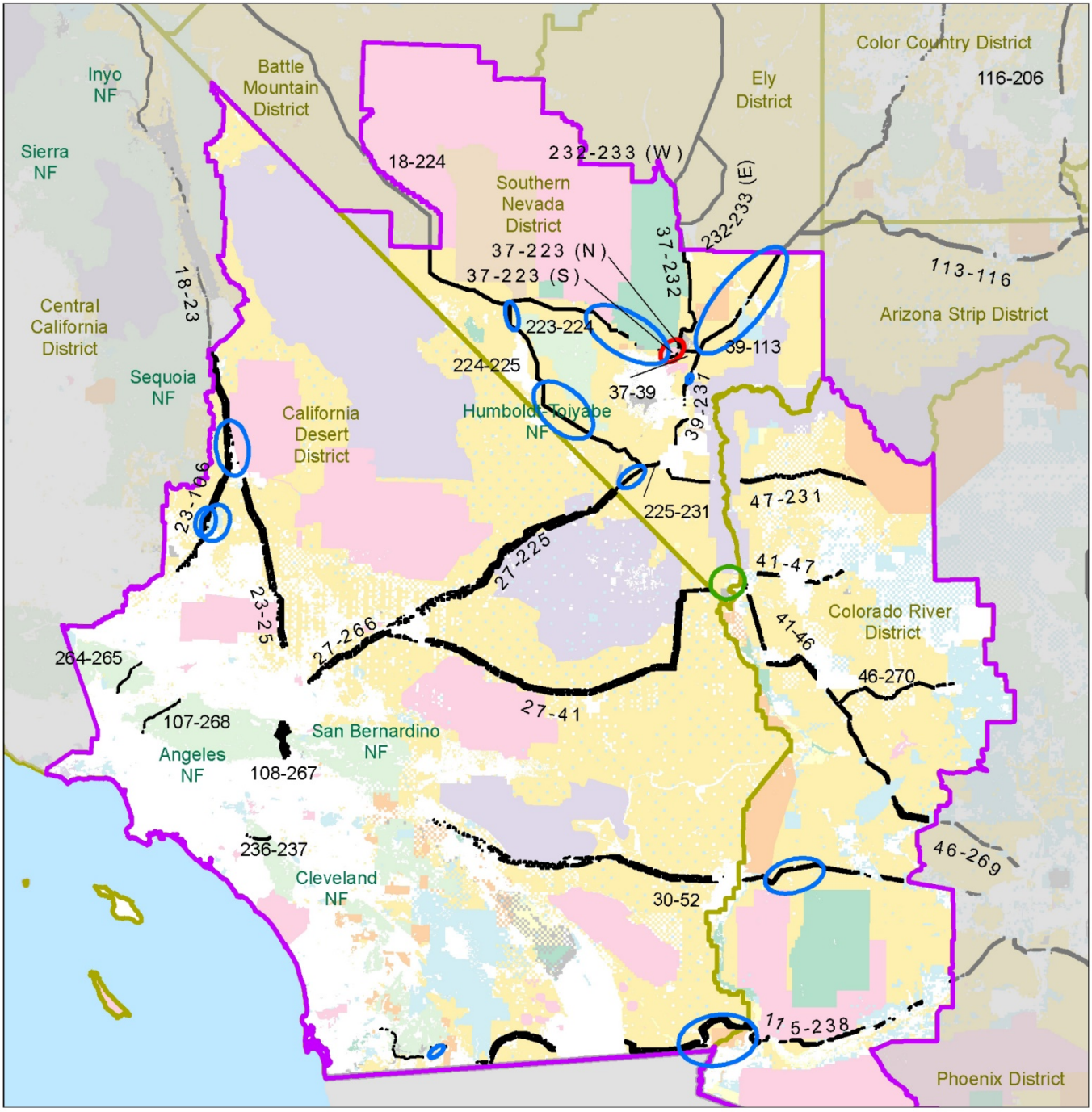
June 2019

REGION 1 REPORT

Section 368 Energy Corridor Review



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Acronyms, Initialisms, and Abbreviations

ACEC	Area of Critical Environmental Concern
AFB	Air Force Base
AGFD	Arizona Game and Fish Department
AGL	above ground level
BCCE	Boulder City Conservation Easement
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	best management practices
BOR	Bureau of Reclamation
CAISO	California Independent System Operator
CDCA	California Desert Conservation Area
CDNCL	California Desert National Conservation Land
CEC	California Energy Commission
CFR	Code of Federal Regulations
CHAT	Crucial Habitat Assessment Tool
CHU	critical habitat unit
CMA	conservation and management action
CMP	Corridor Management Plan
CPW	citizen-proposed wilderness
DC	direct current
DFA	development focus area
DLA	designated leasing area
DNWR	Desert National Wildlife Range
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DRECP	Desert Renewable Energy Conservation Plan
EIS	Environmental Impact Statement
EITP	Eldorado-Ivanpah Transmission Project
EPA	U.S. Environmental Protection Agency
EPAct	Energy Policy Act of 2005
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FLPMA	Federal Land Policy and Management Act
GIS	geographic information system
HMA	Herd Management Area
HSR	Hypothetical Study Range
IM	Instruction Memorandum
IOP	Interagency Operating Procedure
ISA	Instant Study Area
KOP	key observation point
LADWP	Los Angeles Department of Water and Power
LCRMSCP	Lower Colorado River Multi-Species Conservation Program
LLPA	Legislatively and Legally Protected Area
LTVA	Long-term Visitor Area
LUPA	Land Use Plan Amendment
MOA	Military Operation Area
MOU	Memorandum of Understanding
MP	milepost
MSHCP	Multiple Species Habitat Conservation Plan
MTNM	Mojave Trails National Monument
NCA	National Conservation Area
NCL	National Conservation Land
NEPA	National Environmental Policy Act
NFS	National Forest System
NGO	nongovernmental organization
NHPA	National Historic Preservation Act
NHT	National Historic Trail
NLCS	National Landscape Conservation System
NPS	National Park Service
NRA	National Recreation Area
NREL	National Renewable Energy Laboratory
NST	National Scenic Trail
NTSA	National Trails System Act
NTTR	Nevada Test and Training Range
NWR	National Wildlife Refuge

OHV	off-highway vehicle
OSNHT	Old Spanish National Historic Trail
OST	Office of Special Trustee for American Indians
PCTA	Pacific Crest Trail Association
PEIS	Programmatic Environmental Impact Statement
PSD	prevention of significant deterioration
RDEP	Restoration Design Energy Project
REDA	Renewable Energy Development Area
RETI	Renewable Energy Transmission Initiative
RFI	Request for Information
RMP	Resource Management Plan
ROD	Record of Decision
ROW	right-of-way
RPS	Renewable Portfolio Standard
SCE	Southern California Edison
SDG&E	San Diego Gas & Electric Company
SEZ	solar energy zone
SIO	scenery integrity objective
SMS	scenery management system
SNWA	Southern Nevada Water Authority
SRMA	Special Recreation Management Area
SVRA	State Vehicular Recreation Area
SWIP	Southwest Intertie Project
TAFA	Transmission Assessment Focus Area
TCA	Tortoise Conservation Area
TCP	Traditional Cultural Property
TUC	transportation and utilities corridor
TWS	The Wilderness Society
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VEA	Valley Electric Association, Inc.
VPL	Variance Process Land
VRM	Visual Resource Management
WECC	Western Electricity Coordinating Council
WSA	Wilderness Study Area
WSR	Wild and Scenic River
YPG	Yuma Proving Ground

Units of Measure

ft	foot, feet
km^2	square kilometer(s)
kV	kilovolt(s)
m	meter(s)
mi^2	square mile(s)
MW	megawatt(s)

Executive Summary

On behalf of the Section 368 Interagency Workgroup, comprising the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the U.S. Department of Energy, and in response to the 2012 Settlement Agreement, this report is presented for the intended purpose of supporting enhancements to the West-wide energy corridor network across the western United States. The 2012 Settlement Agreement did not change or nullify the energy corridors but provided four foundational principles for subsequent corridor reviews. The report was developed collaboratively with State and tribal governments, the energy industry, nongovernmental organizations, local communities, and other Federal agencies. The findings will be used to improve the West-wide energy corridor network, advancing the Presidential priorities to improve the Federal environmental review and permitting for infrastructure projects, outlined in Executive Order 13807.

The Region 1 report evaluates energy corridor placement on Federal lands managed by both the BLM and the USFS across portions of southern California, southern Nevada, and western Arizona. In compliance with the settlement, the Agencies identify opportunities for energy corridor revisions, deletions, and additions for consideration during future land use planning at the local level. The regional reviews are evaluated within the context of the Departments of the Agriculture, Energy, and Interior priorities and goals. These include administering the appropriate development of all forms of energy on our Federal lands as well as implementing the John D. Dingell, Jr. Conservation, Management, and Recreation Act. The specific findings of the regional review are found in Section 3, Table 3-1 of this report and are summarized as follows: ten potential corridor revisions in Nevada, California, and Arizona; one potential deletion of a 0.6 mile corridor segment in the vicinity of Las Vegas; one potential addition to a corridor originating in California to link to corridors in Arizona, and no changes identified for the 13 remaining corridors. More detailed summaries for all the corridors reviewed are found in Section 3.4. The specific considerations identified by the Agencies appropriately balance the need for safe and reliable energy connectivity with concerns over potential impact on public lands and National Forest System lands.

The Section 368 Workgroup also proposes three updates to interagency operating procedures, which are best management practices for improving consistency across BLM and the USFS in processing applications for use of the Section 368 energy corridors. The potential revisions as well as three new interagency operating procedures are presented in Section 3.3.

In addition, the Agencies developed a publicly accessible geographic information system tool for the review process that will improve future management of the corridors and facilitate their use by industry.

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1. Introduction and Background

This report provides a review of the Region 1 Section 368 energy corridors and presents descriptions of potential corridor revisions, deletions, or additions for consideration during future agency land use planning. The report also presents potential changes to interagency operating procedures (IOPs). Throughout the Region 1 Review, the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the U.S. Department of Energy (DOE), hereafter referred to collectively as "the Agencies," analyzed the 24 West-wide energy corridors located within Region 1 in southern California, southern Nevada, and western Arizona (Figure 1-1). The potential revisions, deletions, or additions described by this report for local BLM and USFS land managers to consider include ten potential corridor revisions, one potential corridor segment deletion, and one corridor addition. In addition, the Agencies propose revising three IOPs and adding three IOPs (see Section 3 for the Region 1 considerations).

1.1 Background

1.1.1 West-wide Energy Corridor Programmatic Environmental Impact Statement

In accordance with Section 368 of the Energy Policy Act of 2005 (EPAct), the BLM and USFS designated energy corridors (commonly referred to as "Section 368 energy corridors" or "West-wide energy corridors") for potential placement of future oil, gas, and hydrogen pipelines and electricity transmission and distribution infrastructure. A programmatic environmental impact statement (PEIS) provided a detailed environmental analysis at the programmatic level of the Section 368 energy corridor designations. Approximately 5,000 miles of Section 368 energy corridors were designated on BLM-administered lands in the 11 contiguous western States, through a 2009 Record of Decision (ROD) that amended 92 land use plans. The USFS issued a ROD, amending 38 National Forest land management plans and designating approximately 1,000 miles of Section 368 energy corridors in 10 western States. The energy corridors are preferred locations for energy transport projects on lands managed by the BLM and USFS. Documents related to the PEIS are available on the West-wide Energy Corridor Information Center website (project website) at www.corridoreis.anl.gov/eis/guide/index.cfm.

1.1.2 Lawsuit and Settlement Agreement

On July 7, 2009, several organizations and San Miguel County, Colorado, filed a lawsuit against the Agencies in the United States District Court for the Northern District of California challenging the Section 368 energy corridor designations identified in the PEIS and RODs on the grounds that the RODs violated the EPAct, National Environmental Policy Act (NEPA), Endangered Species Act (ESA), the Federal Land Policy and Management Act (FLPMA), and the Administrative Procedure Act. On July 3, 2012, the

Figure 1-1 Priority Regions for Regional Reviews

Agencies entered into a settlement agreement with the plaintiffs (Settlement Agreement) providing that the agencies would periodically review the energy corridors.[1] The Settlement Agreement did not result in changes to the Section 368 energy corridors, nor did it nullify any decisions in the RODs. Among other stipulations that the Federal agencies have satisfied, the Settlement Agreement required the Agencies to establish an interagency memorandum of understanding (Interagency MOU) to explain how the Agencies will conduct periodic regional reviews of the energy corridors, guided by siting principles outlined in the Settlement Agreement. The resultant Interagency MOU outlined the general process for conducting regional reviews, the types of information and data to be considered in regional reviews, and the process for addressing any resulting potential energy corridor revisions, deletions, or additions in subsequent BLM and USFS land use planning.

A primary objective of the regional reviews is to evaluate the energy corridors for any potential revisions, deletions, and additions based on the following Settlement Agreement siting principles:

1. "*Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment*";
2. "*Corridors promote efficient use of the landscape for necessary development*";
3. "*Appropriate and acceptable uses are defined for specific corridors*"; and
4. "*Corridors provide connectivity to renewable energy generation to the maximum extent possible while also considering other sources of generation, in order to balance the renewable sources and to ensure the safety and reliability of electricity transmission."*

See Appendix A for a detailed presentation of the Agencies' use of the siting principles in developing potential revisions, deletions, or additions to Region 1 Section 368 energy corridors. Additional information on the Settlement Agreement can be found on the project website at http://corridoreis.anl.gov/regional-reviews/settlement/.

1.1.3 Corridor Study

The Corridor Study evaluated how well the energy corridors are achieving their intended purpose of promoting environmentally responsible right-of-way (ROW) siting decisions and reducing the proliferation of dispersed ROWs across Federal lands. The Corridor Study established baseline data for use in evaluating the corridors and identified considerations that should be explored in more detail during the regional reviews. The Agencies published a Request for Information (RFI) in March 2014 (BLM, USFS, and DOE 2014) to solicit information from interested stakeholders. The Corridor Study covered the period from January 2009 to October 2014 and can be found on the project website at http://corridoreis.anl.gov/regional-reviews/corridor-study/.

[1] Plaintiffs include The Wilderness Society, BARK, Center for Biological Diversity, Defenders of Wildlife, Great Old Broads for Wilderness, Klamath-Siskiyou Wildlands Center, National Parks Conservation Association, National Trust for Historic Preservation, National Resources Defense Council, Oregon Natural Desert Association, Sierra Club, Southern Utah Wilderness Alliance, Western Resource Advocates, Western Watersheds Project, and County of San Miguel, Colorado.

1.2 Overview of Regional Reviews

1.2.1 Scope

The purpose of the corridor reviews is to examine current relevant information and stakeholder input on the energy corridors, including corridors of concern, and, based on this information, to develop potential revisions, deletions, or additions to the corridors and modifications to the IOPs. A corridor revision involves potential corridor rerouting; a corridor deletion involves potential removal of all or part of a corridor; and a corridor addition involves potential extension of a corridor or designation of a new corridor. Figure 1-1 shows the regional boundaries for the reviews, developed by the Section 368 Interagency Workgroup.

The regional reviews do not constitute an agency action, are not subject to NEPA and other environmental statutes, and do not encompass the level of analysis required under NEPA. The results of this regional review will be relayed to appropriate managers in the BLM and USFS for consideration: (1) during the normal course of the land use planning process, (2) during environmental review of a particular site-specific project that proposes to use a particular corridor, or (3) during land use plan revisions proposed specifically to address potential corridor changes. Consideration of potential corridor revisions, deletions, or additions in any of these circumstances would require analysis under NEPA and would be in accordance with other applicable laws, regulations, and agency policy and guidance.

During this review, the Agencies also assessed the need to update IOPs, which provide consistent practices across BLM and the USFS in processing applications for use of the Section 368 energy corridors. Three potential new IOPs and three potential IOP revisions are identified in this report. The IOP assessment will continue throughout subsequent regional reviews, and additional modifications to the IOPs may be forthcoming.

The Agencies must consider the corridor siting principles from the Settlement Agreement as described in Section 1.1.2. The process for conducting regional reviews was identified in the Settlement Agreement and was further developed in an approved work plan formulated under the Interagency MOU that established an Interagency Workgroup (Workgroup) to conduct the reviews. The regional review process outlined in the workplan includes the following:

1. Establishing the geographic scope of the regional reviews;
2. Prioritizing the regions for review;
3. Providing for participation by stakeholders;
4. Identifying new relevant, existing, publicly available information pertinent to consideration of Section 368 energy corridors;
5. Reviewing the Corridor Study to assess the need for updates to the corridors;
6. Synthesizing new relevant, existing, publicly available information pertinent to consideration of Section 368 energy corridors;
7. Conducting regional reviews, including reevaluation of the corridors of concern;
8. Conducting review of the IOPs;

9. Formulating potential revisions, deletions, and additions to Section 368 energy corridors and IOPs; and
10. Considering potential changes to corridors and IOPs that result from the regional reviews.

Abstracts for each energy corridor in Region 1 were developed to provide a condensed record of environmental concerns for each corridor. The abstracts identified other challenges and concerns as well, such as corridor gaps due to land ownership patterns, and pinch points.[2] To populate the abstracts, the Agencies used input from stakeholders, field office review, and geographic information system (GIS) analyses. Figure 1-2, Step 1, shows the process of assembling the abstracts.

The corridor abstracts were intended to be utilized in conjunction with the Section 368 Energy Corridor Mapping Tool (described further in Section 1.2.3) that was developed to provide geospatial information to support the analysis in the abstracts. The corridor abstracts and the mapping tool were released to the public in September 2016. Stakeholders were notified via email and through a website announcement and were given the opportunity to review and provide input on the abstracts through a series of webinars and public meetings at multiple locations, as well through online submissions. Additional webinars were conducted upon request by participating Region 1 stakeholders.

Based on stakeholder input on the abstracts and additional Agency analysis, the Agencies developed this report of potential revisions, deletions, or additions to the Region 1 energy corridors. The report also includes proposed revisions or additions to IOPs. Figure 1-2 describes the entire review process and shows the opportunities for stakeholder engagement.

[2] The term “pinch points” refers to corridor segments with a considerably reduced capacity for new project infrastructure compared to the rest of the corridor. Examples include reduced corridor width due to challenging terrain or jurisdictional land ownership patterns; existing conflicting surface use activities such as airfields, quarries, or mining in or immediately adjacent to the corridor path; and existing infrastructure such as transmission and distribution lines, pipelines, roads, railroads, power generation facilities, or pipeline booster or compressor stations in the corridor path, which may impede the future placement of new project infrastructure within the corridor.

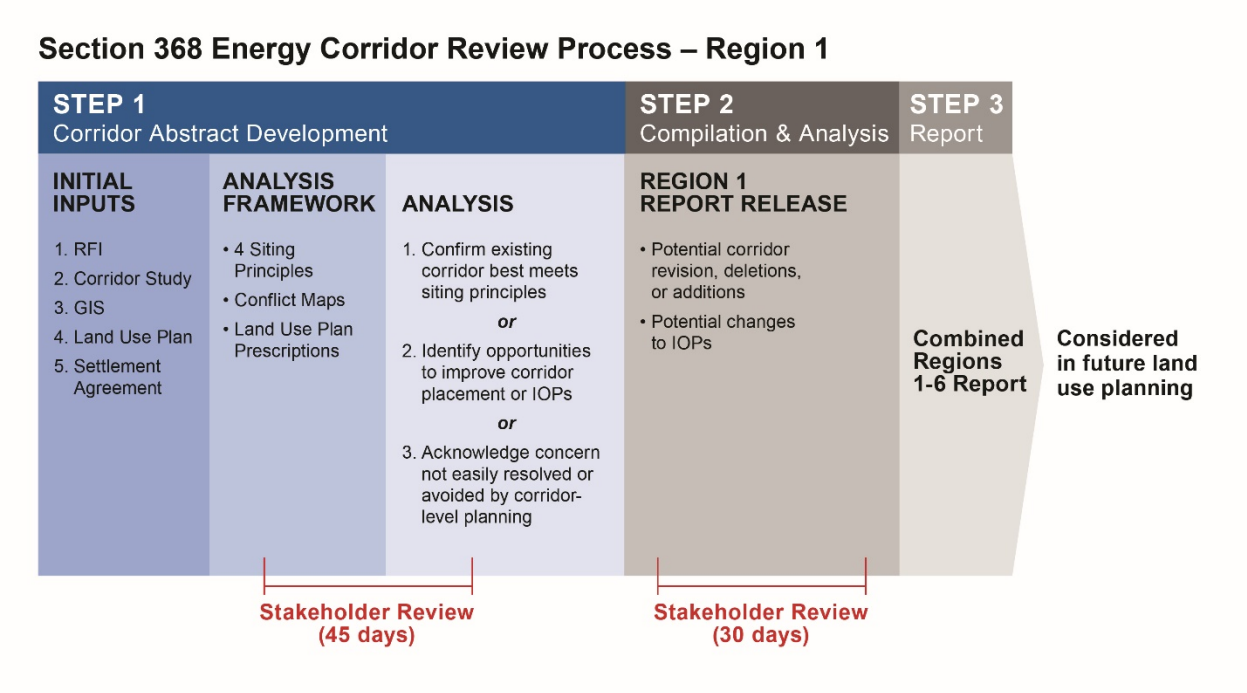

Figure 1-2 Section 368 Energy Corridor Review Process—Region 1

1.2.2 Stakeholder Process

The regional review process entails robust stakeholder involvement to comprehensively identify concerns and support the identification of potential revisions, deletions, or additions to Section 368 energy corridors. For each regional review, the Agencies engage with stakeholders in the region, including but not limited to:

- State governments;
- Tribes;
- County commissioners;
- BLM Resource Advisory Councils;
- Settlement Agreement plaintiffs and other nongovernmental organizations (NGOs);
- U.S. Department of Defense (DoD), U.S. Fish and Wildlife Services (USFWS), National Park Service (NPS), Bureau of Indian Affairs (BIA), Bureau of Reclamation (BOR), and other Federal agencies;
- Energy industry (e.g., utilities, transmission and pipeline companies, power project generators, and regional transmission planning entities); and
- The public.

1.2.3 Available Tools

The Agencies have developed several tools to facilitate stakeholder understanding of and input on the regional review process. These tools include a project website, corridor abstracts, the Section 368 Energy Corridor Mapping Tool, and a web-based form for receiving stakeholder input on the regional review process and the Section 368 energy corridors. All of these tools are available on the project website at http://www.corridoreis.anl.gov.

The Section 368 Energy Corridor Mapping Tool

This interactive GIS tool includes geospatial data for energy infrastructure, cultural and ecological resources, and other data layers to support the analysis of whether an energy corridor may need revisions, deletions, or additions. Existing transmission and pipeline infrastructure data, licensed from a commercial provider, provide critical insight on potential routing alternatives. Recently authorized major transmission projects by the BLM and USFS were included to provide insight on recent use of the energy corridors. Data layers also provide information on conditions that may have changed since the original corridor designation (e.g., new energy generation sources, jurisdictional changes, or new data on environmental resources). A complete list of the geospatial data layers that have been added to the mapping tool at the time of publication is included in Chapter 5.

In addition, the mapping tool facilitated stakeholder involvement. Each corridor abstract is accessible through the mapping tool, allowing the public not only to view each abstract but also to simultaneously compare the corridors to the data available through the mapping tool.[3] The tool facilitates online stakeholder input on specific corridor mileposts or segments. The Section 368 Energy Corridor Mapping Tool is available to the public at http://bogi.evs.anl.gov/section368/portal.

Conflict Assessment

Corridor reviews include a comprehensive resource conflict assessment to help the Agencies identify a corridor's proximity to environmentally sensitive areas. The assessment of potential conflict (low, medium, or high) is generated using the criteria from the BLM's new regulations for prioritizing applications for solar and wind energy projects (43 CFR 2804.35(a)–(c)). The conflict assessment criteria are shown in Table 1-1. The criteria were applied to each corridor to generate conflict maps to aid in reviewing whether the corridor's current location best meets the Settlement Agreement siting principles to provide maximum utility and minimum impact on the environment.

Where feasible, corridors should be sited in the areas of low potential conflict. However, to meet the requirements of the EPAct and the siting principles in the Settlement Agreement, corridors may be located in medium and high potential conflict areas. Moreover, many Section 368 energy corridors were already designated in land use plans prior to their designation as Section 368 energy corridors. In almost all instances, these corridors contained infrastructure at the time of their

[3] A stakeholder input feature has been incorporated into the mapping tool for the subsequent review, to allow input to be directly viewed by location, and stakeholders to enter input for specific locations.

Section 368 designation. Retaining corridors through these areas is the best option for providing long-distance pathways for electrical transmission and pipelines while minimizing impacts from proliferation of energy ROWs on Federal lands.

Table 1-1 Conflict Assessment Criteria for Regional Reviews

Low Potential Conflict Areas
Lands designated as Visual Resource Management Class IV
VRM Class IV
Previously disturbed sites or areas adjacent to previously disturbed or developed sites BLM data were not comprehensively available for inclusion in the figures in individual abstracts, but existing infrastructure can be viewed on the Section 368 Mapper.
Existing transmission lines
Existing pipelines
Existing roadways and railways
Existing telecommunication lines, communication sites
Existing agricultural uses
Other energy development
Lands identified in BLM land use plans as suitable for disposal No BLM data are available for inclusion in the graphical display
Lands specifically identified as appropriate for solar or wind energy development, other than designated leasing areas

Table 1-1 (Cont.)

