not designated in the WVEC PEIS ROD.	BLM would consider adjusting the corridor designation in a future RMP amendment to be consistent with the current jurisdiction, possibly during future project implementation.
Lands and Realty: Transportation							
41-47.009	BLM	Kingman FO	Mohave, AZ	State Highway 68	MP 0.0 to MP 1.4	GIS Analysis.	In accordance with BLM ROW regulations, adjacent ROW holders would be notified.

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ID	Agency	Agency Jurisdiction	County	Primary Concern	Corridor Location (by Milepost [MP])	Source: Context	Agency Review and Analysis
41-47 .010	BLM	Kingman FO	Mohave, AZ	I-40	MP 20.3 to MP 20.8 and MP 30.7 to MP 31.3	GIS Analysis: I-40 crosses corridor	The existing 230-kV line spans I-40. In accordance with BLM ROW regulations, adjacent ROW holders would be notified.
41-47 .011	BLM	Kingman FO	Mohave, AZ	Railroad	MP 20.4 to MP 21.5	GIS Analysis: Railroad crosses corridor.	In accordance with BLM ROW regulations, adjacent ROW holders would be notified.
Public Access and Recreation							
41-47 .012	BLM and Private	Kingman FO	Mohave, AZ	Unofficial recreation trail (for OHVs) called Arizona Peace Trail.	MP 0 to MP 5 (BLM), MP 18 to MP 20 (BLM), and MP 6 to MP 17 (Private). The trail follows the existing transmission line.	GIS Analysis and Website (http://www.arizonapeacetrail.com/).	The proposed Arizona Peace Trail will be incorporated into BLM travel management planning when and if it is formally designated. Use of these routes, along with stakeholder comments, will be considered in project permitting regardless of the status of any formal designation.
Specially Designated Areas							
41-47 .013	BLM	Kingman FO	Mohave, AZ	Black Mountains ACEC	MP 0.7 to MP 6.6	RFI: Intersects Black Mountains ACEC.	Kingman RMP provides for routing major ROWs in corridors in ACECs, including Black Mountain ACEC. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.
41-47 .014	BLM	Kingman FO	Mohave, AZ	Mount Nutt Wilderness Area	MP 5.6 to MP 7.7	Corridor Study: The corridor is adjacent to special management areas (Mount Nutt Wilderness Area).	When Wilderness was designated in 1990 under the Arizona Desert Wilderness Act, many ROWs served as boundaries to the Wilderness Areas and pre-date the Wilderness designation. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

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41-47 .015	BLM	Kingman FO	Mohave, AZ	Historic Route 66 National Scenic Byway	MP 20.0 to MP 21.0	GIS Analysis: Corridor crosses the National Scenic Byway.	The Agencies would need to review the Arizona Department of Transportation Route 66 Corridor Management Plan as part of project- specific environmental analysis required under NEPA and other Federal laws.
INTERAGENCY OPERATING PROCEDURES (IOPS, OR BEST MANAGEMENT PRACTICES)							
41-47 .020				Require IOPs to address ACEC and Desert Tortoise habitat (in consultation with USFWS).		RFI.	There is an existing IOP that addresses important, sensitive, or unique habitats and BLM-special-status, USFWS-sensitive, and state-listed species. Resource management plans specify the management prescriptions of individual ACECs.
41-47 .new2				Pipeline trenching and avian contact with powerlines		Comment on corridor abstract: recommend guidelines for reducing impacts to wildlife, including Guidelines for Handling Sonoran Desert Tortoise Encountered on Development Project; Desert Tortoise Survey Guidelines for Environmental Consultants; and Burrowing Owl Project Clearance Guidelines for Landowners. Consider placing all connecting power lines associated with development underground, unless burial of the lines would result in greater impacts to biological or archaeological resources, or the terrain is prohibitive for such action. All aboveground lines, transformers, and conductors should comply with the Avian Power Line Interaction Committee (APLIC) 2006/2012 standards.	Guidance for reducing impacts and project approvals would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