Medium Potential Conflict Areas
BLM special management areas that provide for limited development, including recreation sites and facilities
Areas of Critical Environmental Concern
DRECP Extensive Recreation Management Areas
Other recreation sites and facilities, as data are available
Lands with wilderness characteristics outside Wilderness and Wilderness Study Areas that have been identified in an updated wilderness characteristics inventory
Lands Inventoried and Managed for Wilderness Character
ROW avoidance areas
No explicit linear ROW avoidance areas were available. ROW avoidance information is derived from other land-use management prescriptions identified in land use plan allocations (e.g., ACECs).
Areas where project development may adversely affect resources and properties listed in a national register, such as in the National Register of Historic Places, National Natural Landmarks, or National Historic Landmarks
Properties Listed in the National Register of Historic Places
National Natural Landmarks
National Historic Landmarks
National Historic Parks
Sensitive habitat areas, including important species use areas, riparian areas, or areas of importance for Federal or State sensitive species
Greater Sage-grouse General Habitat Management Areas
Greater Sage-grouse Priority Habitat Management Areas
Sonoran Desert Tortoise Sensitive Habitat
DRECP Wildlife Allocations
USFWS-identified Desert Tortoise Connectivity Areas
DRECP Tortoise Conservation Areas and Linkages
Lands designated as Visual Resource Management Class III
VRM Class III
DoD operating areas with land use or operational mission conflicts
Military Training Route: Instrument Route Corridors
Military Training Route: Slow Route Corridors
Military Training Route: Visual Route Corridors
Special Use Airspace - Low Altitude
DoD High Risk of Adverse Impact Areas
Areas where project development may adversely affect lands acquired for conservation purposes
Lands Acquired with Federal Funds for Conservation Purposes
Boulder City Conservation Easement
Projects with proposed groundwater uses within groundwater basins that have been allocated by State water resource agencies No data are available for inclusion in the graphical display.

Table 1-1 (Cont.)

High Potential Conflict Areas
■ **Lands designated by Congress, the President, or the Secretary for the protection of sensitive viewsheds, resources, and values (e.g., units of the National Park System, Fish and Wildlife Service Refuge System, some National Forest System units, and the BLM National Landscape Conservation System), which could be adversely affected by development**
Units of the National Park System
Units of the Fish and Wildlife Refuge System
National Monuments
Wilderness Areas
Wilderness Study Areas
National Conservation Areas (except CDNCA)
Other Lands in the NLCS
EPA Class I Air Quality Areas
DRECP California Desert National Conservation Lands
DRECP National Scenic Cooperative Management Areas
USFS Roadless Areas
National Historic Trails
National Scenic Trails
*National Recreation Trails**
■ **Wild and Scenic Rivers and Recreational Rivers and river segments deemed suitable for Wild and Scenic River status, if project development could have significant adverse effects on sensitive viewsheds, resources, and values**
Wild and Scenic Rivers
*Recreational Rivers**
*River segments deemed suitable for Wild and Scenic River status**
■ **Designated critical habitat for federally threatened or endangered species, if project development could result in the destruction or adverse modification of that critical habitat**
Critical Habitat Areas
Critical Habitat Lines
■ **Lands designated as Visual Resource Management Class I or Class II**
Visual Resource Management Class I
Visual Resource Management Class II
■ **ROW exclusion areas**
No explicit linear ROW exclusions areas were available. ROW exclusion information is derived from other land-use management prescriptions identified in land use plan allocations or other designation (e.g., Wilderness).
■ **Lands designated as no surface occupancy for oil and gas development in BLM land use plans**
No Surface Occupancy
*No data are currently available for inclusion in the graphical display.

2. Region 1 Review

2.1 Current Conditions and Projected Growth

One of the corridor siting principles in the Settlement Agreement is to consider whether the energy corridors are thoughtfully sited to provide efficient use of the landscape for necessary development. Consistent with that corridor siting principle, the Region 1 Review assessed existing energy infrastructure, planned or future energy development potential, and additional energy transmission capacity in Region 1 Section 368 energy corridors.

Nearly all of the 24 Section 368 energy corridors in Region 1[4] contain energy transport infrastructure, and several of these corridors have pending or active ROW applications (Figure 2-1). In some cases (e.g., most corridors in the Southern Nevada District Office and one corridor in the Palm Springs–South Coast Field Office in California), the number of pending proposed projects could exceed the ROW capacity in the corridors.

Input received from utilities throughout Region 1 indicates that there is interest in using energy corridors for new energy projects or for expansion of existing energy projects in the region. Appendix B lists the existing infrastructure, pending projects, and potential additional capacity that have been identified for Region 1 corridors.

Another siting principle in the Settlement Agreement is that "corridors provide connectivity to renewable energy generation to the maximum extent possible while also considering other sources of generation, in order to balance the renewable sources and to ensure the safety and reliability of electricity transmission." There are several renewable energy initiatives that have been developed over the past 10 years that could lead to increased renewable energy generation in proximity to Region 1 Section 368 energy corridors. The following sections (2.1.1 through 2.1.7) describe those initiatives along with other studies investigating future energy potential in the region.

[4] Two of the corridors in Region 1, Corridor 18-23 and Corridor 18-224, are predominantly located in Region 5 and will therefore be addressed in their entirety in the Region 5 Review. The Region 1 Review accepted stakeholder input on both corridors, which will be incorporated into the Region 5 Review.

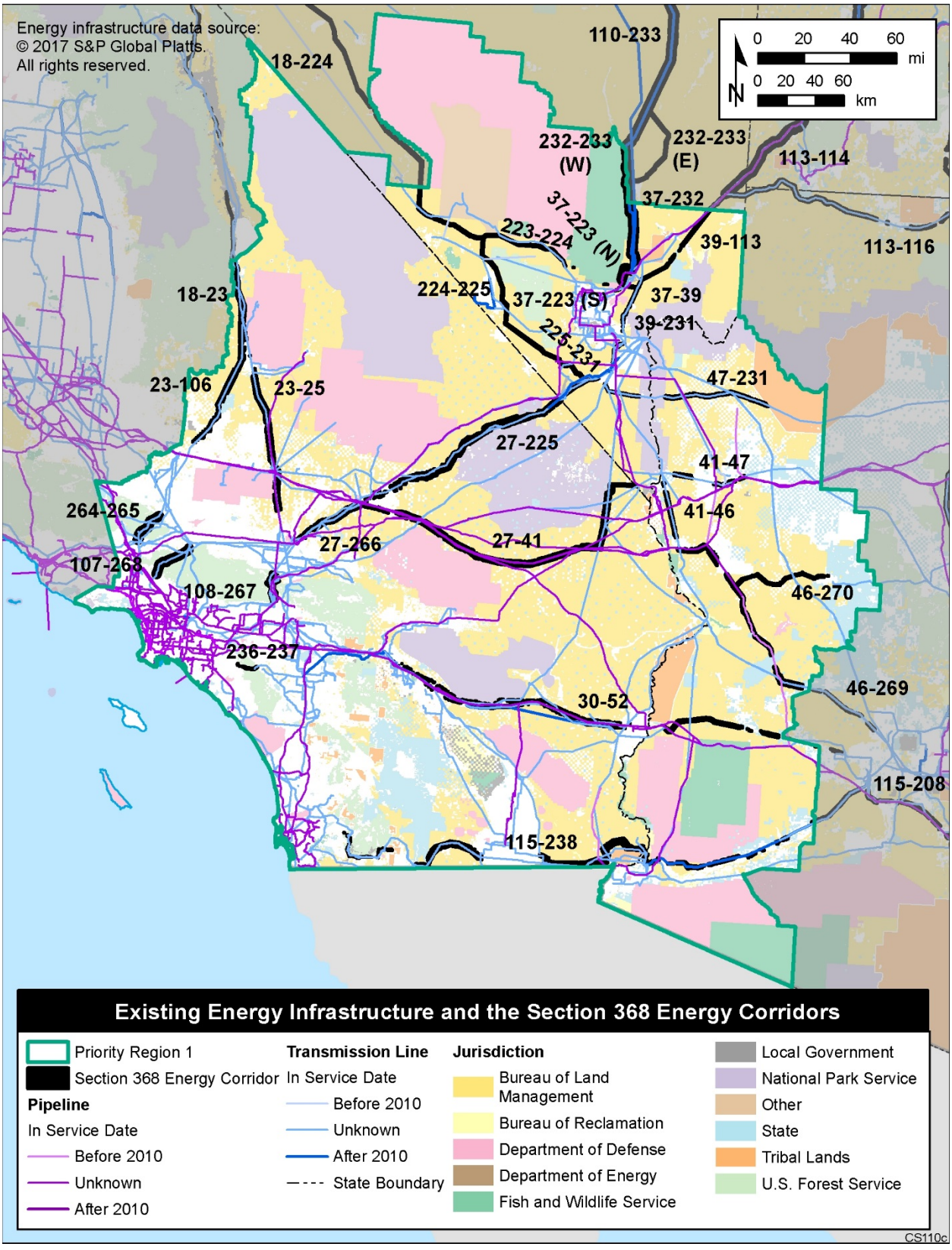

Figure 2-1 Existing Energy Infrastructure and the Region 1 Section 368 Energy Corridors

2.1.1 Final Solar Energy Development PEIS

In 2012, the BLM created a Solar Energy Program for utility-scale solar energy development on BLM-administered lands in six southwestern states (Solar PEIS; BLM and DOE 2012). The BLM designated seventeen solar energy zones (SEZs) and additional solar variance lands in Arizona, California, Colorado, New Mexico, Nevada, and Utah.[5] The SEZs[6] are considered priority areas for solar energy and associated transmission infrastructure development. The SEZs were established to facilitate near-term, utility-scale solar energy development on BLM-administered lands; minimize potential negative environmental impacts; and optimize existing transmission infrastructure and corridors. The following SEZs are close to (within 5 miles of) Region 1 energy corridors:

- Dry Lake SEZ, Nevada, adjacent to Corridor 37-232 (milepost [MP] 7 to MP 9), and approximately 3.5 miles west of Corridor 39-113 (MP 2 to MP 6) and 3.5 miles north of Corridor 37-39 (MP 3 to MP 8);
- Amargosa Valley SEZ, Nevada, adjacent to corridor 223-224 (MP 225);
- Brenda SEZ, Arizona, 3 miles north of Corridor 30-52 (MP 150 to MP 155);
- Gillespie SEZ, Arizona, 0.25 miles south of Corridor 115-238 (MP 1 to MP 2);
- Riverside East SEZ, California, adjacent to and overlapping Corridor 30-52 (MP 60 to MP 99); and
- Imperial East SEZ, California, which overlaps Corridor 115-238 (MP 154 to MP 163).

2.1.2 Arizona Restoration Design Energy Project (RDEP)

The RDEP was a BLM Arizona Office initiative to identify lands across Arizona that may be suitable for the development of renewable energy. The RDEP Final Enviromental Impact Statement (EIS), released in October 2012 (BLM 2012d), and RDEP ROD and Approved Resource Management Plan Amendments, released in January 2013, established 192,100 acres of renewable energy development areas (REDAs) on BLM-administered lands throughout Arizona.[7] The RDEP ROD also established the Agua Caliente SEZ (BLM 2013a).

The Region 1 energy corridors within or near the boundaries of a REDA or the Agua Caliente SEZ are as follows:

- Corridor 115-238, located within 1 mile of the Agua Caliente SEZ between MP 40 and MP 43;
- Corridor 30-52, overlapping with REDAs from MP 152 to MP 155 and MP 170 to MP 173;
- Corridor 46-269, which overlaps REDAs from MP 40 to MP 42 and MP 55 to MP 56; and

[5] The Section 368 Energy Corridor Mapping Tool allows the BLM SEZs to be displayed as a separate GIS layer in the Designated Leasing Areas–Data Group.

[6] The BLM Desert Renewable Energy Conservation Plan (DRECP) renamed all the California SEZs as development focus areas (DFAs), but they are displayed as both SEZs and DFAs in the Section 368 Energy Corridor Mapping Tool.

[7] The Section 368 Energy Corridor Mapping Tool allows the BLM Arizona REDAs to be displayed as a separate GIS layer in the Designated Leasing Areas–Data Group.

- Corridor 47-231, which has several REDAs scattered across the corridor between MP 6 and MP 38.

2.1.3 Southern Nevada

The BLM Southern Nevada District Office is revising its 1998 Las Vegas Resource Management Plan (RMP) (BLM 1998). The RMP revision will provide management direction for the Las Vegas Field Office in Clark County and the Pahrump Field Office in southern Nye County (BLM 2014). Based on concerns and important issues raised by many partners, stakeholders, and the public within the Southern Nevada planning area, the BLM is considering developing a supplement to the 2014 Draft RMP Revision.

2.1.4 California Desert Renewable Energy Conservation Plan (DRECP)

The interagency goal of the DRECP is to provide a streamlined process for the development of utility-scale renewable energy generation and transmission consistent with Federal and State renewable energy targets and policies, while providing for the long-term conservation and management of special-status species and plant communities, and other resources within the plan area. The EIS and associated ROD for BLM-administered lands within the DRECP plan area were completed in September 2016 (BLM 2016a, b).

BLM objectives for the DRECP as analyzed in its Final EIS are to:

- Conserve biological, physical, cultural, social, and scenic resources;
- Promote renewable energy and transmission development, consistent with Federal renewable energy and transmission goals and policies, in consideration of State renewable energy targets;
- Comply with all applicable Federal laws, including the BLM's obligation to manage lands under its jurisdiction consistent with FLPMA;
- "Preserve the unique and irreplaceable resources, including archaeological values, and conserve the use of the economic resources" of the California Desert Conservation Area (CDCA);
- Identify and incorporate BLM-administered lands managed for conservation purposes within the CDCA as components of the National Landscape Conservation System (NLCS), consistent with the Omnibus Public Land Management Act of 2009 (Pub. L. No. 111-11);
- Amend land use plans consistent with the criteria in FLPMA and the CDCA Plan;
- Coordinate planning and management activities with other Federal, State, local, and tribal planning and management programs by considering the policies of approved land and resource management plans, to the extent consistent with Federal laws; and
- Make some land use allocation decisions, including identification of applicable Visual Resource Management (VRM) classes, land use allocations to replace multiple-use classes, and NLCS designations outside the DRECP area but within the CDCA.

The DRECP uses conservation and management actions (CMAs) to identify allowable uses and the actions anticipated to achieve desired outcomes, including actions to maintain, restore, or improve land health. The DRECP also uses ground disturbance caps within Areas of Critical Environmental Concern (ACECs) and the California Desert National Conservation Lands (CDNCL). In general, the ground disturbance cap is a limitation on ground-disturbing activities in ACECs and CDNCLs that is expressed as a percentage of total BLM-managed acreage of the conservation allocation unit and cumulatively considers past, present, and future ground disturbance. Baseline (past and present) ground disturbance of proposed projects is determined using the most current imagery and knowledge available.

Application of the ground disturbance caps may affect how the agency processes and approves transmission infrastructure development within energy corridors. Infrastructure development is allowable under the following conditions:

- Development occurs within an existing ROW. Under this condition, new development would not be measured against disturbance caps.
- Development occurs in CDNCL and/or ACEC when the disturbance cap threshold will not be exceeded.
- Development occurs with required mitigation in situations where CDNCL and/or ACEC disturbance caps are already exceeded.

Seven energy corridors cross DRECP units (CDNCL or ACEC) with disturbance caps (Corridors 23-25, 23-106, 27-41, 27-225, 27-266, 30-52, and 115-238). The majority of these corridor segments cross CDNCL or ACEC lands that currently exceed the disturbance caps. For those locations that cross areas that are currently below the disturbance cap, the disturbance caps may limit infrastructure development, or require collocating project features (e.g., access roads). Details regarding disturbance caps and the Section 368 energy corridors are included in the Corridor Abstracts available on the project website. A general discussion of the effects of the disturbance caps on the Section 368 energy corridors is included in the Corridor Summaries in Chapter 3 (Section 3.4) of this document.

The DRECP ROD designated several development focus areas (DFA), which are locations where renewable energy development, operation, and decommissioning are an allowable use and where renewable energy development may be incentivized and streamlined for approval under the DRECP Land Use Plan Amendment (LUPA).[8] The LUPA may streamline and provide incentives only for renewable energy activities sited in a DFA. Transmission development and operation may occur in previously designated corridors (both locally designated and Section 368 energy corridors) and other areas, both inside and outside DFAs. There are 388,000 acres of DFAs within the LUPA decision area. The following Region 1 Section 368 energy corridors cross, or are near or adjacent to, one or more DFAs:

- Corridor 23-25, the middle portion of which (between about MP 50 and MP 65) is located within and adjacent to DFAs designated for all types of energy development.

[8] The Section 368 Energy Corridor Mapping Tool allows the BLM California DRECP DFAs to be displayed as a separate GIS layer in the Designated Leasing Areas–Data Group.

- Corridor 23-106, the northern end (at about MP 5) of which is near a small DFA designated for all types of energy development, and the southern portion of which is adjacent to small blocks of DFAs designated for all types of energy development and a larger block of DFAs designated as Variance Process Lands (VPLs).[9]
- Corridor 27-41, a portion of which (near MP 15 on BLM-administered lands east of Newberry Springs) is within or adjacent to a DFA designated for all types of energy development, and another portion of which (between MP 70 and MP 85 centered at Cadiz) is about 1.5 miles or more north of DFAs designated as VPLs.
- Corridor 27-225, the southwestern portion of which (at about MP 25 near Afton) is located near a small DFA designated for all types of energy development.
- Corridor 30-52, much of which is near the Riverside East SEZ/DFA and is within or adjacent to DFAs designated for all types of energy development.
- Corridor 115-238, part of which is near the Imperial East SEZ/DFA, which is within or adjacent to DFAs designated for geothermal development only, or for geothermal development but with no surface occupancy, and part of which (between MP 190 and MP 200) is within or adjacent to a small DFA designated for all types of energy development.
- Corridor 18-23, the southern end of which is within a DFA designated for geothermal energy development only.

No other Region 1 Section 368 energy corridors are located within, adjacent to, or near a DFA.

2.1.5 State of California Renewable Energy Transmission Initiative 2.0

California recently enacted the 50 percent Renewable Portfolio Standard (RPS), which requires that utilities procure 50 percent of the electricity for California from renewable energy by 2030 in order to reduce greenhouse gas emissions. In response to the RPS, the California Renewable Energy Transmission Initiative (RETI) 2.0 evaluated where potential new utility-scale renewable energy generation could be developed and assessed the amount and types of energy transmission that may be needed to deliver this energy to California's load centers.

The RETI 2.0 Final Plenary Report, released in February 2017 (CNRA 2017a), provides an in-depth review of the role that Section 368 corridors could potentially play in meeting the RPS target (CNRA 2017a, Part 2 and Appendix B). The RETI 2.0 report also characterized potential transmission constraints and conceptual solutions for the California RPS and mapped them to geographic areas.

Section 368 energy corridors were also assessed in relation to the State of California's Transmission Assessment Focus Areas (TAFAs) identified in the report, which are general geographic

[9] VPLs include portions of the BLM-administered Solar PEIS Variance Lands and other BLM lands identified through the DRECP LUPA (BLM 2016a, b). These lands are potentially available for renewable energy development, but projects would not be streamlined or incentivized and would include a specific set of conservation and management actions. Review of renewable energy applications in VPLs would follow the process described in the Solar PEIS ROD, Section B.5.

areas with a unique mix of renewable energy and transmission system characteristics. The TAFAs were based on a "what if" question of potential renewable energy development and were used to identify potential transmission constraints or environmental issues if development were pursued. Four of the TAFAs contain Section 368 energy corridors that could provide support for California renewable energy development (Table 2-1).

Table 2-1 RETI 2.0 Transmission Assessment Focus Areas Containing Section 368 Energy Corridors

Section 368 Energy Corridor	TAFA	RETI 2.0 Hypothetical Study Range for Renewable Energy Potential*
115-238	Imperial Valley	~5,000 MW
30-52	Riverside East	2,000–4,000 MW
23-25 23-106 27-41 27-225 27-266 108-267	Victorville/Barstow	5,000 MW
23-106 107-268 264-265	Tehachapi	5,000 MW

*Hypothetical study range represents "what if" question of potential renewable energy development intended to gather feedback on implications from RETI 2.0 stakeholders.

2.1.6 Western Electricity Coordinating Council (WECC) Study Program: Section 368 Energy Corridor Spatial Assessment

In 2016, the BLM Washington, D.C., office submitted a request for a study to be conducted as part of the WECC 2026 Study Program. The purpose of the study was to identify the Western Interconnect's most highly utilized WECC transmission pathways from selected 2026 study cases and the pathway's geographic proximity to Section 368 energy corridors. The transmission pathways identified for study by the BLM included the following:

- WECC Common Case (transmission projects under construction or planned) [WECC 2026 PC01];
- Increased or decreased power generation using low-priced and high-priced natural gas [PC06-07];
- Planned coal generation plant retirements largely occurring in the southwestern United States [PC11];
- Increased renewable energy generation from State-mandated RPS (e.g., High RPS Study) [PC12];

- High Distributed (Photovoltaic) Energy Resource Future [PC15];
- North-south power flows with increased renewable energy generation in southern California and the southwestern United States (Arizona, Nevada, and New Mexico) [PC22]; and
- North-south power flows with increased renewable energy generation in northern California and the northwestern United States (Oregon, Washington, and Montana) [PC23].

The high-utilization WECC paths identified in the selected 2026 study cases will be correlated with existing transmission line GIS data to determine which high-utilization transmission lines are located within or near Section 368 energy corridors. The resultant information regarding future high-utilization transmission lines will be integrated into corresponding Section 368 energy corridor abstracts so as to provide the BLM, USFS, and stakeholders with a general sense of where potential transmission infrastructure may be needed during the next 10 years and beyond.

The WECC completed the 2026 Study Program in spring 2017. BLM will consider the WECC Study Program in the regional reviews using the WECC 2026 projections, as well as any WECC Study Program updates, as available.

2.1.7 NREL Assessment of Studies Regarding the Future Energy Portfolio in the Western United States

In accordance with the suggestion in the Settlement Agreement, the Agencies synthesized new relevant, existing, publicly available information and developed a report to help aid in energy forecasting throughout the regional reviews. The synthesis report included a consideration of the Corridor Study, as well as information listed in Subsection B of the Interagency MOU. In 2016, the BLM Washington, D.C., office contracted with DOE's National Renewable Energy Laboratory (NREL) to conduct the study, which was completed in 2018 (Energy Futures Synthesis for West-Wide Section 368 Energy Corridors).

2.2 Land Use Planning Process and the Regional Reviews

BLM and USFS land use plans include management prescriptions for administering the lands they cover, including Section 368 energy corridors. The Agencies will consider implementing the potential corridor revisions, deletions, and additions identified in this report in future land use planning and associated NEPA processes.

The Region 1 Section 368 energy corridors on BLM-administered lands in California are managed under the West Mojave Desert/CDCA Plan Amendment (BLM 2006), Northern and Eastern Mojave Desert/CDCA Plan Amendment (BLM 2004), the Northern and Eastern Colorado Desert/CDCA Plan Amendment (BLM 2002), the Imperial Sand Dunes Recreation Area Management Plan/CDCA Plan Amendment (BLM 2013b), the Western Colorado Desert/CDCA Plan Amendment (BLM 2003), the South Coast RMP (BLM 1994), and the Eastern San Diego County RMP (BLM 2008). The areas encompassed by most of the CDCAs are contained within the DRCEP LUPA Area (BLM 2016a, b).

The Region I Section 368 energy corridors that traverse USFS-administered lands in California are managed under the Cleveland National Forest Plan (USFS 2005b); Angeles National Forest Land Management Plan, Part 2: Angeles National Forest Strategy (USFS 2005a); and Land Management Plan for San Bernardino National Forest, Part 2: San Bernardino National Forest Strategy (USFS 2005c).

Region 1 Section 368 energy corridors within Arizona traverse BLM-administered lands that are managed under the Lake Havasu RMP (BLM 2007), the Kingman RMP (BLM 1995), and the Yuma RMP (BLM 2010a).

All the Region 1 Section 368 energy corridors within Nevada traverse BLM-administered lands managed under the 1998 Las Vegas RMP which includes the Las Vegas and Pahrump Field Offices (BLM 1998).

Corridor 18-23 is partly within the West Mojave Desert/CDCA Plan Amendment in Region 1; most of the corridor is in Region 5. Most of Corridor 18-224 is also in Region 5. Therefore, these corridors will be reviewed in their entirety during the Region 5 Review, which is anticipated to start in 2019.

Table 2-2 lists the BLM RMPs and forest plans that correlate with the corridors analyzed in the Region 1 Review.

Table 2-2 Land Use Plans Associated with Each Region 1 Section 368 Energy Corridor

Corridor	State	RMP/Forest Plan
23-25	California	West Mojave Desert/CDCA Plan Amendment
23-106	California	West Mojave Desert/CDCA Plan Amendment
27-41	California	West Mojave Desert/CDCA Plan Amendment Northern and Eastern Mojave Desert/CDCA Plan Amendment Northern and Eastern Colorado Desert/CDCA Plan Amendment
27-225	California Nevada	West Mojave Desert/CDCA Plan Amendment Northern and Eastern Mojave Desert/CDCA Plan Amendment Las Vegas RMP
27-266	California	West Mojave Desert/CDCA Plan Amendment
30-52	California Arizona	Northern and Eastern Colorado Desert/CDCA Plan Amendment Lake Havasu RMP, Yuma RMP, and Bradshaw-Harquahala RMP (Region 2)
107-268	California	Angeles National Forest Land Management Plan, Part 2: Angeles National Forest Strategy
108-267	California	San Bernardino National Forest, Part 2: San Bernardino National Forest Strategy
115-238	California Arizona	Northern and Eastern Colorado Desert/CDCA Plan Amendment Imperial Sand Dunes Recreation Area Management Plan/CDCA Plan Amendment Western Colorado Desert/CDCA Plan Amendment South Coast RMP Eastern San Diego County RMP Yuma RMP

Table 2-2 Cont.

Corridor	State	RMP/Forest Plan
236-237	California	Cleveland National Forest Plan
264-265	California	Angeles National Forest Land Management Plan, Part 2: Angeles National Forest Strategy
41-46	Arizona	Lake Havasu RMP Kingman RMP
46-269	Arizona	Kingman RMP Bradshaw-Harquahala RMP (Region 2)
46-270	Arizona	Kingman RMP
47-231	Arizona	Lake Havasu RMP Kingman RMP
37-39	Nevada	Las Vegas RMP
37-223 (N&S)	Nevada	Las Vegas RMP
37-232	Nevada	Las Vegas RMP
39-113	Nevada	Las Vegas RMP
39-231	Nevada	Las Vegas RMP
223-224	Nevada	Las Vegas RMP
224-225	Nevada	Las Vegas RMP
225-231	Nevada	Las Vegas RMP

2.3 Summary of Stakeholder Input

The Agencies released the Region 1 corridor abstracts and the Section 368 Energy Corridor Mapping Tool on September 9, 2016, and requested public input on the regional review process, the corridor abstracts, and the mapping tool through October 24, 2016. Stakeholder input focused on the regional review process and on environmental concerns regarding individual Section 368 energy corridors. Although some suggestions for specific corridor revisions, deletions, and additions (in the form of extensions) were received, there were no suggestions for a new corridor.

To facilitate stakeholder involvement during the Region 1 Review, a web-based input form was provided on the project website at http://www.corridoreis.anl.gov/. During the review period, more than 750 comments were received from 41 entities (including Federal and State agencies, local governments, industry, tribes, and NGOs) and three individuals. Ten organizations provided their input by mail, but most used the web-based form. Some input was submitted directly to the Agencies by other means (i.e., via email and telephone).

The following entities provided input:

Federal Agencies

- BIA
- BOR
- NPS

- NPS National Trails Intermountain Region
- USFWS
- DoD

State Agencies

- Arizona Game and Fish Department (AGFD)
- Arizona State Land Department
- California Energy Commission (CEC)
- Nevada Department of Wildlife

Tribes

- Colorado River Indian Tribes
- Navajo Nation
- San Manuel Band of Mission Indians

Local Government

- City of Henderson
- City of North Las Vegas
- Inyo County, California
- La Paz County Board of Supervisors
- Nye County, Nevada
- San Diego County, California
- Clark County Department of Aviation
- Clark County Desert Conservation Program

Nongovernmental Organizations

- Arizona Solar Working Group c/o Sonoran Institute
- Basin and Range Watch
- Center for Biological Diversity
- Citizens for Active Management
- Defenders of Wildlife
- Desert Tortoise Council
- Mono Lake Committee
- National Parks Conservation Association
- Old Spanish Trail Association
- Pacific Crest Trail Association (PCTA)
- The Wilderness Society (TWS)

Industry

- Land Development Associates
- Los Angeles Department of Water and Power (LADWP)
- San Diego Gas & Electric Company (SDG&E)
- Southern California Edison Company (SCE)

- Southern Nevada Water Authority (SNWA)
- Southwest Transmission Partners, LLC
- Valley Electric Association, Inc. (VEA)
- Western Utility Group

Other

- Eastern Kern Onyx Ranch State Vehicular Recreation Area (SVRA)
- Lot 42 Mining, Inc.

The following are general comments on the regional review process and the Agencies' responses.

General Comment: During the public input period from September 9, 2016, until October 24, 2016, many stakeholders suggested that the Agencies perform rigorous analysis upfront to avoid a lengthy and costly review later during NEPA analyses for specific projects.

Agency Response: The regional review analyzes the Region 1 Section 368 energy corridors in light of issues identified in the corridor abstracts, using recent data and GIS analysis to identify potential revisions, deletions, or additions to the corridors. Regional reviews do not trigger NEPA or substitute for project-specific NEPA analysis. Projects proposed within Section 368 energy corridors require appropriate site-specific environmental review pursuant to NEPA and other applicable law. Potential revisions, deletions, or additions to Section 368 energy corridors identified during the Region 1 Review will be considered during subsequent NEPA scoping for any land use or project-level planning. Because the regional review process does not trigger NEPA and other environmental statutes, regional reviews do not include the following:

- Preparation of NEPA documents;
- ESA Section 7 consultation with the USFWS;
- Section 106 consultation under the National Historic Preservation Act;
- Cumulative impact analysis; or
- Analysis of non-Federal lands.

General Comment: Stakeholders also suggested that the failure to modify Section 368 energy corridors to avoid potentially adverse impacts does not follow BLM policy regarding mitigation. These stakeholders stated that BLM regulations require consideration of a mitigation hierarchy consisting of avoidance, minimization, rectification, reduction, or elimination of impacts over time, and/or compensation. With regard to Section 368 energy corridors, these stakeholders believed that implementation of the mitigation hierarchy begins with the location and configuration of the corridors so as to avoid as many conflicts as possible and that the regional review process conducted to date placed an emphasis on compensatory mitigation rather than on avoidance of impacts.

Agency Response: The mitigation hierarchy is addressed in the corridor abstracts, where applicable, and avoidance of impacts continues to be the Agencies' preference, to the extent possible, over

minimization and mitigation of impacts. The BLM policy on compensatory mitigation is described in IM-2018-093. For purposes of this report, the terms "avoidance" and "minimization" also include other elements of the mitigation hierarchy, specifically, rectification and reduction or elimination of impacts over time.

Complete stakeholder input will be presented in two separate reports that will be available on the website: *Region 1: Stakeholder Input, Section 368 Energy Corridor Review* and *2014 Request for Information Responses, Section 368 Energy Corridor Review*. Corridor-specific stakeholder input is summarized by corridor in Section 3 of this report, while non-corridor-specific stakeholder input on specific topics is summarized below.

2.3.1 Environmental Concerns

Stakeholders identified a wide range of general environmental concerns during the regional review process. The most often-expressed general concerns are summarized below, followed by a general Agency response. A few concerns, such as those associated with paleontological resources, wild horses and burros, and environmental justice, were mentioned less frequently and were largely tied to specific corridors. These corridor-specific concerns are addressed in the corridor-specific summaries and abstracts presented in Section 3 of this report.

Air Quality. Concerns were raised that fugitive dust generated by industrial construction could compromise air quality and have an impact on visual and biological resources. Potential public health concerns were also raised. For example, a concern was raised that because valley fever is spread when spores in the soil are transported by blowing dust, fugitive dust from project construction could spread this disease. One organization was concerned about how development within a corridor could potentially affect air quality in Class I Areas.[10]

Cultural Resources. Some stakeholders were concerned that operation of heavy equipment in connection with transmission line and pipeline development could cause irreversible damage to cultural resources. Some stakeholders suggested that prior to ROW approval and development within a Section 368 energy corridor, cultural inventories involving landscape-level evaluations be completed to inform agencies about possible corridor revisions, deletions, or additions. Some stakeholders believed that cultural resources should be avoided whenever possible during ground-disturbing activities.

Lands and Realty. Some stakeholders encouraged the BLM and USFS to cooperate with local governments, planning authorities, and transportation agencies to ensure compatibility with future highways and other infrastructure.

Lands with Wilderness Characteristics. One organization requested that the regional review consider the potential impacts of Section 368 energy corridors on lands with wilderness characteristics. Another

[10] Class I areas (as defined in the Clean Air Act) are protected by the Prevention of Significant Deterioration (PSD) Program and include National Parks, wilderness, National Monuments, National Seashores, and other areas of special national or regional natural, recreational, scenic, or historic value.

stakeholder believed that electric transmission and pipeline development on lands with wilderness characteristics would not be appropriate.

Aviation Needs and Military Concerns. Some stakeholders pointed out that civilian and military aviation needs must be taken into consideration and that Section 368 energy corridors must be compatible with the location and operation of present and future navigational aids. DoD provided information on military training routes within the vicinity of Region 1 Section 368 energy corridors, as well as input on preferred mitigation to alleviate these concerns. DoD commented that future electric transmission lines located along military training routes or near DoD-administered lands would have to be coordinated with DoD.

National Scenic, National Historic, and National Recreation Trails. Several stakeholders were concerned about impacts on National Trails and how Section 368 energy corridor development and introduction of additional infrastructure would affect viewsheds, cultural and historic landscape settings, and the recreational experience of National Trail users and other visitors to Federal lands.

Socioeconomic Impacts. Some stakeholders were concerned about the impacts of Section 368 energy corridors on nearby property values and nearby tourist-based economies, especially those that depend on visual resources. Some stakeholders believed that corridor routes should not negatively affect the environment or residents' quality of life and should be located as far as possible from population centers. Some stakeholders stated that national policies to plan for future energy assets should be balanced with local goals and tied to local benefits.

Special Status Animal Species. Several stakeholders were concerned that Section 368 energy corridor development could result in adverse impacts on the use, quality, and connectivity of wildlife habitat resulting from the introduction of transmission facilities, alteration of vegetation and terrain, and soil disturbance. Impacts on migratory birds from collisions and electrocutions from contact with power lines were specifically mentioned, as was wildlife entrapment by open pipeline trenches during construction. Some stakeholders suggested measures that could be taken to mitigate these impacts. Several stakeholders raised concerns about potential impacts on the desert tortoise and bighorn sheep, including impacts on connectivity of their respective habitats. Concerns were also expressed regarding potential impacts on the Mohave ground squirrel, the southwestern willow flycatcher, and the unarmored threespine stickleback. Habitat fragmentation caused by development of electric transmission lines and pipelines, interstate highways, large-scale solar projects, and large mining operations was identified as a major concern by some stakeholders.

Specially Designated Areas. Some stakeholders were concerned about potential impacts of Section 368 energy corridors on specially designated areas, including ACECs, wilderness, wilderness study areas (WSAs), National Scenic and National Historic Trails (NSTs and NHTs), National Monuments, National Conservation Areas (NCAs), and National Parks. Concerns were raised regarding potential adverse impacts from Section 368 energy corridors that intersect or are close to the boundaries of these areas and how resources protected by these designations might be affected (e.g., habitat quality and connectivity, scenic quality, wilderness characteristics, and cultural importance).

Tribal Concerns. One tribe was concerned about potential impacts from proposed energy transmission projects within Section 368 energy corridors on cultural landscapes and resources that are important to the tribe. Another tribe believed that Argonne and the BLM should have conducted in-person consultation with the tribes before circulating the corridor abstracts for public review and input. This tribe also stated that the tribe must be involved in the preparation and review of ethnographic studies and archaeological survey work and must be notified if any objects of cultural patrimony are discovered during construction or operation of a project in a Section 368 energy corridor. This tribe further stated that tribal monitors should be used during these activities. One tribe pointed out that several Section 368 energy corridors are located within Serrano ancestral territory and that cultural resource concerns associated with those corridors should be added to the corridor abstracts. Another tribe suggested adding an analysis of tribal concerns to the regional review process and supported enhanced partnerships with tribes.

Visual Resources. Some stakeholders noted that the development of energy transmission projects in Section 368 energy corridors could result in a broad range of negative impacts on the visual landscape and character of nearby National Parks, NHTs and NSTs, and other specially designated areas. These stakeholders commented that scenic views, including those that extend beyond National Park boundaries, are an important component of the visitor experience.

Agency Response: The general environmental, socioeconomic, military, and tribal concerns identified above were consistent with the concerns identified for specific Section 368 energy corridors. Corridor-specific concerns that apply to the above topics are identified and assessed in the Section 368 energy corridor summaries and abstracts presented in Section 3 of this report. The Agencies have diagrammed each corridor using conflict criteria to depict areas where the corridor intersects low, medium, and high potential conflict areas to help the Agencies identify where a corridor revision, deletion, or addition could avoid environmentally sensitive areas. Projects proposed within Section 368 energy corridors would require appropriate site-specific environmental review pursuant to the requirements of NEPA and other applicable laws and would include an evaluation of the resources listed above, as applicable.

2.3.2 Corridor Issues and Use Opportunities

Stakeholders raised a wide range of general concerns regarding corridor use opportunities and capacity. The most often-expressed general concerns regarding corridor use opportunities and capacity are summarized below, followed by the Agency's response.

Physical Barriers. Some stakeholders noted specific sections of Section 368 energy corridors that may need to be adjusted because of local terrain or pinch points.

Agency Response: The Agencies reviewed stakeholder-identified, corridor-specific pinch points and physical barriers. The analysis of those pinch points and physical barriers is included in the corridor abstracts (available on the project website) and corridor summaries (Section 3.4).

Jurisdictional Concerns. Several stakeholders pointed out that there could be difficulties during the permitting process for energy transmission projects in Section 368 energy corridors that cross lands under multiple jurisdictions and that may be situated in areas that are not suitable or available for corridor development. These stakeholders also noted that the corridor abstracts typically did not include potential concerns regarding conflicts with county land use plans, conservation resources on private lands, or private lands.

Agency Response: The Agencies' analysis of corridors is limited to BLM- and USFS-administered lands and relies on input to that analysis from other Federal agencies, tribes, counties, States, private landowners, and others with regard to lands under their respective jurisdiction. The Agencies acknowledge that corridors that cross lands under multiple jurisdictions could be more challenging to develop.

Capacity. Several stakeholders provided input on the capacity of individual Section 368 energy corridors to accommodate additional infrastructure and new transmission projects. These stakeholders pointed out that the capacity of a corridor to accommodate multiple energy transmission projects is a crucial factor in determining the need for revisions, deletions, or additions to Section 368 energy corridors. One stakeholder questioned whether individual corridors were sited to provide maximum utility and minimum environmental impact.

Agency Response: This input was incorporated into the corridor abstracts (available on the project website) and corridor summaries (Section 3.4). The capacity of the corridor was assessed, when feasible. In addition, GIS data on energy infrastructure, including operational and planned transmission lines, substations, and pipelines (natural gas, crude oil, and refined products), were licensed from S&P Global Platts. These energy infrastructure data were included in corridor maps presented in the corridor abstracts and summaries. Appendix B lists existing energy infrastructure, planned or future energy development potential, and additional energy capacity identified for Region 1 Section 368 energy corridors.

Electric Transmission and Pipeline Planning. Some stakeholders pointed out several factors that should be considered in transmission planning, including current load being transmitted through the Section 368 energy corridors to determine the need or opportunity for retrofitting existing infrastructure; information on pending applications for transmission project ROWs; projections for long-term energy supply and demand in the western United States; and access needs for the Section 368 energy corridors. A stakeholder suggested considering California Senate Bill 350, which calls for the voluntary transformation of the California Independent System Operator (CAISO) into a regional organization when future transmission corridor needs are evaluated.

Agency Response: Appendix B lists existing energy infrastructure, planned or future energy development potential, and additional energy capacity identified for the Region 1 Section 368 energy corridors. The WECC 2016 Study Program: Section 368 Energy Corridor Spatial Assessment identifies the Western Interconnect's most highly utilized WECC transmission pathways and their proximity to or within Section 368 energy corridors (Section 2.1.6). NREL is preparing an inventory and summary of publicly

available studies regarding the future energy portfolio in the western United States. When completed, the inventory and summary will be provided to the Section 368 Energy Corridor Core Regional Review Team for consideration in connection with potential revisions, deletions, or additions to the Section 368 energy corridors (Section 2.1.7).

Acceptable Use. Some stakeholders wanted to maximize the use and efficiency of Section 368 energy corridors by allowing for multiple types of infrastructure, including pipelines and electric transmission, transportation, water and sewer lines, and other utilities. Another stakeholder wanted assurances that adding infrastructure to the corridors would not interfere with existing infrastructure and uses. Some stakeholders expressed reservations about multiple land uses in utility corridors on the grounds that mixed use of the corridors could increase cumulative impacts and result in significant safety or environmental risks. These stakeholders noted that corridors that are wide enough to accommodate multiple uses might interfere with conservation objectives or protection of other resources, such as specially designated areas.

Agency Response: The West-wide Energy Corridor RODs designated Section 368 energy corridors for long-distance pipeline transport of oil, gas, or hydrogen and transmission and distribution of high-voltage electricity via transmission and distribution lines. Therefore, transportation infrastructure, water and sewer lines, and other utilities are generally not considered appropriate and acceptable uses of Section 368 energy corridors. The colocation of pipelines and transmission lines is subject to safety requirements. Installation and operation of high-voltage electric transmission lines and pipelines in the same corridor must adhere to established colocation protocols. Impacts on specially designated areas and other environmental resources would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

West-wide Energy Corridor Purpose. Several stakeholders pointed out the importance of maintaining Section 368 energy corridors for future energy planning, particularly for solar energy development. One stakeholder provided information on the ability of individual corridors to provide connectivity for renewable energy generation while ensuring reliability.

Agency Response: One of the siting principles from the Settlement Agreement states “corridors should provide connectivity to renewable energy generation to the maximum extent possible while also considering other sources of generation, in order to balance the renewable sources and to ensure the safety and reliability of electricity transmission.” Sections 2.1.1, 2.1.2, 2.1.4, and 2.1.5 describe several renewable energy initiatives that could lead to increased renewable energy generation within or near Region 1 Section 368 energy corridors. Current and potential future renewable energy development within or near specific Region 1 Section 368 energy corridors is identified and assessed in the corridor-specific summaries in Section 3.4 and in the corridor abstracts available on the project website.

2.3.3 Stakeholder Engagement and the Regional Review Process

General Comment: Several stakeholders communicated the importance of continued stakeholder involvement. There was one request for another workshop on the regional review process to facilitate

understanding of Section 368 energy corridor issues and anticipated outcomes of the regional reviews. Another stakeholder requested an opportunity to provide additional input once the finer-scale analysis and mapping have been completed. One stakeholder wanted the Agencies to be aware that residents in some communities do not have access to a computer, email, or social media and that mail or direct outreach would be more effective ways to communicate with these residents. One stakeholder wanted the Region 1 Energy Planning Report to be available to stakeholders at the start of the regional reviews for Regions 2 through 6.

Agency Response: The regional review process calls for robust stakeholder involvement. Stakeholder engagement is sought by the Agencies at multiple times during the regional review process through webinars, public meetings, and a comment period after the release of Section 368 energy corridor abstracts. The Agencies will also solicit stakeholder input on the potential revisions, deletions, and additions identified for the Section 368 energy corridors during the regional reviews. In addition, the project website is an online source for public information on the Section 368 energy corridors and regional reviews.

GIS Data and Mapping Tool. Several stakeholders suggested adding data layers to the mapping tool to aid in analyzing potential siting impacts. Some stakeholders provided maps or digital data files, while others provided website addresses for additional data on such topics as State special status species, major migration corridors, and specially designated areas. Stakeholders suggested including other data (such as designations and conservation lands in the DRECP) as they became available. Some stakeholders suggested adding a data layer to the mapping tool showing existing transmission lines and pipelines within all Section 368 energy corridors. Some stakeholders suggested updating maps and abstracts to include information on existing and pending ROWs in Section 368 energy corridors and to provide a general indication of the capacity of each corridor. One stakeholder stated that the mapping tool did not provide enough MP marker detail relative to the corridor abstracts, which gave more precise MP distances.

Agency Response: Data received from stakeholders and other suggested data layers have been incorporated into the Section 368 Energy Corridor Mapping Tool, as appropriate. GIS data on energy infrastructure, including operational and planned transmission lines, substations, and pipelines (natural gas, crude oil, and refined products), were licensed from S&P Global Platts. Platts energy infrastructure GIS layers are now viewable in the mapping tool for users who register, agree to the terms and conditions, and log in. The Section 368 Energy Corridor Mapping Tool can be used to view corridor MPs as well as to measure distances between map features (e.g., the distance between a Section 368 energy corridor and a specially designated area).

Corridor Abstracts. Several stakeholders provided additional information for inclusion in the corridor abstracts, such as where Section 368 energy corridors intersect with ACECs and specially designated areas. These stakeholders also corrected information in some of the corridor abstracts and pointed out where additional information or clarification (e.g., information on corridor width and ROWs) was needed. A stakeholder believed that the final corridor abstracts should summarize the most important resource concerns, so that stakeholders and developers would be more aware of factors that would

likely have the greatest influence on project design, mitigation requirements, and cost. One stakeholder questioned the utility of the corridor abstracts, since no solutions were identified for the constraints or pinch points described in the abstracts.

Agency Response: As appropriate, the Agencies incorporated information provided by stakeholders including additional concerns, corrections, and clarifications into the corridor abstracts. The corridor abstracts were used to formulate potential revisions, deletions, and additions to the Region 1 Section 368 energy corridors (Table 3.1 and Section 3.4). The significant resource concerns affecting each corridor as well as the Agencies' rationale for any potential revision, deletion, or addition to Region 1 Section 368 energy corridors are included in the corridor summaries (Section 3.4). Revised corridor abstracts are presented together in a separate document available on the project website and individually through the mapping tool.

Process. Several stakeholders believed that the Agencies should improve the regional review process to meet the objectives of the Settlement Agreement. One stakeholder believed that the current definition and application of the term "constraint" did not allow environmental concerns to qualify as "constraints" and that there was too much reliance on compensatory mitigation to address impacts. In addition, some stakeholders believed that the BLM's approach to the regional review process failed to examine cumulative impacts on the same resources from multiple Section 368 energy corridors. One stakeholder suggested that the regional review process use a ranking system for constraints, rather than the constraint/not a constraint approach, to identify corridors that may warrant revisions now, rather than during a future NEPA analysis.

One stakeholder requested that the regional review process consider new energy policies, energy trends, and new energy generation and transmission technologies to ensure that future energy transmission projects are still needed. One stakeholder suggested that technology experts be engaged in the process for identifying potential revisions, deletions, or additions to Section 368 energy corridors. Another stakeholder believed that evolving technology and energy strategies that emphasize rooftop solar energy rather than large-scale solar and wind projects would reduce the need to build new transmission lines and infrastructure in the western United States.

Some stakeholders stated that any consideration of revisions, deletions, or additions to Section 368 energy corridors should be completed through a NEPA process that would include alternatives analysis, public input, and other NEPA-required analyses and considerations. One stakeholder wanted the BLM to consult with the USFWS regarding impacts on endangered or threatened species from Section 368 energy corridor development, as required by the ESA, before finalizing any suggested revisions, deletions, or additions to the Region 1 Section 368 energy corridors. Some stakeholders wanted potential revisions, deletions, or additions to Section 368 energy corridors to be based on updated and thorough data.

Another stakeholder suggested that the Agencies establish a process for prioritizing Section 368 energy corridors for additional evaluation and make this process clear to stakeholders. Another stakeholder believed that the Agencies should not limit the outcome of regional reviews to identifying

potential revisions, deletions, or additions to Section 368 energy corridors, but should also include development of required mitigation measures. Another stakeholder believed that the Agencies should identify data gaps, uncertainties in energy planning or energy markets, and variable resource conditions that may be priorities for future research and analysis regarding Section 368 energy corridors.

Agency Response: One of the siting principles from the Settlement Agreement states that Section 368 energy corridors should "ensure avoidance of environmentally sensitive areas to the maximum extent practicable." The Agencies have diagrammed each Section 368 energy corridor using conflict criteria to depict areas where each corridor intersects low, medium, and high potential conflict areas to help the Agencies identify where a potential corridor revision, deletion, or addition could avoid environmentally sensitive areas. These maps of potential conflict areas in the vicinity of Section 368 energy corridors are presented in the summaries in Section 3.4. In response to stakeholder input, the Agencies no longer use the terms "constraint" and "not a constraint" to characterize corridor concerns. Instead, the Agencies have assessed whether a Section 368 energy corridor reflects the siting principles stated in the Settlement Agreement in determining whether to develop a potential corridor revision, deletion, or addition. The mitigation hierarchy is addressed in the corridor abstracts, where applicable, and avoidance of impacts continues to be the Agencies' preference, to the extent possible, over minimization and mitigation of impacts. The regional reviews are not conducted for the purpose of supporting immediate Agency actions or specific energy projects within corridors, but instead represent a study of the Section 368 energy corridors including potential revisions, deletions, or additions for future consideration. As a result, NEPA is not required for regional reviews. This report is not a NEPA document and thus does not have to address cumulative impacts. Similarly, ESA Section 7 consultation is not required for regional reviews, nor is it covered in this report. The USFWS is participating in the regional reviews as a member of the Agencies' Region 1 Review Core Team (see Chapter 7). In general, the regional reviews incorporate lessons learned from major energy project land-use authorizations since the issuance of the West-wide Energy Corridor PEIS, as well as from recent transmission studies and current energy policies and trends. Technology and energy strategies that emphasize rooftop solar energy are outside the scope of the regional reviews. The corridor abstracts and corridor summaries contain updated data, including applicable RMP revisions.