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41-47 .new3				Minimize habitat alterations		Comment on corridor abstract: follow existing disturbed areas during installation. In low areas where the power line crosses drainages, the soil should be compacted to reduce the potential for erosion.	According to policy, BLM would apply the mitigation hierarchy to avoid, minimize, and mitigate impacts. Habitat alterations from development within the corridor and soil erosion would be addressed as part of the project-specific environmental review required under NEPA and other Federal laws. The Agencies encourage development alongside existing infrastructure, and that is one reason Corridor 41-47 was designated in the West-wide Energy Corridor PEIS.
41-47 .new4				Trenching		Comment on corridor abstract: trenching and backfilling crews should be close together to minimize the amount of open trench at any given time, and should operate during the cooler months when wildlife is less active. Avoid leaving trenches open overnight, as wildlife may become trapped. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 150 ft. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The slope should be less than 45 degrees (1:1). Trenches that have been left open overnight should be inspected and animals removed prior to backfilling.	Best management practices would be analyzed as part of the project-specific environmental analysis required under NEPA and other Federal laws.
41-47 .new5				Bighorn Sheep habitat		Comments on corridor abstracts: corridor traverses the Black Mountain Range and critical Desert Bighorn Sheep habitat. Recommend	Best management practices would be analyzed as part of the project-specific environmental review

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						keeping major project disturbances to a minimum during the Desert Bighorn Sheep lambing season, which peaks from late December to early March.	required under NEPA and other Federal laws.
Visual Resources							
41-47 .017	BLM	Kingman FO	Mohave, AZ	VRM Class II	MP 0 to MP 7.6 and MP 19.9 to MP 27.0	GIS Analysis.	VRM class objectives are binding land use plan decisions. Transmission facilities must demonstrate that they will conform to the VRM decisions in the land use plan through a hard-look visual impacts analysis outlined in BLM VRM Contrast Rating Handbook H 8431-1 (VRM Manual Section (MS) 8400, BLM 1986). Minimizing visual contrast remains a requirement of applicable VRM class objectives even when the proposed action is in conformance with these VRM class objectives (VRM MS-8400). Between MP 25 and MP 27, consider changing the VRM Class II areas to VRM Class III areas to create a seamless connection between Class VRM III and VRM IV.
41-47 .016	BLM	Kingman FO	Mohave, AZ	VRM Class III	MP 0 to MP 0.8, MP 21.6 to MP 25.8, and MP 29.2 to MP 30.9	GIS Analysis.	
41-47 .019	BLM	Kingman FO	Mohave, AZ	VRM Class IV	MP 17.3 to MP 22.0 and MP 26.9 to MP 31.4	GIS Analysis.	While VRM Class IV objectives allow for major modification to occur and management activities may dominate the view, minimizing visual contrast remains a requirement of these VRM class objectives. Ratings are required in areas of high sensitivity or high impact (VRM MS-8400).

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ID	Agency	Agency Jurisdiction	County	Primary Concern	Corridor Location (by Milepost [MP])	Source: Context	Agency Review and Analysis
<i>Other Issues</i>							
41-47 .new6						Input was provided clarifying existing capacity and potential for new capacity.	The input provided by stakeholders regarding existing capacity and potential for future capacity has been added to the corridor abstracts and has been considered in the Agencies' analysis.

Abbreviations: ACEC = Area of Critical Environmental Concern; BLM = Bureau of Land Management; ESA = Endangered Species Act; FO = Field Office; GIS = geographic information system; IOP = Interagency Operating Procedures; MP = milepost; NEPA = National Environmental Policy Act; OHV = Off-Highway Vehicle; PEIS = Programmatic Environmental Impact Statement; RFI = Request for Information; RMP = Resource Management Plan; ROW = right-of-way; TCA = Tortoise Conservation Area; USFS = Forest Service; USFWS = U.S. Fish and Wildlife Service; VRM = Visual Resource Management; WWEC = West-wide Energy Corridor