Corridor Revisions, Deletions, and Additions. Several stakeholders made suggestions as to how specific Section 368 energy corridors might be rerouted, realigned, extended, narrowed, or deleted to reduce impacts on resources and resource areas, such as specially designated areas, special status species, lands with wilderness characteristics, wildlife corridors, visual resources, and cultural and historic resources. Some stakeholders suggested corridor revisions, deletions, or additions based on terrain and jurisdictional constraints.

Agency Response: The Agencies considered stakeholder suggestions for Section 368 energy corridor revisions, deletions, and additions during the Region 1 Review. Corridor-specific suggestions provided by stakeholders as well as the Agencies' potential corridor revisions, deletions, and additions are included in Section 3.4.

Potential IOP Revisions, Deletions, and Additions. Stakeholders suggested adding IOPs to support improved mitigation approaches and outcomes and to conform to Agency guidance on the mitigation hierarchy. Stakeholders also suggested that the Agencies incorporate the design features from the Solar PEIS into the IOPs.

Agency Response: Based on stakeholder concerns and additional review, the Agencies are considering the addition of three IOPs: one IOP for ecological resources (regarding habitat connectivity), an IOP for lands with wilderness characteristics, and an IOP for NSTs and NHTs. During the Region 1 Review, the Agencies also identified possible revisions to three other IOPs (visual resources, vegetation, and DoD coordination). The Agencies are considering the stakeholder suggestions to incorporate the design features from the Solar PEIS into the IOPs (Section 3.3). Text regarding the mitigation hierarchy (40 CFR 1508.20) has been added to the corridor abstracts available on the project website and to the corridor summaries in Section 3.4. Additional IOP revisions, deletions, and additions may be identified in subsequent regional reviews.

2.3.4 Key Corridor Characteristics That Could Affect Energy Development

Through the Region 1 Review process, the Agencies have identified the following key corridor characteristics that could affect development in the Region 1 Section 368 energy corridors:

- Jurisdictional gaps within corridors (i.e., corridors crossing private or State land, tribal land, or undesignated DoD-, BOR-, or NPS-administered lands);
- Nonlinear ROWs, such as ROWs for solar energy development, within corridors;
- Locations within or near specially designated areas, such as National Monuments, or corridors that cross or parallel specially designated features, such as NSTs and NHTs;
- Locations within special status species habitat, such as desert tortoise conservation areas (TCAs), desert tortoise critical habitat, and Priority 1 and 2 tortoise connectivity areas; and
- Physical bottlenecks within corridors, such as difficult terrain and pinch points, multiple transmission lines and pipelines crowding the corridor, inefficient use resulting from ROWs not running parallel to the corridor centerline, and poor corridor spacing.

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3. Region 1 Section 368 Energy Corridor Summary of Considerations

3.1 Corridor Revisions, Deletions, or Additions

The Agencies' review of Section 368 energy corridors in Region 1, including corridors of concern, identified potential revisions, deletions, or additions to the corridors for consideration in future land use planning. Section 368 energy corridor revisions, deletions, or additions would be made only through the land use planning process, either with a plan amendment or as part of a larger planning effort.

Table 3-1 contains a summary of the potential revisions, deletions, or additions for the Section 368 energy corridors in Region 1, including a rationale for those potential changes. Figure 3-1 shows those potential revision areas on a map of the corridor network. The corridors are listed in numerical order, for ease of reference. More detailed information for all of the corridors is provided in the individual corridor summaries that follow the table. Appendix A contains a table showing the Agencies' application of the Settlement Agreement corridor siting principles identifying potential revisions, deletions, and additions to the Section 368 energy corridors in Region 1.

3.2 General Considerations for Future Energy Development

During the Region 1 Review, the Agencies identified several general changes that could help regional and local Agency planning offices address concerns identified for the Region 1 Section 368 energy corridors and thus promote improved use of the corridors:

- Agency policy and/or program guidance should be provided to local BLM and USFS offices describing the purpose and benefits of designating and using Section 368 energy corridors.
- The BLM and USFS should coordinate to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within Section 368 energy corridors.
- When an authorized long-distance oil, gas, or hydrogen pipeline or high-voltage electric transmission or distribution line has been located outside or adjacent to a Section 368 energy corridor, the affected Agency should review why the corridor was not used and should consider whether future revisions, deletions, or additions to the unused corridor segments could improve utilization of the corridor.
- When a Section 368 energy corridor straddles a road or trail (e.g., an Interstate Highway, NST, NHT, or a Scenic Byway), the affected Agency should consider whether shifting the corridor to the edge of the road or trail would increase the potential for meeting applicable VRM objectives.
- The BLM and USFS should encourage proponents of projects in Section 368 energy corridors to integrate visual resource planning and design principles during the early phases of project planning to meet BLM VRM and USFS scenic integrity objectives and avoid land use plan amendments.

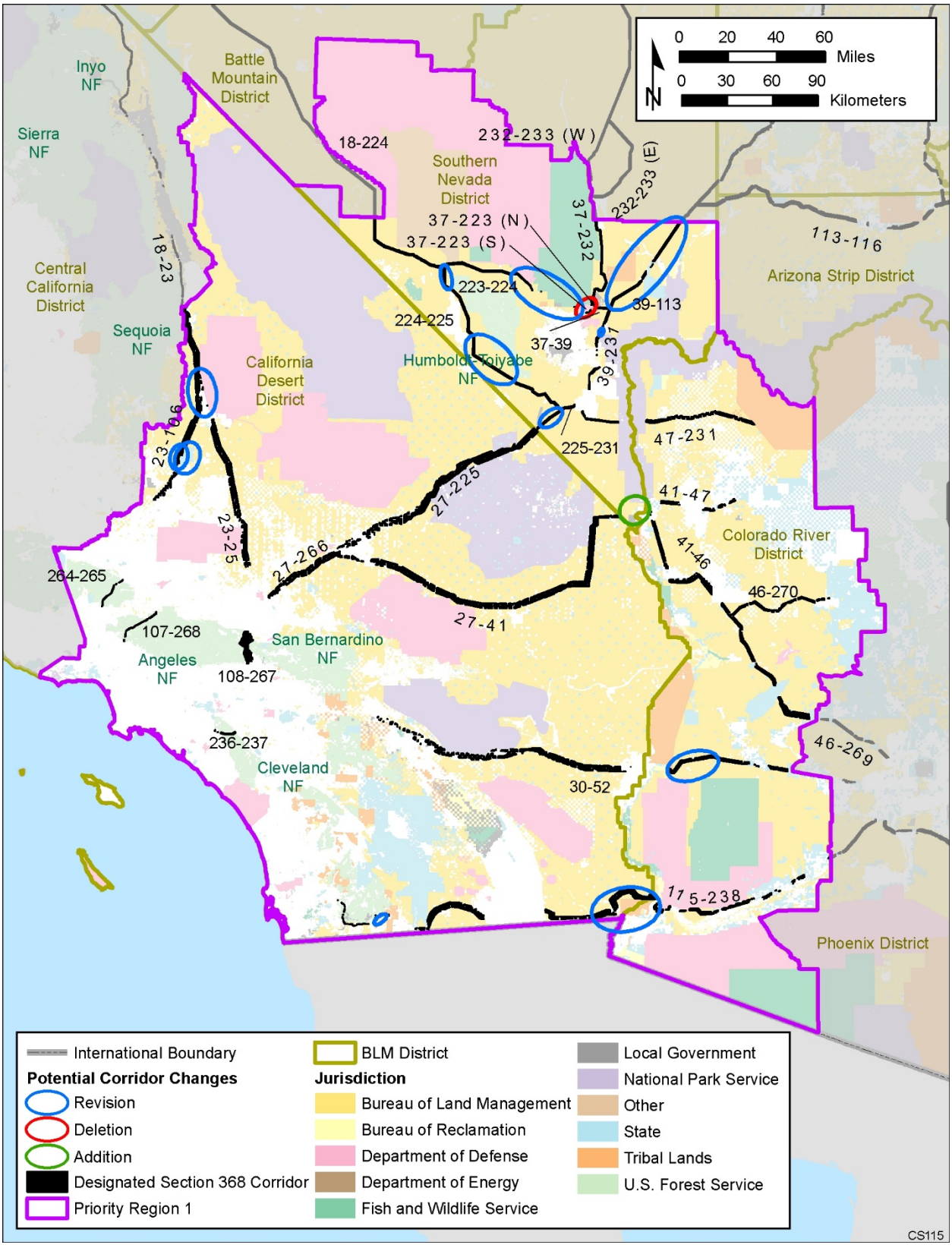
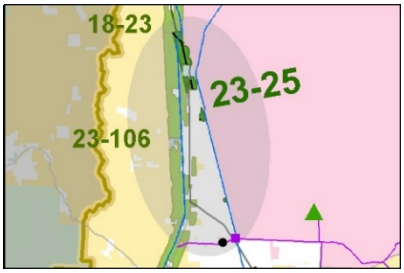
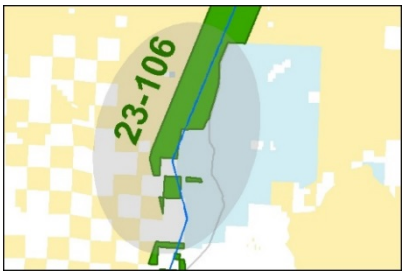
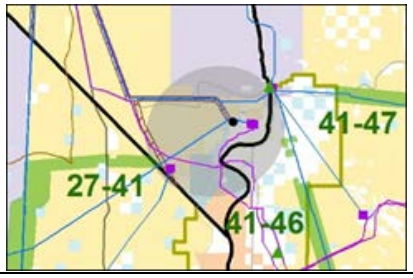
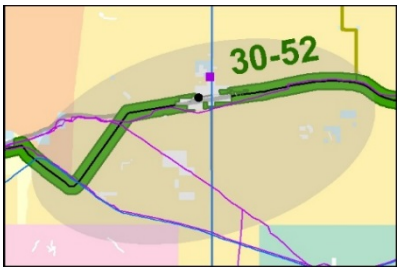
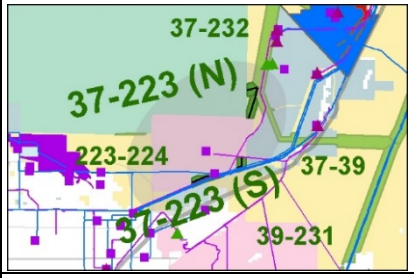
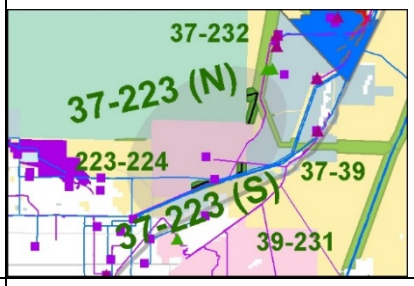


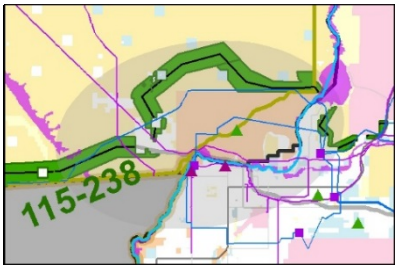
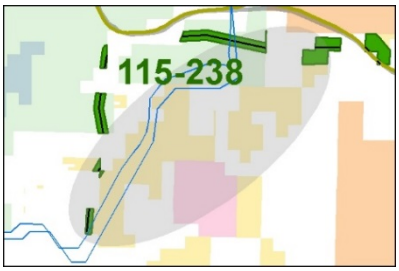
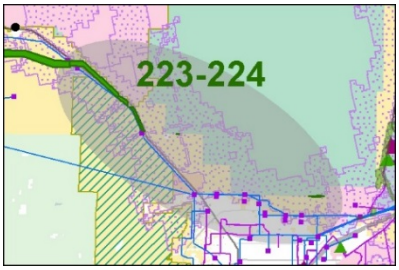
Figure 3-1 Potential Revisions, Deletions, and Additions to Region 1 Section 368 Energy Corridors

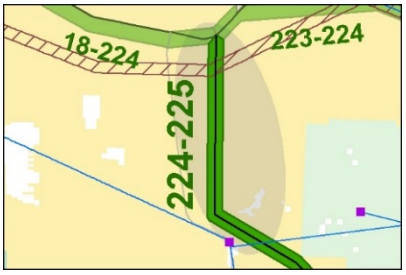
Table 3-1 Summary of Potential Revisions, Deletions, and Additions to Region 1 Section 368 Energy Corridors

Corridor Number[a] and Location	Potential Revision, Deletion, or Addition	Rationale
23-25 Segment California	Revision: Consider realigning the corridor between MP 0 and MP 18 to connect to Corridor 23-106 via an existing locally designated corridor.  Addition: Consider extending the corridor across additional BLM-administered lands south of MP 83 in a future plan amendment.	Improve corridor utility by shifting the first 18 miles westward to connect earlier to adjacent West-wide corridor 23-106. Existing corridor segment has a jurisdictional gap due to the China Lake Naval Weapons Center. Original corridor route studied in the West-wide Energy Corridor PEIS included DoD-administered lands, but designation was not made, leaving a corridor gap. Corridor utility could be also be improved by extending the corridor on public lands south of MP 83 toward Victorville.
23-106 Segment California	Revision: Consider two possible revisions to avoid Red Rock Canyon State Park: • Realign the corridor to the west between MP 32 and MP 36. • Braid the corridor in two segments around the park.  	Maximum utility and minimum impact of the corridor could be improved by realigning the corridor to avoid the state park. The corridor is pinched at this location.
27-41 Arizona California, and Nevada	Addition: Consider extending Corridor 27-41 from the west in California to the east through the southern tip of Nevada to link to Corridors 41-46 and 41-47 in Arizona.  	Corridor abruptly stops at Nevada State line. Extending the corridor across Nevada would provide continuity between Arizona and California and thus help the Agencies achieve the purpose of West-wide energy corridors. Several alternatives to extend the corridor are possible. Jurisdictional issues and sensitive resources may be a concern with one or more alternatives for a corridor extension; however, existing infrastructure is present along multiple potential ROWs.

Corridor Number[a] and Location	Potential Revision, Deletion, or Addition	Rationale
27-225 Segments Nevada and California	Revision: Consider widening corridor and/or adding a braid between MP 103 and MP 107 using the adjacent, locally designated corridor with existing infrastructure. 	Increasing capacity in Nevada through widening or adding a braid would alleviate a major bottleneck. This corridor provides a major link in the energy transport system extending from Wyoming to southern California; however, future use of the corridor is unlikely due to physical constraints from solar energy development within the corridor in southern Nevada. In addition, the California side of the corridor is much wider, at 2 miles in width, and a more coordinated approach should be taken between the BLM in Nevada and California.
30-52 Segment Arizona	Revision: Consider revising corridor between MP 120 and MP 143, and consider braiding into two segments. 	Maximum utility and minimum impact of the corridor are affected by jurisdictional gaps at the Town of Quartzsite and the Colorado River Indian Reservation, and the physical bottleneck at Copper Bottom Pass. Consider options for a braided corridor to redirect around the town of Quartzsite and coordinate and consult with tribes to discuss the jurisdictional gap. Alternatives and lessons learned from the ongoing analysis for the 500-kV Ten West Link transmission project, which proposes to utilize these portions of the corridor, should be taken into account. When available, the rationale for the proposed route should be reviewed when revisions, deletions, or additions to the energy corridor are considered.
39-113 Nevada	Revision: Consider realigning and replacing the corridor from MP 0 to MP 46 to utilize locally designated BLM corridors, as well as the Moapa Corridor across the Moapa Indian Reservation. 	The potential realignment across BLM lands, if acceptable, would connect with the Moapa Corridor, a transportation and utility ROW corridor administered by the BLM under Public Law 96-491 that traverses the Moapa Indian Reservation. The Moapa Ban of Paiute Indians, BIA, and the Office of Special Trustee for American Indians (OST) would need to be engaged. The potential realignment would eliminate the jurisdictional gap at the Valley of Fire State Park and avoid currently undeveloped areas and identified environmental and recreational issues.
37-223 (N) Nevada	Deletion: Consider deleting a 0.6-mile corridor segment, while still preserving the intersecting corridors (37-232 and 37-39).	Corridor utility is very limited due to jurisdictional gaps at Desert National Wildlife Refuge. Corridor was originally envisioned to include DoD and USFWS lands at this location in the West-wide Energy Corridor PEIS. As those designations did not occur, the existing short corridor segment does not provide much function as a preferred route for energy.

Corridor Number[a] and Location	Potential Revision, Deletion, or Addition	Rationale
		
37-223 (S) Nevada	Revision: Consider revising corridor segment to better align with existing infrastructure and other corridors. 	Corridor utility is limited due to jurisdictional gaps at Nellis Small Arms Range. Corridor was originally envisioned to include DoD and USFWS lands at this location in the West-wide Energy Corridor PEIS. As those designations did not occur, the existing short corridor segments do not provide much function as a preferred route for energy; though from MP 4 to MP 6, there are existing transmission lines and a natural gas pipeline in the corridor. Consider revising the corridor to better align with adjacent legislative energy/utility corridors, to provide more options for preferred routes for energy ROWs.
39-231 Nevada	Revision: Consider widening corridor from MP 9.5 to MP 11.0 from 500 feet (ft) to 3,500 ft. 	The corridor revision would broaden an existing pinch point, improving corridor utility and promoting more efficient use of the landscape. The pinch point was caused by a previously identified Instant Study Area (ISA). Congress subsequently removed the designation; however, the width of the corridor has remained unchanged.

Corridor Number[a] and Location	Potential Revision, Deletion, or Addition	Rationale
115-238 Segments Arizona and California	Revision: Consider realigning the corridor between MP 103 and MP 144 at the Colorado River crossing.  Revision: Alternate alignment at MP 241 to MP 248 to stay on BLM-administered lands and follow existing transmission line. 	Maximum utility and minimum impact of the corridor are affected by jurisdictional gaps and sensitive resources at the Colorado River crossing. The jurisdictional gaps include BOR land in Arizona and the Fort Yuma-Quechan Indian Reservation in California. Realigning the corridor to bring it into alignment with existing infrastructure further south should be examined to reduce impacts on sensitive resources; nevertheless, jurisdictional gaps would persist across BOR and the reservation and may affect the viability of this option.
223-224 Nevada	Revision: Consider realigning corridor from MP 0 to MP 17 to the south of U.S. Highway 95, to align with the locally designated corridors where there is existing infrastructure. 	Potential revision to improve utility and reduce impacts would avoid the Tule Springs Fossil Beds National Monument and the DoD Nellis Test and Training Range and would provide a viable route for energy transmission northwest of the Las Vegas Valley. However, the potential revision would narrow the corridor width to approximately 1,400 ft.

Corridor Number[a] and Location	Potential Revision, Deletion, or Addition	Rationale
224-225 Nevada	Revision: Consider options to realign MP 33 to MP 61 segment to the north, in alignment either with Highway 160 and a 138-kV line, or with locally designated corridor with existing infrastructure.  Revision: Consider alternatives to navigate the pinch point caused by terrain between MP 6 and MP 9. 	Potential revision would reduce impacts by better alignment with existing infrastructure. If there is significant solar energy development in Nye County, this route will be important. Future consideration should be given to finding alternatives for navigating difficult terrain between MP 6 and MP 9 to improve corridor utility.

No Potential Revisions, Deletions, or Additions
(analysis for these corridors can be found in
Section 3.4, Region 1 Section 368 Energy Corridor Summaries)

Corridor 27-266 Corridor 37-39 Corridor 37-232 Corridor 41-46 Corridor 41-47	Corridor 46-269 Corridor 46-270 Corridor 47-231 Corridor 107-268	Corridor 108-267 Corridor 225-231 Corridor 236-237 Corridor 264-265

[a] **Corridors of Concern are identified in red text.**

3.3 Potential Revisions, Deletions, or Additions to Interagency Operating Procedures

In addition to considering potential revisions, deletions, or additions to Section 368 energy corridors, the Agencies considered potential revisions, deletions, or additions to IOPs during the Region 1 Review. As described in the West-wide Energy Corridor PEIS, the IOPs were developed to assist the Agencies in evaluating proposals and applications for using Section 368 energy corridors by providing uniform proposal and application processing criteria for energy transport ROWs in the corridors. The IOPs are similar to best management practices (BMPs), but they are mandatory and apply to all proposals, applications, and authorizations for energy transmission projects in Section 368 energy corridors, regardless of whether they traverse land administered by the BLM or USFS. The IOPs address the entire ROW authorization process, from the project planning, proposal, and application stage through siting, design, construction, operation, and decommissioning. The IOPs were developed and designated in the West-wide Energy Corridor PEIS and the subsequent BLM and USFS RODs. The IOPs are presented in Appendix B of both RODs.

In conducting the first regional review, as well as the Corridor Study, the Agencies determined IOPs were neither well understood nor consistently used. Moreover, the Region 1 Review and Corridor Study revealed the need to revise or add IOPs to provide more specific guidance, for example, for NSTs and NHTs, Federal lands with wilderness characteristics, and habitat connectivity. The IOPs and their application will be evaluated in subsequent regional reviews to determine whether revisions, deletions, or additions are needed to make the IOPs more effective. In addition, the West-wide Energy Corridor Guidebook, being developed by the BLM to inform Federal land managers and ROW applicants, will address IOPs and their use.

Based on the Region 1 Review, the Agencies identified three potential new IOPs: one for habitat connectivity as an ecological resource, one for lands with wilderness characteristics, and one for NSTs and NHTs. The Agencies also identified potential revisions to three existing IOPs: visual resources, vegetation management, and DoD coordination. No potential IOP deletions were identified.

3.3.1 Potential IOP Additions

3.3.1.1 Potential New IOP for Ecological Resources

B.1 Project Planning IOPs. The Agencies should consider adding a subsection on habitat connectivity. While Section 368 energy corridors are being designated or modified through a plan revision or plan amendment, impacts on connectivity for wildlife and natural environmental processes should be avoided or minimized. Any transmission projects within Section 368 energy corridors should be sited and designed in a manner that minimizes impacts on habitat connectivity.

This potential IOP addition would be consistent with the John D. Dingell, Jr. Conservation, Management, and Recreation Act which directs the Secretary of the Interior to assess the impacts of habitat fragmentation on wildlife in the California Desert Conservation Area; establish policies and procedures to ensure the preservation of wildlife corridors and facilitate species migration to determine the individual and cumulative impacts of rights-of-way for projects in the California Desert Conservation Area, in accordance with NEPA, the ESA and any other applicable law; and incorporate the findings and recommendations into all land management plans applicable to the California Desert Conservation Area.

3.3.1.2 Potential New IOP for Lands with Wilderness Characteristics

B.1 Project Planning IOPs. The Agencies should consider adding a subsection on lands with wilderness characteristics. Prior to designating new Section 368 energy corridors or corridor segments, the BLM is required to follow the procedures in BLM Manuals MS-6310, "Conducting Wilderness Characteristics Inventory on BLM Lands (Public)," and MS-6320, "Considering Lands With Wilderness Characteristics in Land Use Plans."

3.3.1.3 Potential New IOP for National Scenic and National Historic Trails

B.1 Project Planning IOPs. The Agencies should consider adding a subsection for NSTs and NHTs. The new subsection should ensure that:

- The appropriate agency project leader (BLM or USFS) must consider the National Trails System Act (NTSA, P.L. 90-954, as amended), applicable regulations, and agency trail policies (BLM MS-6250 and 6280; Forest Service M-2353; and NPS DO-45) to safeguard the nature and purposes of congressionally designated trails (NTSA Sec. 7(c)), to make efforts to avoid activities incompatible with trail purposes (NTSA Sec. 7(c)), and to ensure that any easement or ROW conditions are related to the policy and purposes of the Act (NTSA Sec. 9(a)).
- To support interagency coordination, the appropriate agency project leader (BLM or USFS) shall contact the delegated National Trail Administrator (NPS, USFS, or BLM interagency trail-wide leader) when a project may be located in the vicinity of a congressionally designated National Scenic or Historic Trail (NTSA, Sec. 5(a)), or a trail under study for potential designation (NTSA Sec. 5(c)), to initiate project review. In addition, State or Regional Trail Program Leaders (BLM, NPS, USFS, USFWS, BOR, and U.S. Army Corps of Engineers [USACE]) shall be contacted to coordinate local-level project review in order to meet agency trail management policy requirements for proposed projects.
- The affected National Trail Administrator(s) and State or Regional Trail Program Leader(s) will provide the appropriate agency (BLM or USFS) necessary information, such as the official trail map depicting the congressionally designated route and trail alignment (NTSA Sec. 5(a)); a description or location of the national trail ROW (NTSA Sec. 7(a)(2)); relevant trailwide Comprehensive Plan decisions (NTSA Sec. 5(e) and (f)); land use plan decisions and maps for established National Trail management corridors (*BLM MS-6280*) or National Trail areas (*Forest Service M-2353*); and available data or data requirements for the identification of trail-related

features (i.e., historic sites, recreation facilities, viewshed analysis) to support project site selection and the environmental analysis.

3.3.2 Potential IOP Revisions

3.3.2.1 Potential Revisions to IOP for Visual Resources

B.1 Project Planning IOPs. In the IOP for visual resources, the Agencies should consider adding the following text: "VRM class objectives are binding land use planning decisions." Transmission facilities must demonstrate that they will conform to the VRM decisions in the applicable land use plan through the hard-look visual impact analysis enumerated in *BLM Manual Handbook H-8431-1*, "Visual Resource Contrast Rating." The hard-look analysis must also analyze the cumulative effects associated with existing built facilities and anthropogenic landscape character changes in combination with the proposed action to ensure conformance with the applicable VRM class objective. If the cumulative effects analysis demonstrates a nonconforming situation, approval of the proposed action would necessitate amending the applicable land use plan.

According to *BLM Manual 8400*, "Visual Resource Management," proposed actions need to be in conformance with the applicable land use plan VRM class objectives. Also, while VRM Class IV objectives allow for major modification to occur and for authorized activities to dominate the view, minimizing visual contrast remains a requirement of those VRM class objectives. Visual contrast ratings are required in areas of high sensitivity or high impact.

3.3.2.2 Potential Revisions to IOP for Vegetation Management

B.1 Project Planning IOPs. In the IOP for vegetation management, the Agencies should consider adding the following text:

> The BLM published two RODs, in 2007 and 2016, that focus on management of invasive and noxious weeds on BLM-administered lands in 17 western states (see *BLM IM 2017-078*). The 2016 ROD documents approval for the use of three additional EPA-registered herbicide active ingredients, aminopyralid, fluroxypyr, and rimsulfuron, in all 17 States covered by the 2016 PEIS. Implementation of the 2016 ROD increases the number of active ingredients approved for use on BLM-administered lands from 18, as established by the 2007 ROD, to 21. The 2016 ROD identifies standard operating procedures that must be used in all applications of herbicides used on BLM-administered lands. The standard operating procedures are intended to minimize risks to human health and the environment from herbicide treatments.

3.3.2.3 Potential Revisions to IOP for DoD Coordination

B.1 Project Planning IOPs. The Agencies should consider restricting new infrastructure height within corridors near DoD training routes to the following:

- Where DoD training routes restrict development above ground level, new infrastructure placed in corridor would not be allowed to exceed the height of the tallest existing structure within DoD training routes (most likely 0 ft above ground level [AGL]);
- Where DoD training route special-use airspace has a floor of 200 ft AGL, new infrastructure placed in corridor would not be allowed to exceed 200 ft AGL; and
- Where DoD training route special-use airspace has a floor of 500 ft AGL, new infrastructure placed in corridor would not be allowed to exceed 400 ft AGL.

3.3.3 General Considerations for IOP Revisions, Deletions, and Additions

Stakeholders suggested that the IOPs incorporate the design features from the Solar PEIS Record of Decision (BLM and DOE 2012). The Agencies are considering this suggestion.

Development of potential IOP revisions, deletions, or additions will continue in the subsequent regional reviews. In addition, concurrent IOP review is under way in connection with development of the West-wide Energy Corridor Guidebook for project developers.

3.4 Region 1 – Section 368 Energy Corridor Summaries

This section summarizes the review for all the West-wide corridors in Region 1 by presenting 24 individual corridor summaries. Each corridor summary includes any identified potential revisions, deletions, or additions, or a statement that no potential revisions, deletions, or additions have been identified, along with a rationale. Readers should also reference Appendix A as they review the corridor summaries, because it contains a table showing the Agencies' application of the Settlement Agreement corridor siting principles for each corridor.

The corridor summaries include a corridor-specific discussion of current infrastructure and potential for future development; energy planning and environmental resource concerns identified by stakeholders and the Agencies; the Agencies' review and analysis of the corridor concerns; and a high-level summary of input received from stakeholders. Maps of the potential conflict areas based on the conflict screening criteria are also included in the summaries. The summaries are derived from the more detailed corridor abstracts, which are available in a separate document on the project website and also through the Section 368 Energy Corridor Mapping Tool.

Corridor 23-25

(Little Lake – Adelanto)

Agency Jurisdiction

Bureau of Land Management

California Desert District
Barstow Field Office
Ridgecrest Field Office

California Counties

Inyo County
Kern County
San Bernardino County

Resource Management Plan

DRECP LUPA (BLM 2016a, b)

Corridor 23-25 Summary

Corridor 23-25 supports existing and future energy infrastructure and is consistent with the locally designated California Desert District energy corridor. Because of the lack of contiguous BLM-administered lands directly adjacent to DoD-administered lands and resulting gaps in the corridor between MP 0 and MP 18, the Workgroup has identified a potential corridor revision for BLM to consider. The potential revision is to reroute the 18-mile segment west of the China Lake Naval Weapons Center about 4 to 5 miles to the west along an existing locally designated corridor to connect to Corridor 23-106 (Figure 3-2a). This corridor revision would improve the utility of the corridor by increasing the amount of available BLM-administered lands within the corridor while continuing to provide north–south continuity for energy transport. In addition, the Workgroup suggests that BLM analyze additional BLM-administered lands south of MP 83 for corridor designation in a future land use plan amendment.

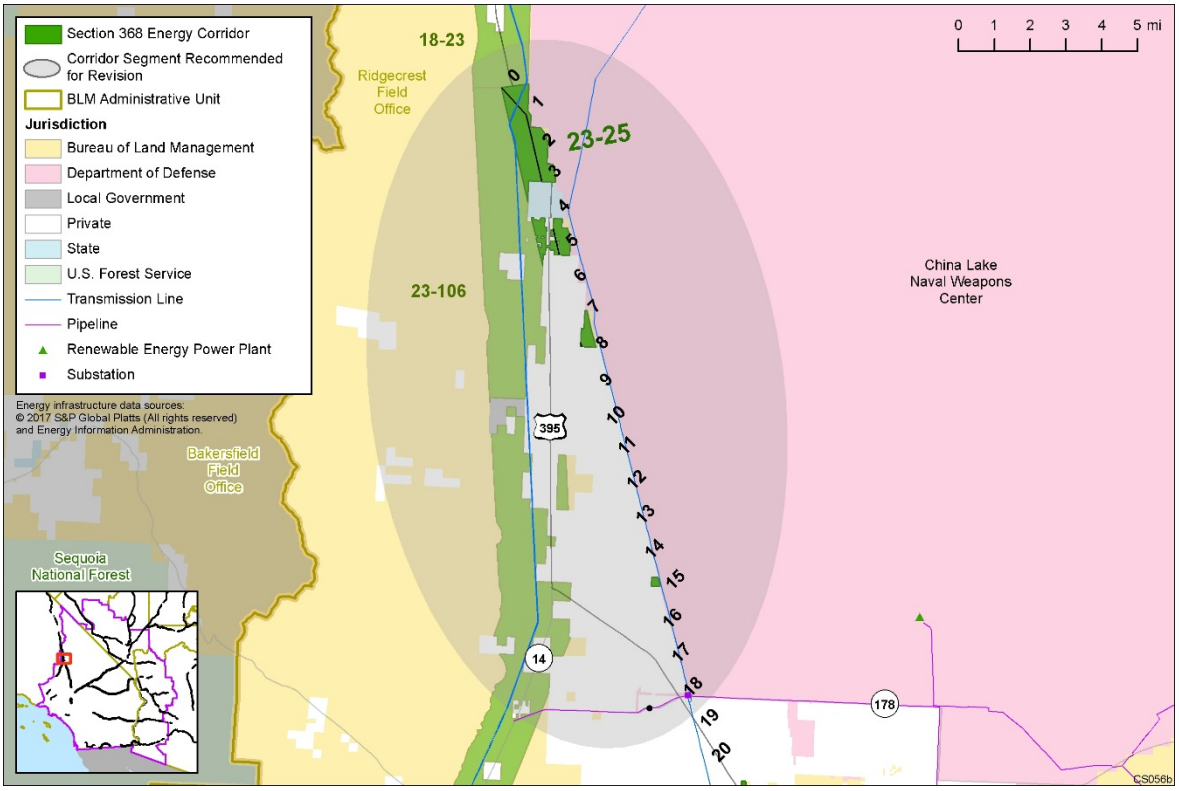


Figure 3-2a Potential Revision to Corridor 23-25

Corridor Overview: Existing Use and Opportunity

Corridor 23-25 was sited consistent with a locally designated California Desert District energy corridor, follows U.S. Route 395 throughout most of its length, and contains transmission lines and pipelines. The corridor also connects to Corridor 23-106, which provides a northern route to Corridor 18-23. Potential exists for future utility-scale solar development in the area, and Corridor 23-25 is adjacent to a DFA, providing an opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins near Little Lake in Inyo County and runs south for 83 miles to Adelanto in San Bernardino County, just south of Edwards Air Force Base. The corridor is 10,560 ft wide over most of its length, consistent with a BLM RMP in effect prior to its designation as a Section 368 energy corridor, and can accommodate both electric transmission and pipeline projects. Existing transmission lines and pipelines are located within the corridor, but the corridor is wide enough to accommodate additional energy projects. Although there are no pending energy applications or planned energy projects in the corridor, SCE has indicated that it is likely to be used in the future, given the numerous electrical generation and generation interconnection requests in the area. There is also the potential for future utility-scale solar development in the Indian Wells Valley. The corridor is located within the Victorville/Barstow RETI 2.0 TAFA and from MP 50 to MP 65 is adjacent to a DFA designated for all types of energy development. The DFA and TAFA provide for the corridor to accommodate transmission tied to renewable energy development.

Corridor 23-25 was identified as a corridor of concern in the Settlement Agreement for critical habitat, NCA, and ACECs. While specially designated areas, desert tortoise habitat, and priority habitat for the Mohave Ground Squirrel exist in or near the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas and provide a pathway for additional energy transport (Figure 3-2b).

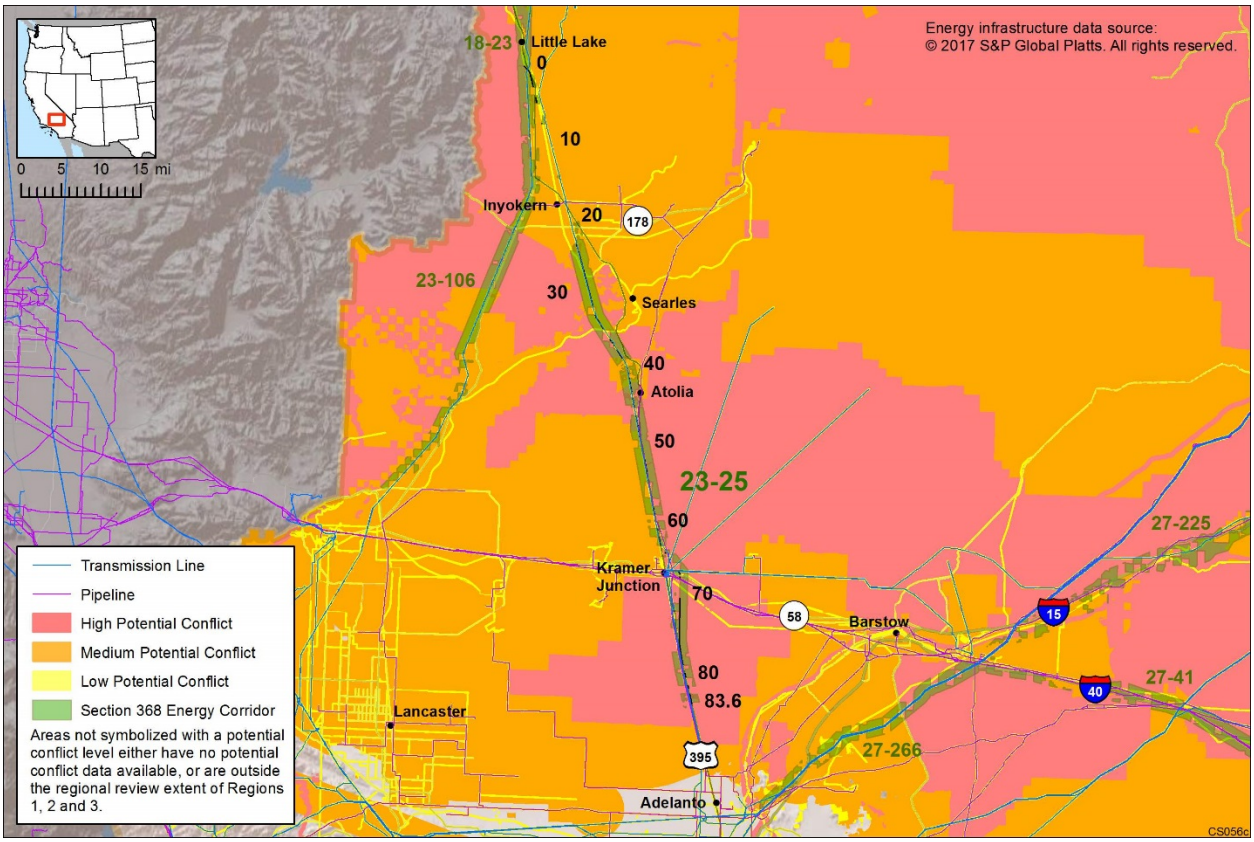


Figure 3-2b Mapping of Potential Conflict Areas in Vicinity of Corridor 23-25

General Issues Identified in Corridor Abstracts and from Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft corridor abstracts in September 2016; and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, identified in Table 1-1, is shown in Figure 3-2b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Location-Specific Physical Barrier. Rugged terrain limits options for additional projects.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Jurisdictional Concerns. The corridor is adjacent to China Lake Naval Weapons Center, creating a discontinuous section of DoD-administered lands that were studied in the West-wide Energy Corridor PEIS as part of this corridor, but were not designated. The jurisdictional gap also includes agriculture, an airport, and other development. This 580-foot (ft)-wide strip contains three transmission lines. The corridor abuts the west side of the Edwards Air Force Base. In addition, there is a corridor gap through the towns of Randsburg and Johannesburg. The corridor also abruptly ends without further designation.

Agency Analysis. Consider rerouting the 18-mile segment west of China Lake (MP 0 to MP 18) about 4 to 5 miles to the west (at MP 18) along an existing locally designated corridor to connect to Corridor 23-106 and proceed to the north (Figure 3-2a). Proposed project siting and colocation alternatives to address impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws. Although there are more BLM-administered lands past MP 83, there is no corridor designation south to Victorville, and the Workgroup suggests that BLM analyze additional BLM lands for corridor designation in future land use plan amendments.

Cultural Resources and Tribal Concerns. Serrano Ancestral Territory is located throughout the corridor.

Agency Analysis. The Agencies would consult with the San Manuel Band of Mission Indians, as well as with other California tribes, in connection with any proposed energy project in the corridor.

***Ecological Resources*.** Various portions of the corridor intersect with Mohave Ground Squirrel habitat. Desert tortoise designated critical habitat is located from MP 35.1 to MP 83.6, TCAs are located from MP 34.5 to MP 39.0 and MP 42.0 to MP 83.7, and desert tortoise connectivity areas are located along the corridor from MP 0 to MP 8.2 and MP 37 to MP 83. In addition, the corridor intersects a Southern California Wildlands Linkage, and stakeholders were concerned with potential connectivity impacts on desert bighorn sheep in the Mojave Desert. In responding to the 2014 RFI, stakeholders suggested rerouting the corridor to avoid TCAs and Priority 1 and 2 connectivity habitat in areas where there are no existing transmission lines, and to avoid priority habitat for the Mohave Ground Squirrel.

Agency Analysis. While desert tortoise habitat and priority habitat for the Mohave Ground Squirrel exist in or near the corridor, there is no nearby alternative route that would avoid these areas and provide a pathway for additional energy transport in a corridor with existing infrastructure (Figure 3-2b). The DRECP has specific CMAs to address impacts on the Mohave Ground Squirrel. The information in the DRECP would be used in implementing any energy projects. There are DRECP-wide as well as ACEC- and

NCL-specific CMAs for species that must be considered. Impacts on habitat and habitat connectivity would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws and can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under Section 7 of the ESA. The Ridgecrest portion of this corridor does not affect any desert bighorn sheep habitat or habitat connectivity.

Lands and Realty, Military and Civilian Aviation. There are potential impacts on the following military training routes: visual routes from MP 0 to MP 10 with a floor of 200 ft AGL; instrument routes from MP 31 to MP 40 with a floor of 500 ft AGL, and from MP 31 to MP 39 with a floor of 200 ft AGL; special-use airspace (with a floor of the ground surface, i.e., 0 ft AGL, from MP 19 to MP 31); and a slow-speed route from MP 30.7 to MP 75.3.

Agency Analysis. For the military training routes with a floor of 200 ft AGL, DoD identified no impact if structures remain below 200 ft AGL. For the military training routes with a floor of 500 ft AGL, DoD identified no impact if structures remain below 400 ft AGL. Taller structures would require further analysis for operational impact. For the military training routes with a ground surface floor, DoD identified no impact if structures remain below the height of existing infrastructure. Structures exceeding 200 ft AGL would require further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

Specially Designated Areas

- The corridor runs parallel to (and slightly overlaps) the West Mojave Desert Ecological Reserve between MP 61.9 and MP 63.4 across lands that are not in Federal ownership.
- West Desert and Eastern Slopes DRECP National Conservation Lands run between MP 0 and MP 1.4 and MP 1.6 to MP 1.9.
- Mojave and Silurian Valley DRECP National Conservation Lands are located from MP 37 to MP 37.4 and MP 37.8 to MP 38.1.
- Sierra Canyon ACEC is located between MP 0 and MP 1.9.
- Mohave Ground Squirrel ACEC is located from MP 0 to 3.4 and MP 34 to MP 35.
- El Paso to Golden Valley Wildlife Corridor ACEC is located from MP 24.1 to MP 35.
- Western Rand Mountains ACEC is located from MP 33.9 to MP 37.9.
- Fremont-Kramer ACEC runs from MP 34.5 to MP 39.4 and MP 44.2 to MP 83.6.
- Barstow Woolly Sunflower ACEC is located from MP 61.1 to MP 66.
- East Sierra Special Recreation Management Area (SRMA) is located from MP 0 to MP 5.2.
- El Paso/Rand SRMA is located from MP 23.2 to 45.3.
- Red Mountain SRMA is located from MP 36.5 to MP 39.9, MP 41.8 to MP 42.7, and MP 44.2 to MP 52.7.

In response to the 2014 RFI, stakeholders suggested rerouting the corridor to avoid ACECs. Stakeholders raised concerns with ground disturbance caps established in the DRECP for specially designated areas, specifically, the El Paso to Golden Valley Wildlife Corridor and Fremont-Kramer ACECs. Stakeholders suggested reducing the width of the corridor within the El Paso to Golden Valley Wildlife Corridor ACEC from 10,560 ft to 1,320 ft.

Agency Analysis. Disturbance caps are in place in this area to limit, offset, or mitigate ground disturbance to acceptable levels to meet conservation goals in ACECs and other conservation allocations in the DRECP area. Disturbance caps, and whether they will be reached by a proposed project, are

determined when the proposed project is evaluated and analyzed under NEPA (BLM 2016a, Section II.2, p. 31). While specially designated areas exist in or near the corridor, there is no nearby alternative route that would avoid ACECs and other specially designated areas and provide a pathway for additional energy transport in a corridor with existing infrastructure (Figure 3-2b). Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Visual Resources. There are no VRM Class I areas within or adjacent to the corridor. VRM Class II areas abut the corridor on either side from MP 24.3 to MP 33.9. VRM Class IV areas are located from MP 14.4 to MP 14.7, MP 27.5 to MP 32.3, and MP 52.5 to MP 83.6; the remaining areas are VRM Class III.

Agency Analysis. VRM class objectives are binding land use planning decisions. Transmission facilities must demonstrate that they will conform to the VRM decisions in the land use plan through a hard-look visual impact analysis outlined in *BLM Handbook H-8431-1*.

Other Issues. Some stakeholders clarified existing capacity and identified potential for new capacity.

Agency Analysis. The input provided by stakeholders regarding existing capacity and potential for future capacity has been added to the corridor abstract and has been considered in the Agencies' analysis.

Corridor 23-106

(Little Lake – Mojave)

Agency Jurisdiction

Bureau of Land Management

Ridgecrest Field Office, California

California Counties

Inyo County
Kern County

Resource Management Plan

DRECP LUPA (BLM 2016a)

Corridor 23-106 Summary

Corridor 23-106 supports existing and future infrastructure and avoids crossing the Red Rock Canyon State Park. The Workgroup suggests that BLM analyze a revision to the corridor from MP 32 to MP 36 to avoid the pinch point created where the corridor abuts the Red Rock Canyon State Park. Potential corridor revisions include shifting the corridor to the west or braiding the corridor around the park in two segments to preserve width and capacity within the corridor (Figure 3-3a).

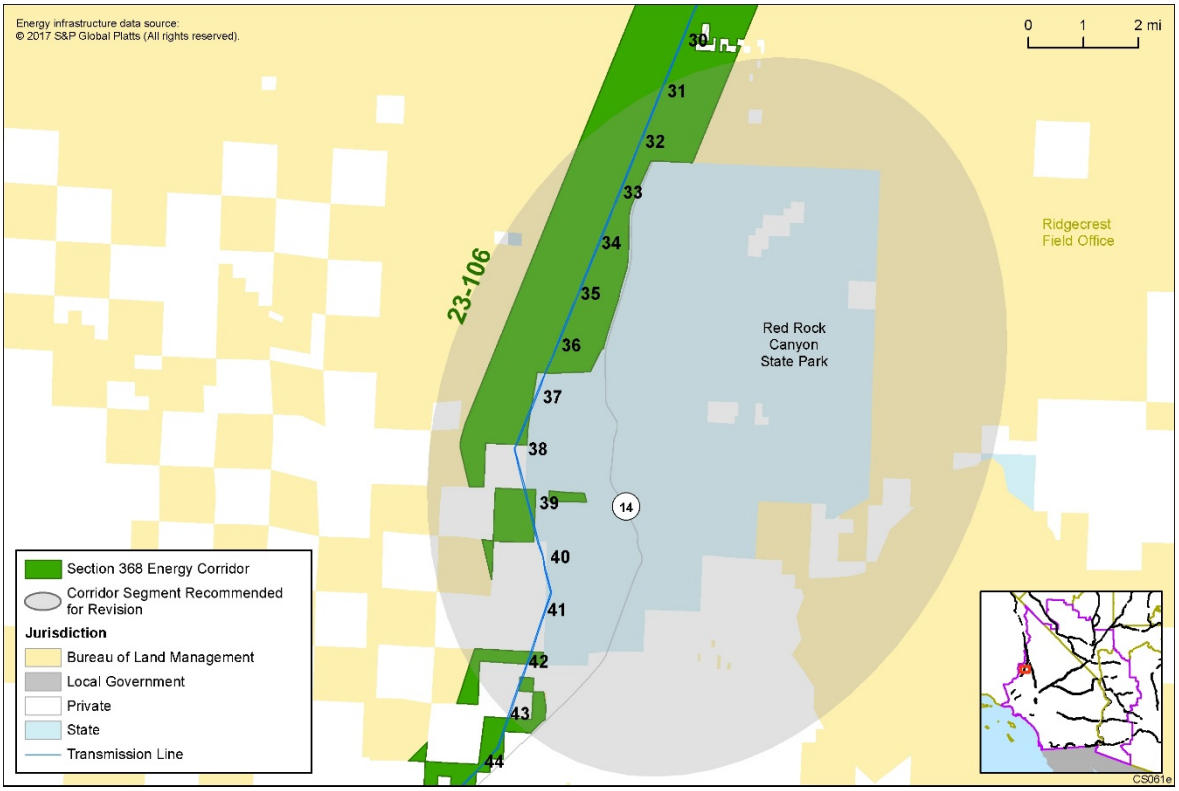


Figure 3-3a Potential Revision to Corridor 23-106

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated California Desert District energy corridor, contains multiple transmission lines, and is aligned with State Highway 14 and U.S. Highway 395. Many wind energy power plants exist near the corridor; there is potential for future utility-scale solar energy development in the vicinity of the corridor; and there are DFAs located at the northern end of the corridor and adjacent to the southern portion of the corridor. All provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins at the junction of Corridors 18-23 and 23-25 at Little Lake and Mojave, in southern California, runs 56.5 miles south along State Highway 14 and U.S. Highway 395, and ends just north of Mojave in Kern County. The corridor is 10,560 ft wide over its entire length, consistent with an existing RMP prior to Section 368 designation; however, BLM-administered land exists in a checkerboard

pattern at the southern end. The corridor is multimodal to accommodate both electrical transmission and pipeline projects. The corridor is aligned with State Highway 14 and U.S. Highway 395 and includes a commercial utility corridor that supports two electricity transmission lines. Portions of the corridor are located within the RETI 2.0 Victorville/Barstow and Tehachapi TAFAs. There is some expressed interest for use of the corridor, including two possible pending ROWs. Many wind energy power plants exist near Mojave at the southern end of the corridor and west of the corridor between MP 40 and MP 50. There is also the potential for future utility-scale solar energy development in the Indian Wells Valley. A DRECP DFA is located at the northern end of the corridor (at about MP 5), while the southern portion is adjacent to small blocks of DFAs, all of which are designated for all types of energy development, as well as a larger block designated as DFA VPLs. The DFAs provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor was identified as a corridor of concern in the Settlement Agreement due to concerns regarding the NCA and ACECs. While the corridor overlaps specially designated areas across its length, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas (Figure 3-3b).

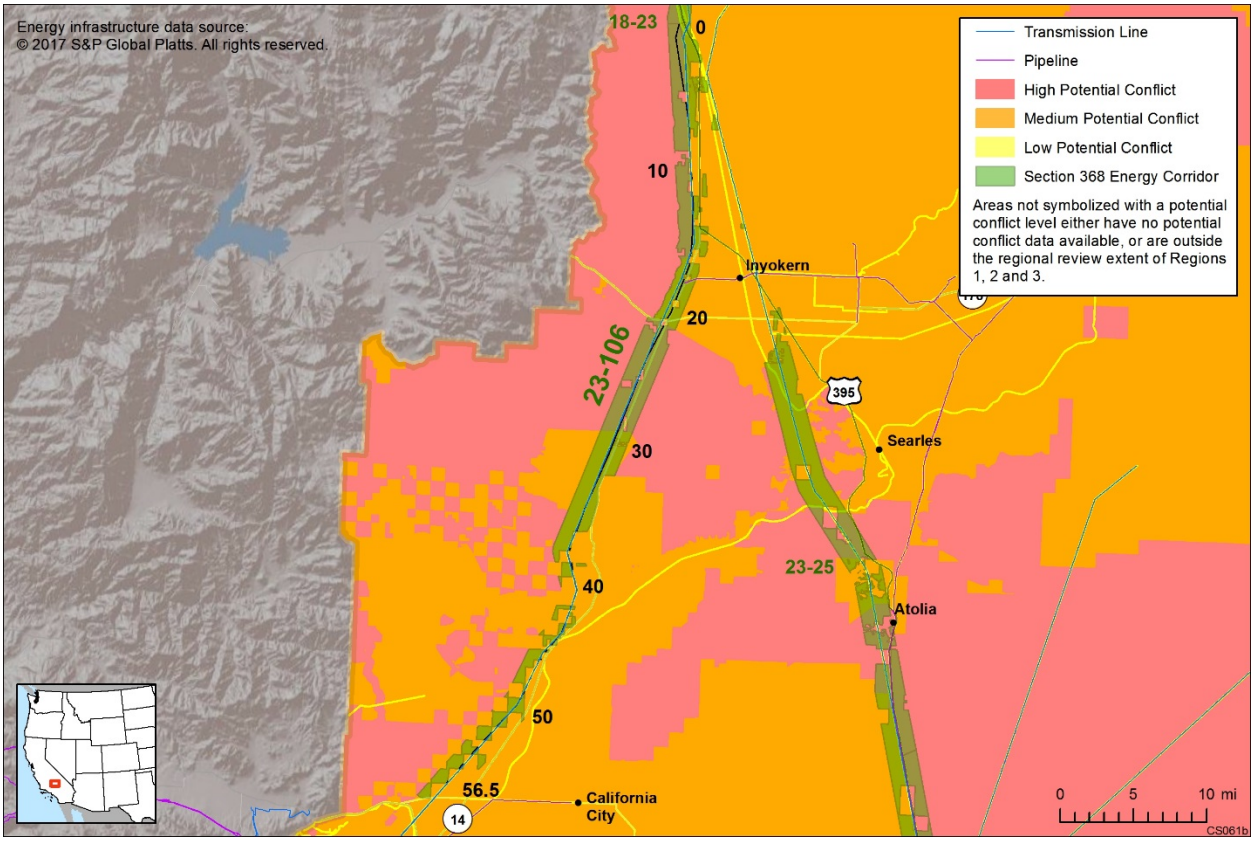


Figure 3-3b Mapping of Potential Conflict Areas in Vicinity of Corridor 23-106

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-3b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Jurisdictional Concerns. The Red Rock Canyon State Park abuts part of the corridor between MP 32 and MP 41.8, creating a pinch point between MP 32 and MP 36.

Agency Analysis. The Workgroup suggests that BLM consider a revision to the corridor from MP 32 to MP 36 where it abuts Red Rock Canyon State Park and creates a pinch point. Potential corridor revisions include realigning the corridor to the west or braiding around the park in two segments to preserve width and capacity within the corridor (Figure 3-3a). Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Ecological Resources. The corridor intersects with Mohave Ground Squirrel modeled habitat along most of the corridor. Desert tortoise Priority 1 and 2 connectivity habitat is located along the entire corridor length. The corridor intersects a Southern California Wildlands Linkage. Stakeholders provided input that bighorn sheep connectivity habitat is also located within the corridor. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid Priority 1 and 2 connectivity habitat in areas where there are no existing transmission lines and to minimize additional transmission line siting in these areas.

Agency Analysis. The corridor overlaps with special status species habitat across its length; however, there is no nearby alternative route that would avoid this habitat in a corridor with existing infrastructure (Figure 3-3b). Any additional development within the corridor would avoid currently undeveloped areas. The DRECP has specific CMAs to address impacts on the Mohave Ground Squirrel. The information in the DRECP would be used in any project implementation. There are plan-wide as well as ACEC- and NCL-specific CMAs for species that must be considered. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. BLM would follow its mitigation policy regarding impacts. This corridor does not affect any desert bighorn sheep habitat or connectivity. Impacts of corridors on wildlife linkage are analyzed and addressed in the DRECP.

Military and Civilian Aviation. There is a potential for impacts on military training routes: visual route from MP 0 to 56 with a floor of 200 ft AGL; instrument routes from MP 38 to MP 41 and MP 42 to MP 56.6 with a floor of 200 ft AGL; and an instrument route from MP 45 to MP 56 with a floor of 500 ft AGL; and a slow-speed route from MP 38.4 to MP 56.5.

Agency Analysis. For the military training routes with a floor of 200 ft AGL, DoD identified no impact if structures remain below 200 ft AGL. Taller structures would require further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

Public Access and Recreation. The Red Rock Canyon State Park is adjacent to the corridor between MP 32.1 and MP 41.8. Stakeholders suggested restricting development in the corridor or reducing the corridor width to avoid encroachment into Red Rock Canyon State Park. Stakeholders mentioned that the corridor is near the Eastern Kern Onyx Ranch SVRA but would not be a concern as long as impacts are analyzed and mitigated under NEPA and other Federal laws. Stakeholders suggested revision to this corridor, including reducing the corridor width to 3,500 ft between Red Rock State Park and the junction of State Highway 14 and State Highway 178.

Agency Analysis. The corridor is not designated within the Red Rock Canyon State Park; the park would not be encroached upon by a project located within the designated corridor. However, there is a pinch point with the current location of the corridor and a potential reduction in corridor capacity. See Jurisdictional Concerns, above, for a discussion of potential solutions to the pinch point concerns.

Specially Designated Areas

- Basin and Range DRECP National Conservation Lands are located from MP 0 to MP 3.4 and MP 5.4 to MP 6.8.
- West Desert and Eastern Slopes DRECP National Conservation Lands are located throughout various portions of the corridor.
- The Owens Peak Wilderness Area is adjacent to the corridor from MP 3.4 to MP 21.2.
- Sand Canyon ACEC is located from MP 7.9 to MP 8.8.
- Jawbone/Butterbredt ACEC is located from MP 20.7 to MP 45.0.
- Sierra Canyons ACEC is located from MP 0 to MP 16.2.
- Eagles Flyway ACEC is located from MP 20.9 to MP 28.7.
- Mohave Ground Squirrel ACEC is located throughout various portions of the corridor.
- Jawbone SRMA is located from MP 20.7 to MP 48.7.
- El Paso/Rand SRMA is located from MP 20.3 to MP 32.1.
- East Sierra SRMA is located from MP 0 to MP 20.7.
- Middle Knob SRMA is located from MP 48.5 to MP 56.6.
- Jawbone Canyon Open Off-Highway Vehicle (OHV) Area is located from MP 41.6 to MP 44.3.
- Dove Springs Open OHV Area is located from MP 34.2 to MP 36.0.

In response to the 2014 RFI, stakeholders suggested rerouting the corridor to avoid ACECs. Stakeholders raised concerns with ground disturbance caps established in the DRECP for specially designated areas, specifically the Jawbone/Butterbredt and Eagles Flyway ACECs.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Disturbance caps are in place in this area to limit, offset, and address ground disturbance to acceptable levels (or with acceptable mitigation) to meet conservation goals in ACECs and other conservation allocations in the DRECP area. Disturbance cap thresholds (and whether the cap will be reached by the proposed action) are determined at the time of new project consideration and analysis (DRECP LUPA Section II.2, p. 31, BLM 2016a). While the corridor overlaps with specially designated areas across its length, there is no nearby alternative route that would avoid these areas and contain existing infrastructure (Figure 3-3b).

***Visual Resources*.** The VRM classification for areas within the corridor varies the entire length of the corridor. No VRM Class I areas are within the corridor, but they are adjacent to various portions of the corridor.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM Class objectives even when the proposed action is in conformance with these VRM class objectives.

Other Issues**.** Stakeholders requested that the Agencies review scientific information including species connectivity data and species conservation values developed for the DRECP and collect missing data to minimize potential impacts on the Southern California Wildlands Linkage. Input was also provided clarifying existing capacity and potential for new capacity. Stakeholders also suggested reducing the width to no more than 3,500 ft and locating only on the west side of the state highway because of environmental sensitivity and surface disturbance limitations.

Agency Analysis. The Agencies have updated the corridor abstracts with information developed for the DRECP, including new designations and species connectivity and conservation data. 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. The current 10,560-ft corridor width provides greater flexibility for avoiding and minimizing impacts on sensitive areas than a reduced corridor width when siting additional infrastructure within the corridor.

Corridor 27-41

(Daggett – Bullhead City)

Agency Jurisdiction

Bureau of Land Management

Barstow Field Office, California
Needles Field Office, California

California County

San Bernardino County

Resource Management Plans

DRECP LUPA (BLM 2016a)
West Mojave Desert/CDCA Plan Amendment
Northern and Eastern Mojave Desert/CDCA Plan Amendment
Northern and Eastern Colorado Desert/CDCA Plan Amendment

Corridor 27-41 Summary

The Workgroup has identified a potential opportunity to extend Corridor 27-41 coming from California from the west to facilitate a connection with Corridors 41-46 and 41-47 in Arizona to the east (Figure 3-4a). All three corridors contain infrastructure; however, Corridor 27-41 abruptly stops at the California–Nevada state line, preventing the corridor from providing a long-distance pathway for electrical transmission and pipeline needs. Extending Corridor 27-41 to the east across Nevada could provide a contiguous corridor between states and could help the Agencies achieve the purpose of Section 368 energy corridors to serve the national energy transmission and pipeline system. Although this report does not identify a specific location for a revised or new corridor segment, several alternatives are possible and could be considered. The most feasible alternative appears to be through southern Nevada near MP 148 (for approximately 12 miles). Jurisdictional issues and sensitive resources may preclude a viable option; however, existing infrastructure is present along several potential east–west pathways.

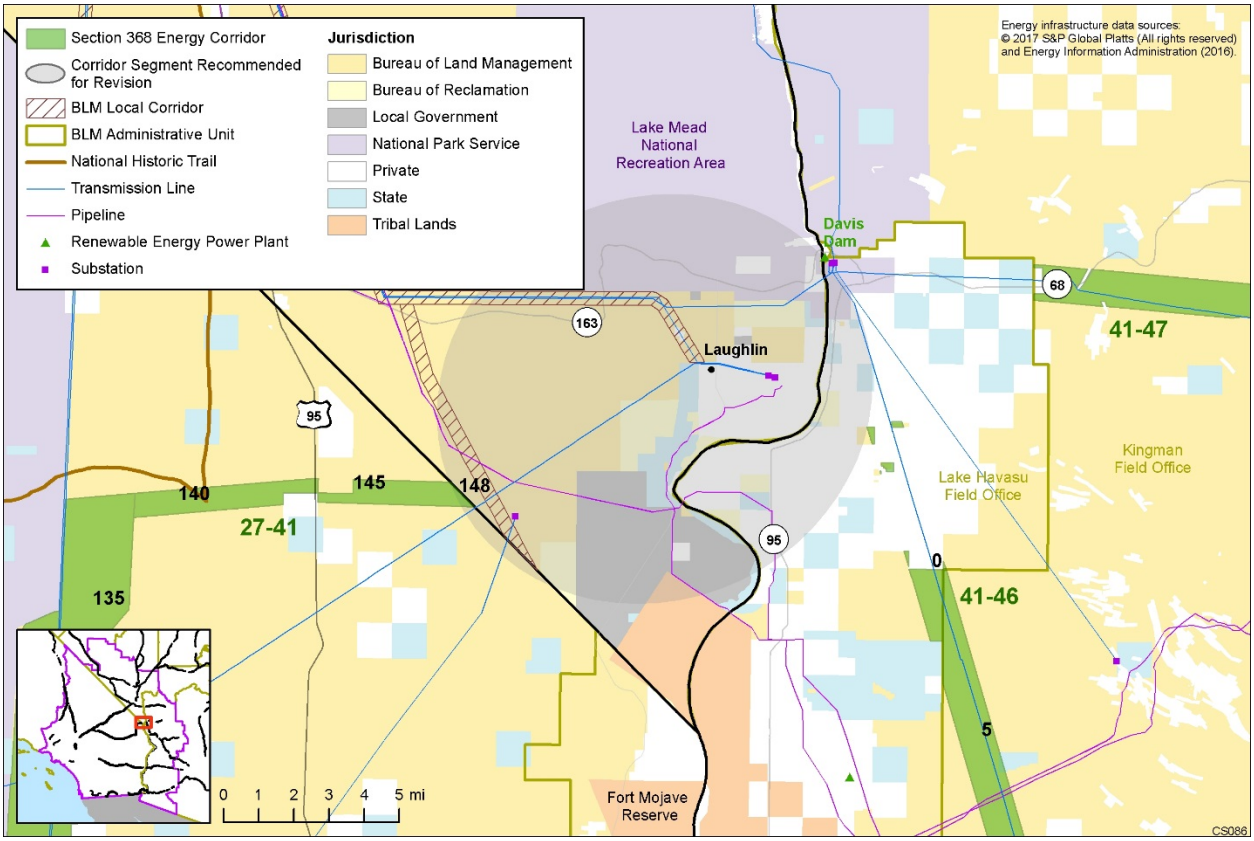


Figure 3-4a Potential Addition to Corridor 27-41

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated California Desert District energy corridor and contains natural gas pipelines, transmission lines, and Interstate 40. The corridor is in the vicinity of current and potential solar energy development: two solar energy power plants are near the

western end of the corridor; a portion of the corridor is near the RETI 2.0 Victorville/Barstow TAFA; a portion of the corridor is within and/or adjacent to a DFA; and another portion is about 1.5 miles north of a large DFA block, both of which are designated for all energy development technologies. The DFAs and TAFA provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins at the junction of Corridors 27-225 and 27-266 near Daggett, California, north of Twentynine Palms Marine Corps Base and south of Mojave National Preserve, and runs 148.2 miles east to the California–Nevada state line, west of Bullhead City, Arizona, where Corridors 41-46 and 41-47 converge. The corridor has a 10,560-ft width throughout, consistent with existing plans, except for a 3,500-ft-wide segment from MP 138.8 to MP 148.2. The corridor is multimodal to accommodate both electrical transmission and pipeline projects. Natural gas pipelines follow the corridor for most of its extent, and major electrical transmission lines and Interstate 40 are also located within the corridor for approximately 35 miles.

The corridor was not identified as a corridor of concern in the Settlement Agreement and although desert tortoise habitat and a wildlife linkage are present in the corridor, mapping of potential conflict areas indicates there is no previously disturbed alternate route in the vicinity of the corridor that would avoid these areas (Figure 3-4b).

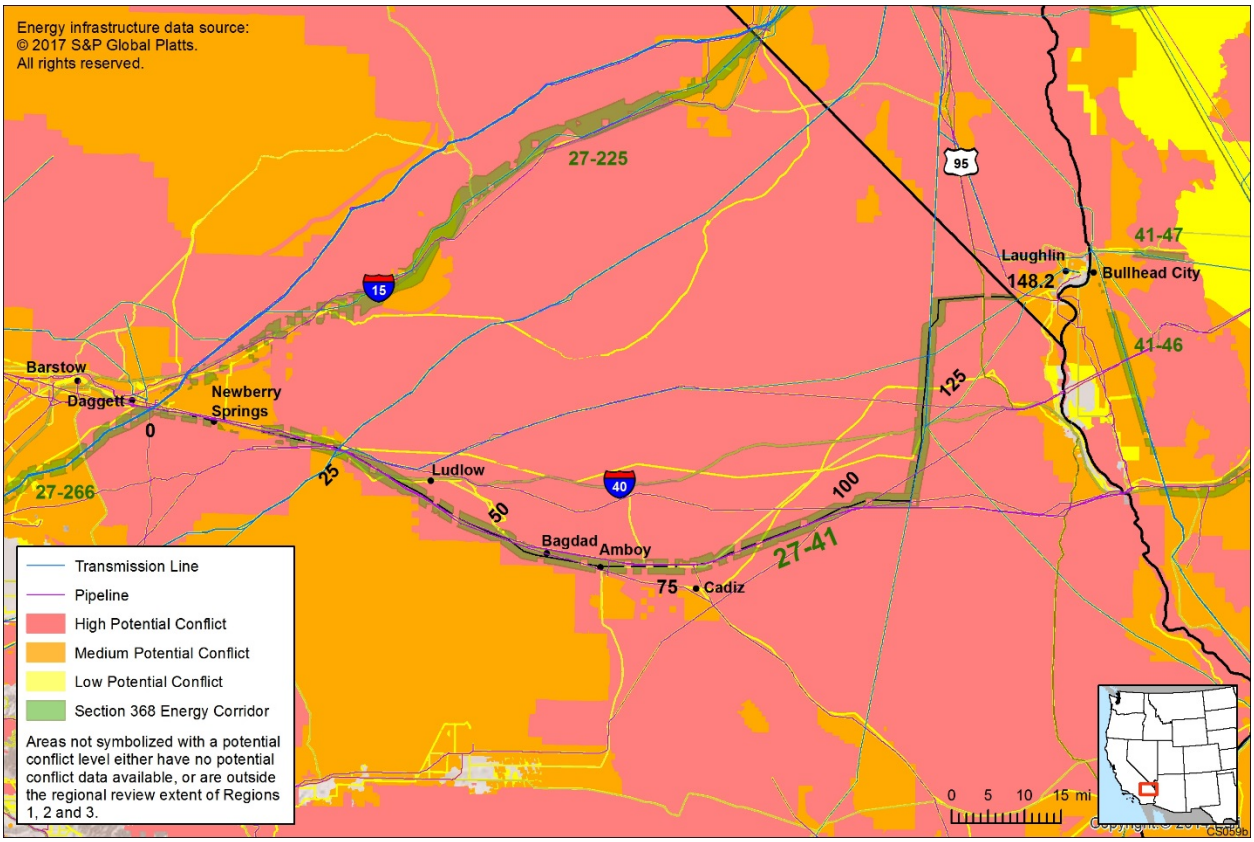


Figure 3-4b Mapping of Potential Conflict Areas in Vicinity of Corridor 27-41

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-4b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Transmission and Pipeline Capacity Opportunities. One stakeholder suggested that the BLM should consider extending Corridor 27-41 approximately 10 miles roughly east northeast to include the SCE substation just outside Laughlin to allow for new transmission ROWs between existing substations.

***Agency Analysis*.** Future Nevada land use planning should consider extending Corridor 27-41 from the California–Nevada State line approximately 12 miles across southern Nevada, to the extent of available Federal lands near Laughlin, Nevada. Extending Corridor 27-41 across Nevada could provide a contiguous corridor between states to help the Agencies achieve the purpose of Section 368 energy corridors, to serve the national energy transmission and pipeline system.

***Cultural Resources*.** Important historical, cultural, and natural values occur throughout most of the corridor. Stakeholders suggested rerouting the corridor to an east–west alternative corridor.

***Agency Analysis*.** Impacts would be analyzed and mitigated as part of the project-specific environmental review required under the National Historic Preservation Act (NHPA), NEPA, and other Federal laws.

***Ecological Resources*.** The corridor intersects with desert tortoise critical habitat, TCAs, and Priority 1 and 2 tortoise connectivity habitat throughout various portions of the corridor. The corridor also intersects a Southern California Wildlands linkage. There were many stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid desert tortoise critical habitat, TCAs, Priority 1 and 2 connectivity habitat, and Southern California Wildlands linkages. Specific suggestions received from stakeholders included the following:

- Realign corridor with Interstate 40 to avoid critical habitat.
- Reduce corridor width from 10,560 ft to no more than 3,500 ft. If there are existing energy utilities in place in areas designated as critical habitat for Agassiz's desert tortoise (that crosses east west through the Piute Valley), reduce width to 1,320 ft.
- Reroute to the north of I-40 to avoid adverse modification of critical habitat.
- Do not construct new transmission lines or pipelines within a 27-mile reach located north and south of I-40 (MP 110.0 to MP 137.9).
- Address concern by rerouting corridor for the eastern 56-mile portion of the corridor that departs from U.S. Route 66 at approximately MP 80 to MP 138.
- Realign corridor to follow existing routes of travel, including I-40, U.S. Route 66, and California State Route 95.
- Keep Corridor 27-41 in its entire length along I-40 to U.S. Route 95, and then proceed northward to the current proposed location at MP 148. Restrict the 33-mile length of this new corridor coinciding with the southern boundary of the Mojave National Preserve to the southern side of I-40.

- Keep Corridor 27-41 along U.S. Route 66 from MP 75, through Essex, to I-40; then follow I-40 east to U.S. Route 95; follow U.S. Route 95 north to the junction at MP 143; and then proceed east to MP 148.
- Remove corridor.

***Agency Analysis*.** While desert tortoise habitat and a wildlife linkage are present throughout the corridor, there is no alternative route in the vicinity of the corridor that would avoid these areas (Figure 3-4b). The DRECP has specific CMAs to address impacts on desert tortoise. The information in the DRECP would be used in any project implementation. Impacts on habitat and habitat connectivity would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws and can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Lands and Realty, Military and Civilian Aviation. There is a potential for impacts on military training routes: visual routes with a floor of 200 ft AGL throughout various portions of the corridor, instrument routes from MP 135 to MP 148 with a floor of 200 ft AGL, and various portions of the corridor with a surface floor (0 ft). The Camino Airstrip intersects the corridor between MP 119.5 and MP 119.8.

***Agency Analysis*.** For the military training routes with a floor of 200 ft AGL, DoD recommends that structures remain below 200 ft AGL. For the military training routes with a surface floor, DoD recommends that structures remain below existing structures. Taller structures will require further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required. Potential impacts on the airstrip would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Lands with Wilderness Characteristics. Stakeholders were concerned that the corridor overlaps with citizen-inventoried lands with wilderness characteristics and suggested that corridors should be excluded from Newberry Mountains Additions unit, Argos unit, Ash Hill unit, and Ragtown unit. Wilderness areas adjacent to or near Mojave National Preserve and the corridor include Bristol Mountains Wilderness, Trilobite Wilderness, Clipper Mountain Wilderness, Piute Mountains Wilderness, and Dead Mountains Wilderness, and the Mojave Wilderness within the Mojave National Preserve.

Agency Analysis. There are extensive CMAs for addressing wilderness characteristics during project implementation in the DRECP.

Specially Designated Areas

- Piute Valley and Sacramento Mountains DRECP National Conservation Lands are located between MP 134.4 and MP 148.2.
- Pinto Lucerne Valley and Eastern Slopes DRECP National Conservation Lands are located between MP 7.0 and MP 7.3 and MP 8.0 and MP 9.4.
- South Mojave-Amboy DRECP National Conservation Lands are located throughout various portions of the corridor.
- Mojave and Silurian Valley DRECP National Conservation Lands (NCLs) are located throughout various portions of the corridor.
- The corridor is adjacent to several wilderness areas to the north and south (Newberry Mountains, Trilobite, Old Woman Mountains, Piute Mountains, Bigelow Cholla Garden, Mojave, and Dead Mountains Wilderness Areas).

- Daggett Ridge Monkeyflower ACEC is located between MP 0.0 and MP 0.1.
- Ord-Rodman ACEC is located between MP 0.0 and MP 22.3. There were stakeholder suggestions to remove the corridor south of I-40 at the western end of the corridor, which coincides with the Ord-Rodman desert tortoise critical habitat unit (CHU).
- Pisgah ACEC is located between MP 25 and MP 32 and throughout various portions of the corridor. There were stakeholder suggestions to reduce corridor width to conform to the location of existing facilities and disturbed areas in the Pisgah Research Natural Area ACEC.
- Mojave Trails National Monument (MTNM) is located between MP 27.0 and MP 148.2. There were stakeholder suggestions to reduce corridor width to conform to the location of existing facilities and disturbed areas in the MTNM and to delete the corridor.
- The corridor is adjacent to the Amboy Crater ACEC between MP 62.8 and MP 63.8.
- The corridor is adjacent to the Amboy Crater National Natural Landmark between MP 80.3 and MP 120.5.
- Piute-Fenner ACEC is located between MP 20.0 and MP 148.1.
- The corridor is located near the southern boundary and directly along portions of the eastern boundary of the Mojave National Preserve between MP 125.4 and MP 137.8. There were stakeholder suggestions to realign the corridor segment from MP 125 adjacent to the Mojave National Preserve boundary to avoid encroaching into Mojave National Preserve. There was concern about visual impacts on the Mojave National Preserve.
- The corridor crosses the Old Spanish National Historic Trail (OSNHT) between MP 138 and MP 141.
- Bristol Mountains ACEC is located between MP 32.8 and MP 63.0.
- Dead Mountains ACEC is located between MP 148.1 and MP 148.2.
- Ward Valley Extensive Recreation Management Areas are located throughout various portions of the corridor.
- DRECP National Trails SRMA is located throughout various portions of the corridor.
- The corridor runs parallel to U.S. Route 66. There were stakeholder suggestions to reroute the corridor to align with I-40 and the California BLM's designated utility corridors per the CDCA plan to avoid impacts on historic resources, like U.S. Route 66.

There were stakeholder suggestions to delete the corridor to avoid impacts on ACECs. Stakeholders raised concerns with ground disturbance caps established in the DRECP for specially designated areas, specifically the Bristol Mountains, Piute-Fenner, Chemehuevi, Amboy Crater, and Pisgah ACECs.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Disturbance caps are in place in this area to limit, offset, and address ground disturbance to acceptable levels (or with acceptable mitigation) to meet conservation goals in ACECs and other conservation allocations in the DRECP area. Disturbance cap thresholds (and whether the cap will be reached by the proposed action) are determined at the time of new project consideration and analysis (DRECP LUPA, Section II.2, p. 31, BLM 2016a). Energy corridors are specifically identified in the DRECP, especially where they overlap ACECs. The proclamation that established the MTNM does not preclude or interfere with the operation or maintenance of existing utility and pipeline facilities. In addition, new facilities may be constructed within the monument provided the construction is done consistent with the care of the resources identified in the proclamation. For transmission corridors that intersect or parallel National Trail System components, or trails under study for potential designation, the National Trail administering agency or trail

administrator, regional or State program leader, and a primary National Trail partner organization representative (in accordance with applicable law) will be advised and invited to attend pre-authorization or pre-application meetings, as applicable. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs (NTSA Sec. 5(a)), which will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established (NTSA Sec. 7(c)). While easements and rights-of-way may be granted, conditions shall be related to the policy and purposes of the NTSA (Sec. 9(a)).

***Visual Resources*.** The VRM classification for areas within the corridor varies the entire length of the corridor. No VRM Class I areas are within the corridor but are adjacent to the corridor in various portions of the corridor. There are some potential challenges for conforming to VRM class objectives due to the proximity of the corridor to anticipated key observation points (KOPs) on Historic Route 66. From MP 18 to MP 34 the corridor ranges from immediately adjacent to within 1 mi of I-40 and Historic Route 66. The proximity to Historic Route 66 may be difficult for future development to conform to VRM Class III.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. One stakeholder requested that the Agencies update the maps and abstracts to portray existing and pending ROWs. There were concerns about the appropriate use of pipelines alongside transmission lines and about the Piute-Fenner ACEC and Chemehuevi ACEC. One stakeholder suggested that the Agencies not postpone revision or deletion of potential corridors until project-specific NEPA and NHPA analysis has been conducted. Last, input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. GIS layers have been added to the mapping tool that show locations of existing and planned infrastructure, and these data have been incorporated into the maps. The colocation of pipelines and transmission lines is subject to safety requirements. Installation and operation of high-voltage electric transmission lines and pipelines in the same corridor must adhere to established colocation protocol.

The regional review process is not a NEPA process; the corridor considerations resulting from the regional reviews should be used within subsequent NEPA scoping for land use planning or project-specific planning and would be analyzed with any newer information that may become available. 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.

Corridor 27-225

(Interstate-15)

Agency Jurisdiction

Bureau of Land Management

Needles Field Office, California
Barstow Field Office, California
Las Vegas Field Office, Nevada

California County

San Bernardino County

Nevada County

Clark County

Resource Management Plans

DRECP LUPA (BLM 2016a)
West Mojave Desert/CDCA Plan Amendment
Northern and Eastern Mojave Desert/CDCA Plan Amendment
Las Vegas RMP (BLM 1998)

Corridor 27-225 Summary

Corridor 27-225 provides a major link in an energy transport system extending from Wyoming to southern California. The corridor is located in a previously designated corridor for 100 of its 115-mile extent and contains infrastructure. There is enough capacity on existing lines in the corridor, but the corridor is limited physically because of solar energy development across the corridor in southern Nevada, making potential future development within the corridor unlikely. Because the corridor may not be able to accommodate additional infrastructure, the Workgroup suggests widening the corridor in Nevada, if possible, between MP 103 and MP 107 (Figure 3-5a), to offset the decreased capacity of the corridor due to the presence of solar energy projects in the corridor. An alternative to widening the corridor is to add a second branch of the corridor along a locally designated corridor to the north, in essence braiding the corridor into two parallel segments, which would also add potential capacity to the corridor. A coordinated approach is needed between the California and the Nevada BLM regarding the pinch point created by the differences in corridor width available at the state line.

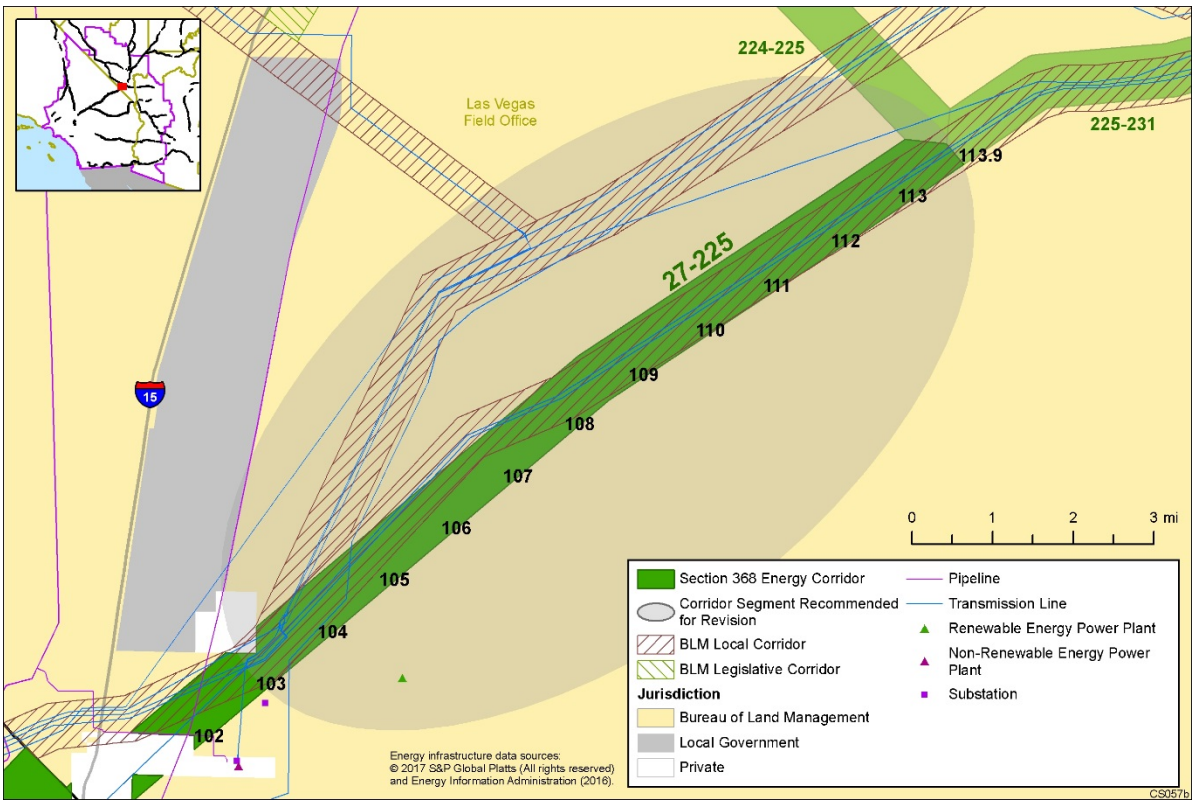


Figure 3-5a Potential Revision to Corridor 27-225

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated California Desert District energy corridor throughout its entire length, has multiple transmission lines throughout most of the corridor, and follows Interstate-15 within and along the corridor. Portions of the corridor are within the RETI 2.0 Victorville/Barstow TAFA; the corridor is in the RETI 2.0 HSR to support 3,000 MW of transmission from and to Nevada (or adjacent states); a portion of the corridor is located near a DFA; and renewable

energy developments are located in or near the corridor. All provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins at the junction of Corridors 27-41 and 27-266 near Daggett, California, in San Bernardino County; runs northeast for 113 miles to the intersection of Corridors 224-225 and 225-231 in Clark County, south of Jean, Nevada; and runs adjacent to the Mojave National Preserve for 40 miles in California. The corridor is 10,560 ft wide in California, consistent with existing plans, and 3,500 ft wide in Nevada, and is multimodal to accommodate both electrical transmission and pipeline projects. The corridor contains multiple transmission lines throughout most of the corridor length with eight existing transmission lines along its entire extent, and existing pipelines intersect the corridor. There is interest for use of the corridor, including three pending ROWs and two conceptual routes. According to SCE, the east side of corridor has more utility provided by the 220kV Eldorado-Ivanpah Transmission Project (EITP), while the west side of the corridor is limited by an existing low-capacity conductor which meanders through the corridor. In general, the corridor was sited in its current location to provide a major link in an energy transport system extending from Wyoming to southern California. It was a previously designated California Desert District corridor and was not previously designated in Nevada. BLM Southern Nevada is currently in the process of revising the 1998 Las Vegas RMP.

Corridor 27-225 was not identified as a corridor of concern in the Settlement Agreement. Although desert tortoise habitat, bighorn sheep connectivity, and specially designated areas exist along the corridor, mapping of potential conflict areas indicate there are no nearby previously disturbed alternate routes that would avoid these areas and still provide an energy transport pathway extending from Wyoming to southern California (Figure 3-5b).

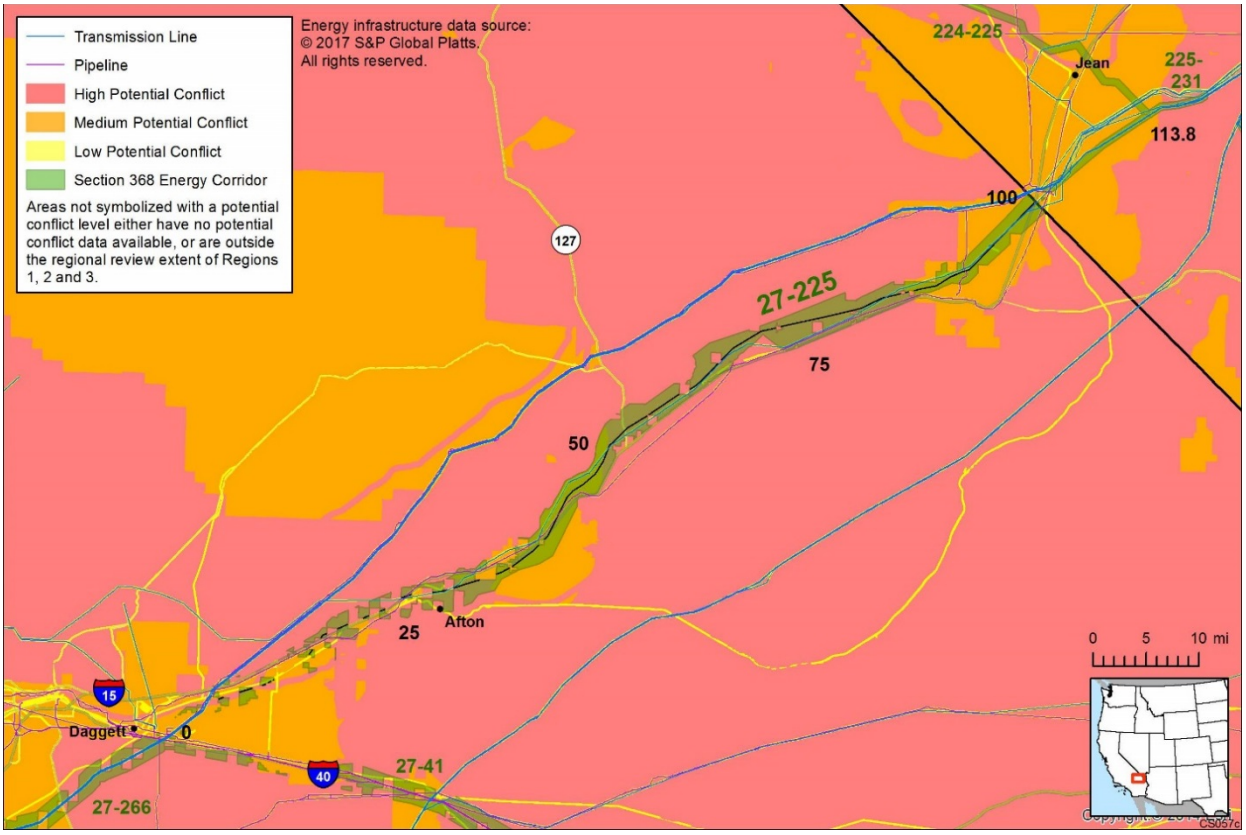


Figure 3-5b Mapping of Potential Conflict Areas in Vicinity of Corridor 27-225

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-5b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Location-Specific Barrier. The corridor contains a lot of infrastructure and fragmented Federal lands. The town of Primm is in line with the corridor in an undesignated non-Federal gap.

Agency Analysis. Project design may allow for development though the existing infrastructure, and the fragmentation of public land may present challenges to a future developer. Proponents for projects within non-Federal gaps would have to negotiate with the non-Federal jurisdiction landowners.

Jurisdictional Concerns. There are gaps between SCE substations at the end of Corridor 27-225 at the junction with Corridor 27-266, and could affect a potential rebuild or upgrade of the 115kV capacity conductors.

Agency Analysis. Section 368 energy corridors can be designated only on Federal lands. Proponents for projects extending from Corridor 27-225 to Corridor 27-266 would have to negotiate with the non-Federal jurisdiction landowners.

Ecological Resources**.** The corridor intersects with desert tortoise critical habitat, TCAs, Priority 1 and 2 tortoise connectivity habitat, desert and bighorn sheep connectivity, and wildlife linkages throughout various locations in the corridor. There were stakeholder suggestions to remove the corridor designation for 31 miles on the north side of I-15 to avoid the Superior-Cronese desert tortoise CHU and reduce corridor width from 10,560 ft to 3,500 ft for the approximately 25-mile stretch of the corridor that runs through the Ivanpah desert tortoise CHU.

Agency Analysis. Desert tortoise habitat and bighorn sheep connectivity exist along the corridor and are pervasive in the vicinity of the corridor; however, there is no nearby alternative route that would avoid tortoise habitat and provide an important energy transport pathway extending from Wyoming to southern California in a corridor with existing infrastructure (see Figure 3-5b). Analysis would be completed through the NEPA process (i.e., for RMP revision) on a case-by-case basis with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Habitat and linkage for bighorn sheep are analyzed in the DRECP, and the DRECP has CMAs that allow for conservation of this species and its habitat while also allowing for development and for transmission specifically.

Lands and Realty, Military and Civilian Aviation. The corridor is adjacent to the Barstow-Daggett Airport (MP 3.5 to MP 4.5) and intersects with the Baker Airport (MP 54.4 to MP 54.5). There is a potential for impacts on military training routes: instrument route from MP 59 to MP 65, from MP 84 to MP 90, and from MP 91 to MP 94 with a floor of 200 ft AGL.

Agency Analysis. Structures should remain below 200 ft AGL. Taller structures will require further analysis for operational impact.

Specially Designated Areas

- Kingston-Amargosa DRECP NCLs are located between MP 59.9 and MP 85.8.
- Mojave and Silurian Valley DRECP NCLs are located throughout various portions of the corridor.
- The corridor is adjacent to WSAs (Cady Mountains and Soda Mountains WSAs).
- MTNM is located between MP 27.5 and MP 35.9.
- The corridor is adjacent to the Amboy Crater ACEC between MP 62.8 and MP 63.8.
- The corridor is adjacent to and intersects multiple ACECs (Mojave Fringe-toed Lizard, Afton Canyon, Cronese Basin, Shadow Valley, Clark Mountain, Ivanpah, Soda Mountains Expansion, Manix, Soda Mountains WSA, Superior-Cronese). There were stakeholder suggestions to reduce the corridor width to avoid additional development in the Afton Canyon ACEC. Stakeholders also suggested that there be no additional ground disturbance on ACEC lands that overlap the corridor and that any new proposals for ROWs within the corridor should be limited to lands with existing surface disturbance situated adjacent to existing facilities.
- The corridor is located directly along portions of the northern boundary of Mojave National Preserve and transects (via non-NPS land) two portions of the preserve at about MP 80 through MP 90. There were stakeholder suggestions to maintain corridor designation to the north of I-15 only, in order to avoid possible corridor encroachment into the Mojave National Preserve.
- Corridor is adjacent to multiple wilderness areas (Mojave Wilderness, Hollow Hills Wilderness, State Line Wilderness, South McCullough Wilderness, Mesquite Wilderness Area, Kingston Range Wilderness Area, and Kelso Dunes Wilderness).
- Shadow Valley Extensive Recreation Management Areas is located between MP 61.6 and MP 90.3.
- Ivanpah Valley Extensive Recreation Management Areas is located at various locations within the corridor.
- Afton Canyon SRMA is located between MP 27.2 and MP 37.3.
- Rasor SRMA is located between MP 37.1 and MP 38.9.
- Ivanpah SRMA is located between MP 96.9 and MP 100.4.
- Rasor Open OHV Area is located between MP 37.1 and MP 38.9.

Stakeholders raised concerns with ground disturbance caps established in the DRECP for ACECs.

Agency Analysis. While specially designated areas exist along the corridor, there is no nearby alternative route that would avoid specially designated areas and provide an important energy transport pathway extending from Wyoming to southern California in a corridor with existing infrastructure (see Figure 3-5b). Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. The Proclamation for the MTNM does not restrict development of new facilities to only those associated with an existing ROW. An analysis has been conducted for these corridors, the preserve, and NHTs. The DRECP has CMAs for NHTs, VRM plan-wide wilderness values identified to conserve resources, and transmission specifically across many resources. For the Mojave National Preserve, the corridor follows I-15, which is also the northern boundary of the Mojave National Preserve and transects the preserve on non-NPS land. Within Nevada, the corridor is located outside of the South McCullough Wilderness Area. Disturbance caps are in place in this area to limit, offset, and address ground disturbance to acceptable levels (or with acceptable mitigation) to meet conservation goals in ACECs and other conservation allocations in the DRECP area. Disturbance cap

thresholds (and whether the cap will be reached by the proposed action) are determined at the time of new project consideration and analysis (DRECP LUPA, Section II.2, p. 31, BLM 2016a).

The John D. Dingell, Jr. Conservation, Management, and Recreation Act changes the designations of three specially designated areas within the corridor:

The 'Proposed Soda Mountains Wilderness' is now the 'Soda Mountains Wilderness.' The corridor may slightly intersect the Soda Mountains Wilderness between MP 30 and MP 56. Congressional designation of wilderness areas precludes and eliminates the energy corridor designation by operation of law at these intersections.

The 'Proposed Rasor OHV Recreation Area' is now the 'Rasor Off-Highway Vehicle Recreation Area'. The corridor slightly intersects the Rasor Off-Highway Vehicle Recreation Area and allows for energy transport facilities, rights-of-way, and related telecommunication facilities, if compatible.

The boundaries of the Mojave National Preserve have been adjusted to include 25 acres of BLM-administered lands. It is anticipated that the energy corridor on these acres would potentially be deleted and would have a negligible effect on the corridor utility.

***Visual Resources*.** The majority of the corridor is VRM Class III, with the exception of a 5-mile stretch of corridor from MP 93 to MP 98 where it is VRM Class IV.

Agency Analysis. Transmission facilities must demonstrate that they will conform to the VRM decisions in the land use plan through a hard-look visual impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM Class objectives even when the proposed action is in conformance with those VRM class objectives.

Corridor 27-266

Agency Jurisdiction

Bureau of Land Management

Barstow Field Office, California

California County

San Bernardino County

Resource Management Plan

West Mojave Desert/CDCA Plan Amendment

Corridor 27-266 Summary

Corridor 27-266 supports existing and future infrastructure. The corridor was designated prior to Section 368 designation; existing transmission lines follow the corridor across its entire length; and the corridor is in close proximity to a TAFA and solar energy projects. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated California Desert District energy corridor, and transmission lines follow the corridor for its full length. There are 29 power plants and 26 solar energy plants near the corridor along its length. The corridor is also located within the Victorville/Barstow RETI 2.0 TAFA. The TAFA provides opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins at the junction of Corridors 27-41 and 27-225 near Daggett, California, continues 33.3 miles southwest, and ends just north of Victorville, California. The corridor is 10,560 ft wide throughout its entire length, consistent with existing plans, and is multimodal to accommodate both electrical transmission and pipeline projects. The corridor contains four transmission lines throughout its entire length, and two pipelines partially overlap the corridor. There is some expressed interest for use of the corridor, including two planned projects with conceptual routes within the corridor.

The corridor was not identified as a corridor of concern in the Settlement Agreement. While habitat for special status species and specially designated areas exist along portions of the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas (Figure 3-6). The Agencies have not identified any potential revisions, deletions, or additions to this corridor at the time of this review.

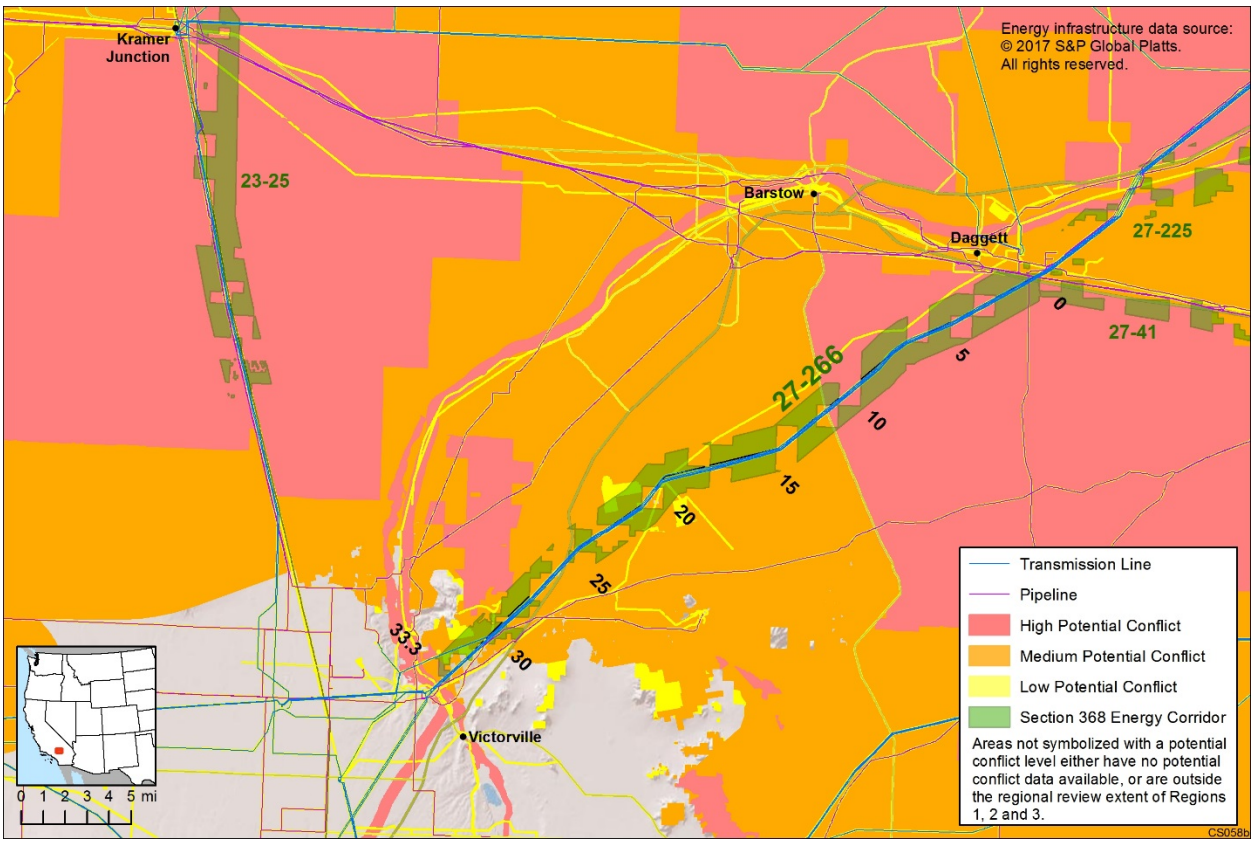


Figure 3-6 Mapping of Potential Potential Conflict Areas in Vicinity of Corridor 27-266

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-6; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Cultural Resources. The Serrano Ancestral Territory is located throughout the entire length of the corridor.

Agency Analysis. The Agencies would consult with the San Manuel Band of Mission Indians, as well as with other California tribes, as required for any proposed project in the corridor.

Ecological Resources. The corridor intersects with desert tortoise critical habitat, TCAs, Priority 1 and 2 tortoise connectivity habitat, priority habitat for the Mohave Ground Squirrel, the Southwestern Willow Flycatcher designated critical habitat, and the Southern California Wildlands Linkage throughout various locations in the corridor. There were stakeholder suggestions to reduce the corridor width to 3,500 ft to protect desert tortoise critical habitat. Stakeholders also suggested that the Agencies consult the Desert

Manager's Group regarding parcels that are priority habitat for Mohave Ground Squirrel and reroute the corridor to avoid impacts on these parcels.

Agency Analysis. While habitat for special status species exists along portions of the corridor, there is no nearby alternative route that would avoid these habitats in an area with existing infrastructure and without gaps in jurisdiction (see Figure 3-6). The corridor does not intersect the Mohave Ground Squirrel habitat according to available GIS data. Impacts on habitat and habitat connectivity can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. The DRECP has CMAs that allow for conservation of desert tortoise, Mohave Ground Squirrel, and Southwestern Willow Flycatcher and habitat while also allowing for development including transmission specifically.

Specially Designated Areas

- Pinto Lucerne Valley and Eastern Slopes DRECP NCLs are located between MP 5.2 and MP 11.7.
- West Desert and Eastern Slopes DRECP NCLs are located between MP 10.3 and MP 11.5.
- Mojave and Silurian Valley DRECP NCLs are located between MP 0.1 and MP 7.1.
- Ord-Rodman ACEC is located between MP 5.8 and MP 11.7.
- The corridor is adjacent to, and touching, the Daggett Ridge Monkey Flower ACEC between MP 0.1 and MP 7.8.
- OSNHT is located at MP 33. Stakeholders provided input that there is unlikely to be a constraint to future development in the corridor given the nature of the existing infrastructure.
- Brisbane Valley Monkey Flower ACEC is located between MP 28.3 and MP 30.0
- Stoddard Valley Open OHV Area is located between MP 11.1 and MP 23.4.
- Stoddard/Johnson SRMA is located between MP 1.3 and MP 25.5.

Stakeholders brought up concerns with ground disturbance caps established in the DRECP for ACECs, specifically the Daggett Ridge Monkey Flower and Northern Lucerne Wildlife Linkage ACECs. Stakeholders requested reducing the corridor width from the existing 10,560 ft to 3,500 ft to protect the Mojave monkeyflower.

Agency Analysis. While specially designated areas exist along the corridor, there is no nearby alternative route that would avoid these areas in an area with existing infrastructure and without gaps in jurisdiction (see Figure 3-6). The current 10,560-ft corridor width provides greater flexibility for avoiding and minimizing impacts on sensitive areas than a reduced corridor width when siting additional infrastructure within the corridor. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. The DRECP has CMAs for NHTs. Disturbance caps are in place in this area to limit, offset, and address ground disturbance to acceptable levels (or with acceptable mitigation) to meet conservation goals in ACECs and other conservation allocations in the DRECP area. Disturbance cap thresholds (and whether the cap will be reached by the proposed action) are determined at the time of new project consideration and analysis (DRECP LUPA, Section II.2 p. 31, BLM 2016a). The John D. Dingell, Jr. Conservation, Management, and Recreation Act changes the designation of one specially designated area within the corridor: the 'Proposed Stoddard Valley OHV Recreation Area' is now the 'Stoddard Valley Off-Highway Vehicle Recreation Area.' The corridor intersects the Stoddard Valley Off-Highway Vehicle Recreation Area from MP 11 to MP 23 and allows for energy transport facilities, rights-of-way, and related telecommunication facilities, if compatible.

Visual Resources. The VRM classification for areas within the corridor varies the entire length of the corridor.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM class objectives even when the proposed action is in conformance with those VRM class objectives.

Other Issues. Stakeholder suggestions included removing the corridor because of its proximity to various environmental impacts and prohibiting future development in the corridor if there is insufficient space to accommodate another transmission. Last, input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. While there are special status species and specially designated areas in and around the corridor, there is no nearby alternative route that would avoid these areas in an area with existing infrastructure and without gaps in jurisdiction (see Figure 3-6). Installation and operation of high-voltage electric transmission lines and pipelines in the same corridor must adhere to established colocation protocol. 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.

Corridor 30-52

(Palo Verde – Palm Springs)

Agency Jurisdiction

Bureau of Land Management

California Desert District, California
Yuma Field Office, Arizona
Lower Sonoran Field Office, Arizona
Lake Havasu Field Office, Arizona
Hassayampa Field Office, Arizona

Arizona Counties

La Paz County
Maricopa County

California County

Riverside County

Resource Management Plans

Northern and Eastern Colorado Desert/CDCA Plan (BLM 2016b)
Lake Havasu RMP (BLM 2007)
Yuma RMP (BLM 2010a)
Bradshaw-Harquahala RMP (BLM 2010b)

Corridor 30-52 Summary

Corridor 30-52 provides a pathway for energy transport, particularly electricity transmission, from Palo Verde Generating Station into California. The Riverside East SEZ, Brenda SEZ, DFA, TAFAs, and HSR provide opportunity for the corridor to accommodate transmission generated from renewable energy development. The corridor contains multiple transmission lines, natural gas pipelines, and Interstate-10. The Workgroup has identified a potential corridor revision between MP 120 and MP 143 and possible addition of a second corridor segment (Figure 3-7a). This potential corridor revision is based on issues of corridor alignment and physical barriers, including topographic constraints in Copper Bottom Pass (MP 123), the Colorado River Indian Reservation (MP 119 to MP 128), town of Quartzsite (MP 132 to MP 135), visual impacts on long-term visitor areas, and solar encroachment within the corridor in California and could be considered during future land use planning activities. There are a number of different options with varying levels of impact to consider and discuss with tribes and other agencies regarding a reroute of the corridor including the following:

- Coordinate and consult with tribes to discuss a possible corridor revision near the reservation;
- Use current corridor and analyze engineering options and impacts for placing additional infrastructure through the pass;
- Drop the corridor south/southwest of Quartzite to meet with existing lines;
- Look at options for establishing a second route branching from the main route that would allow the corridor to split into two segments to retain the same capacity; and
- Integrate the Ten West Link analysis of alternatives and lessons learned when considering revisions, deletions, or additions in the future to the currently designated corridor.

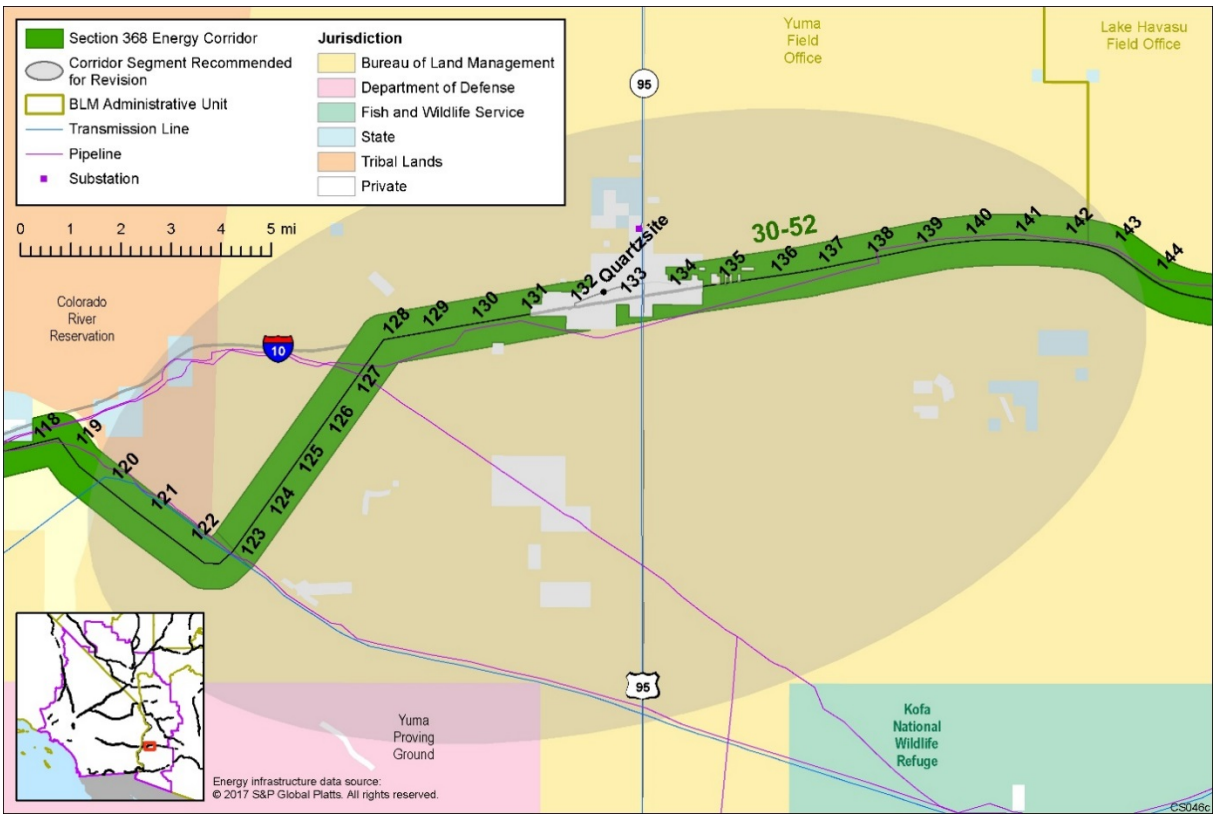


Figure 3-7a Potential Revision to Corridor 30-52

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated California Desert District energy corridor in California and contains transmission lines, several major natural gas pipelines, and I-10. The Riverside East SEZ overlaps the corridor in California; the Brenda SEZ is located 3 miles from the corridor in Arizona; REDAs overlap the corridor in Arizona; and the corridor is located within the RETI 2.0 Riverside East TAFA and the RETI 2.0 HSR to support 3,000 MW of renewable energy transmission from/to Arizona (or adjacent states). All provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins near Palm Springs in southern California, continues 199.7 miles east, and ends near the Palo Verde Nuclear Generating Station and the western suburbs of Phoenix in central Arizona. The corridor has a 10,560-ft width in California, a 5,280-ft width in Arizona from MP 112.1 to MP 174.9, and a 3,500-ft width in Arizona from MP 174.9 to MP 199.8, and is multimodal to accommodate both electrical transmission and pipeline projects. The corridor width was designated in existing land use plans prior to Section 368 corridor designation. The corridor currently contains I-10, five major transmission lines, and several major natural gas pipelines. Many of the energy production projects along I-10, the Riverside East SEZ, and the adjacent DFAs in California have generation-tie lines that use the corridors, which create congestion near the major substations. The congestion is compounded by the Mecca Hills and Orocopia Wilderness and Joshua Tree National Park, reducing the size of and potential for increasing the size of the corridor. There is a lot of interest for use of the corridor, including multiple applications that also include energy storage or production within the corridor. Many DLAs are located within or in the vicinity of the corridor.

The corridor was not identified as a corridor of concern in the Settlement Agreement. While the corridor overlaps with special status species habitat and specially designated areas across its length, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas (Figures 3-7b and 3-7c).

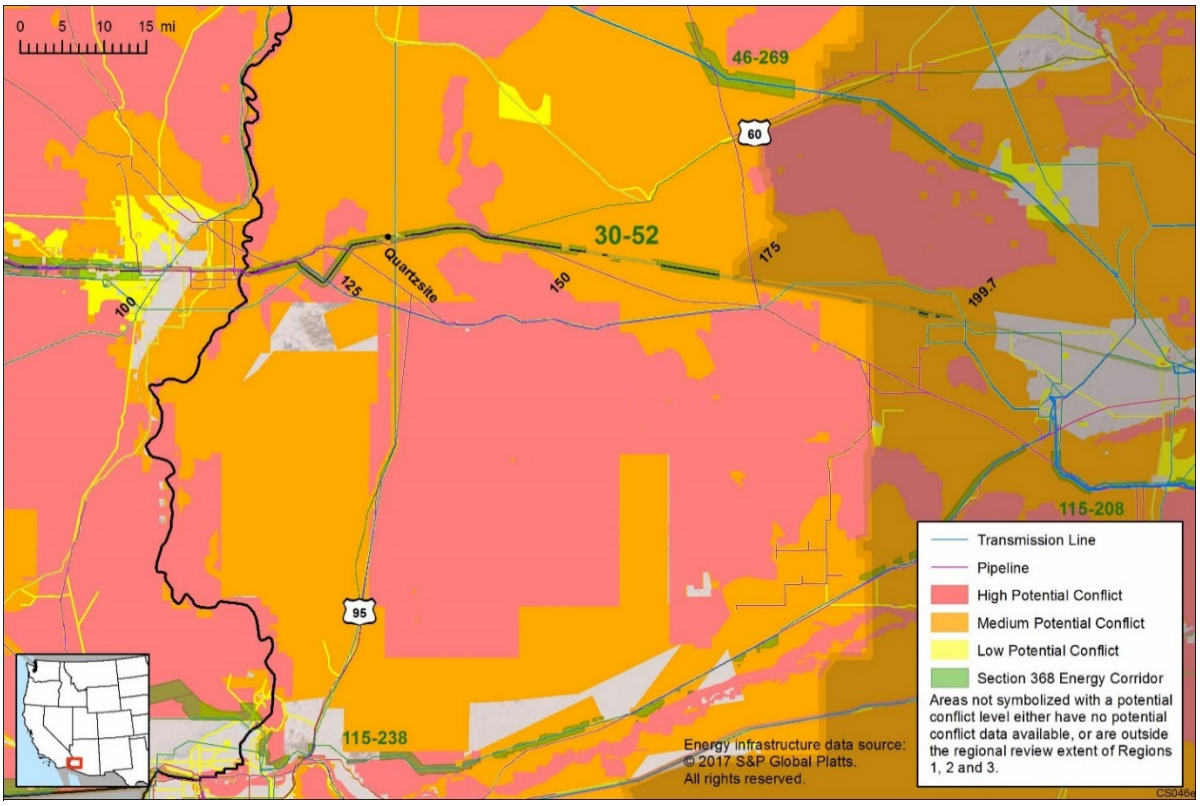


Figure 3-7b Mapping of Potential Conflict Areas in Vicinity of Corridor 30-52

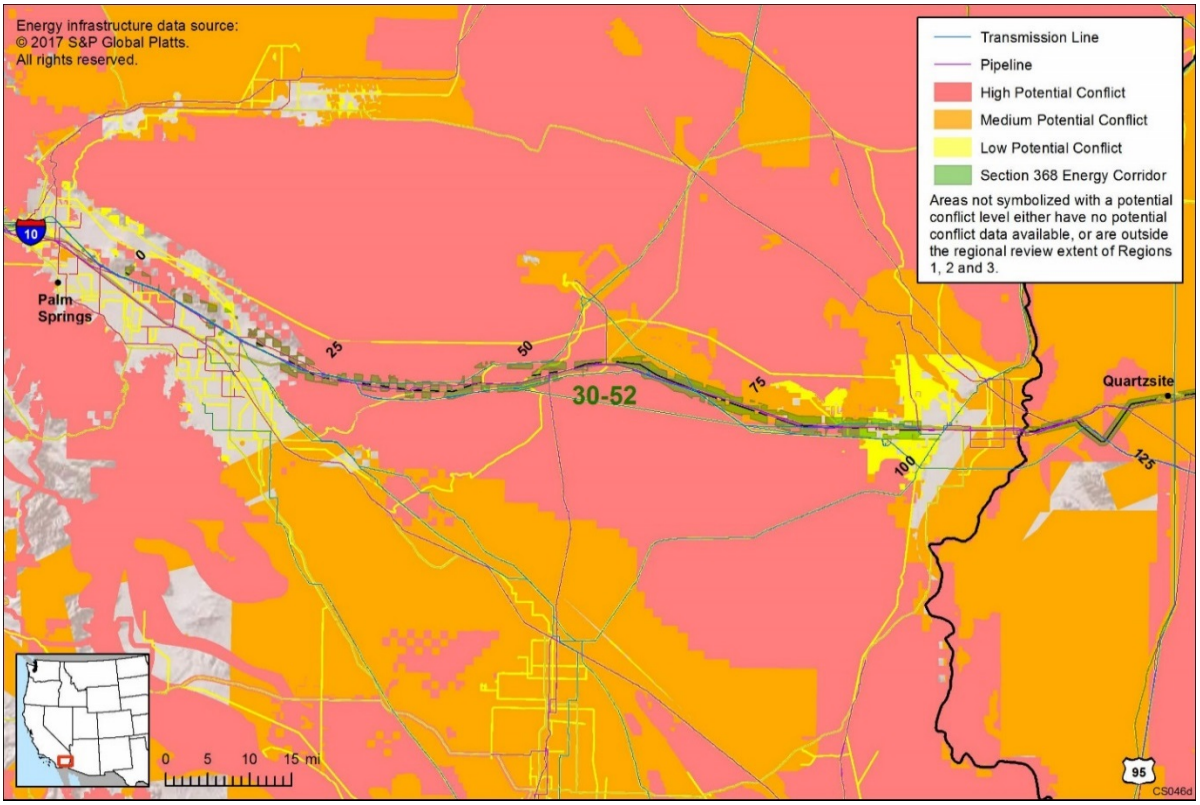


Figure 3-7c Mapping of Potential Conflict Areas in Vicinity of Corridor 30-52

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figures 3-7b and 3-7c; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Appropriate and Acceptable Use. The Riverside East SEZ overlaps the corridor between MP 60.1 and MP 99.8, potentially restricting future development of transmission and pipelines if solar energy development encroaches on the corridor.

Agency Analysis. The Agencies suggest coordinated action to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within Section 368 energy corridors.

Transmission and Pipeline Capacity Opportunity. The study area for alternative routes for the proposed Ten West Link transmission project includes Corridor 30-52 along I-10.

Agency Analysis. The BLM should consider the Ten West Link analysis of alternatives and lessons learned when considering revisions, deletions, or additions to the currently designated corridor in the future.

Location-Specific Physical Barrier. There is a bottleneck around the San Gorgonio Pass approximately 17 miles west of the corridor from MP 0, where it has been challenging in the past to site additional transmission. The corridor was not designated in the pass. In the 2014 RFI, stakeholders suggested that the corridor be developed only if a technological solution can be found to place additional transmission infrastructure through the San Gorgonio Pass. Routing transmission anywhere else in the area would have significant impacts on the existing natural and biological resources. There are physical and topographical constraints in Copper Bottom Pass, in addition to a jurisdictional constraint with the Colorado River Indian Reservation.

Agency Analysis. The San Gorgonio Pass area limits additional development. There are two national monuments on either side of the interstate, so there is not much room to site a transmission line elsewhere through the pass. Future planning efforts would have to consider major rerouting alternatives in order to make this end-portion of the corridor viable for transmission of energy further west. 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.

***Jurisdictional Concerns*.** The town of Quartzsite, Arizona, lies within a corridor gap between MP 131 and MP 135. The town of Desert Center, California, is located in a corridor gap at MP 61. The Central Arizona Project Aqueduct is in a BOR-administered undesignated gap. A future foreseeable development project (Paradise Valley Residential/Commericial Development) would be located on the north side of I-10 near Pinkham Wash.

Agency Analysis. The Town of Quartzsite and La Paz County have both expressed concern and opposition about transmission projects in the corridor within or near Quartzsite town limits because of

possible negative impacts on tourism and visual resources, as well as impacts on county-provided services. Strong opposition to projects in the private portion of the future project development can be expected, and both the town and the county can be expected to be cooperating agencies in any project-specific NEPA analysis. Proponents for projects on private land would have to negotiate with the non-Federal jurisdiction landowners. Coordination and authorization from BOR would be required to traverse through the BOR-administered segment. BOR reviews applications for rights-of-use on BOR-administered land within the corridor on a case-by-case basis. 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. The Workgroup suggests that future federal land use plans present analysis of alternatives to allow future growth (widening) and to make more efficient use of the corridor (e.g., collocation, siting, high-density technologies, and so on).

***Corridor Alignment and Spacing*.** Existing infrastructure, fragmented Federal lands, rugged terrain, and nearby development may limit the potential for future development.

***Agency Analysis*.** There is room for additional projects. The Workgroup suggests that future federal land use plans present analysis of alternatives to allow future growth (widening) and make more efficient use of the corridor.

***Air Quality*.** The Joshua Tree Wilderness NPS Class I Area is just north of the corridor between MP 37.7 and MP 54.0. Seventy-five percent of the National Park is designated as a Class I area for air quality standards. Joshua Tree National Park monitors air quality at three locations (western, central, and eastern) across two air basins (Salton Sea and Mojave Deserts). In general, air quality improves in the eastern regions with the most pristine air quality in the Coxcombs and eastern Eagle Mountains (adjacent the Riverside East SEZ).

Agency Analysis. Avoidance is the primary mitigation tool that BLM uses in reaching an agency-preferred alternative during project development. Transmission lines and pipelines typically do not have a major impact on air quality, and if they did, the impact would be addressed through mitigation measures including the possibility of siting the project elsewhere.

***Ecological Resources*.** The corridor intersects with Coachella Valley Milk Vetch and Coachella Valley Fringe-Toed Lizard designated critical habitat from MP 0.0 to MP 6.9. Desert tortoise critical habitat, TCAs, Priority 1 and 2 connectivity habitat, and habitat linkages are located along at various locations throughout the corridor. Yellow-billed Cuckoo proposed critical habitat is located from MP 111.8 to MP 112.8. There were stakeholder suggestions to follow locally specific connectivity recommendations for desert bighorn sheep connectivity in the Mojave Desert. Razorback Sucker-designated critical habitat has been observed to intersect the corridor between MP 111.9 and MP 112.3. The corridor intersects a Southern California Wildlands Linkage. There were stakeholder suggestions to consider alternative routes to avoid these areas.

Agency Analysis. The corridor overlaps with special status species habitat across its length; however, there is no nearby alternative route that would avoid these habitats in an area with existing infrastructure (Figures 3-7b and 3-7c). Impacts would be analyzed and mitigated as part of the project-specific environmental review under NEPA and in consultation with the USFWS as required under ESA. Impacts on habitat and habitat connectivity would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Regional reviews do not result in decisions that require NEPA reviews or consultation. USFWS is participating in the regional

reviews. Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. BLM would follow its mitigation policy on impacts. The DRECP has extensive CMAs that allow for project development while conserving desert tortoise

Lands and Realty, Military and Civilian Aviation. Chiriaco Summit Airport, Julian Hinds Pump Plant Airstrip, Blythe Airport, Blythe Service Center Heliport, Clayton Heliport, and Cyr Aviation Airport are all in line with the corridor in non-Federal gaps. There are potential impacts on military training routes: visual routes with a floor of 200 ft AGL, instrument routes with a floor of 200 ft AGL and 500 ft AGL, and slow-speed routes.

Agency Analysis. 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. For visual routes, DoD identified no impact if structures remain below 200 ft AGL. For instrument routes, DoD recommended that structures remain below 200 ft AGL. For the instrument route with a floor of 500 ft AGL, DoD recommends that structures remain below 400 ft AGL. Taller structures would require further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

Lands with Wilderness Characteristics. The corridor is adjacent to lands with wilderness characteristics to the north.

Agency Analysis. The DRECP has CMAs for addressing impacts on lands with wilderness characteristics.

Public Access and Recreation. The corridor spans the Indio Hills Palms State Park in an undesignated segment between MP 6.0 and MP 7.8.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Specially Designated Areas

- Coachella Valley Fringe-toed Lizard ACEC is located between MP 2.8 and MP 6.0.
- Coachella Valley DRECP NCLs are located between MP 2.6 and MP 6.6 and between MP 23.6 and MP 50.6.
- Colorado Desert DRECP NCLs are located between MP 3.4 and MP 21.2.
- Pinto Lucerne Valley and Eastern Slopes DRECP National Conservation Lands are located between MP 7.9 and MP 8.8.
- The State Wildlife Preserve (Coachella Valley Preserve–Thousand Palms Oasis Preserve) is located in a non-Federal corridor gap from MP 2.5 to MP 4.9.
- The Coachella Valley National Wildlife Refuge (NWR) is in the path of corridor between MP 4.5 and MP 7.0, but the corridor was not designated in the NWR.
- Colorado River Resource Management Area is located between MP 11.8 and MP 112.0.
- Mecca Hills Wilderness is located south of the corridor between MP 22.1 and MP 32.4.
- Palen Ford ACEC is located between MP 71.8 and MP 78.1 and between MP 80.0 and MP 90.2.
- Alligator Rock ACEC abuts the corridor to the south between MP 57.7 and MP 65.7.
- Joshua Tree Wilderness is located from MP 25.0 to MP 54.9.
- Orocopia Mountains Wilderness is located south of the corridor between MP 32.4 and MP 45.8.

- Chuckwalla Mountains Wilderness is located south of the corridor between MP 54.0 and MP 76.0.
- Palen Dry Lake ACEC abuts the corridor on the north side between MP 75.7 and MP 78.1.
- Chuckwalla Valley Dune Thicket ACEC is in the corridor path, but the corridor is not designated within the ACEC between MP 88.8 and MP 90.2.
- Palen-McCoy Wilderness Area is located 2 to 3 miles north of the corridor between MP 73 and MP 92.
- The corridor runs directly to the south of Joshua Tree National Park on the north side of I-10. There were stakeholder suggestions to consider alternative routes and to reduce the width of the corridor through the 33-mile area located along I-10 and west of Desert Center from 10,560 ft to 3,500 ft.
- Chuckwalla ACEC is located between MP 23.6 and MP 74.8 and between MP 82.8 and MP 90.8. There were stakeholder suggestions to reduce the width of the corridor through the 33-mile area located along I-10 and west of Desert Center from 10,560 ft to 3,500 ft and to eliminate the corridor south of I-10 to approximately 33 miles east of Desert Center, restricting new transmission line and pipeline development to the north side of the freeway.
- Mule McCoy Linkage ACEC abuts the corridor and intersects the corridor between MP 88.4 and MP 92.4.
- Chuckwalla SRMA is located between MP 50.6 and MP 83.0.
- Meccacopia SRMA is located between MP 36.6 and MP 41.2.

Agency Analysis. The DRECP has CMAs for wilderness characteristics. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. The corridor is centered on a previously designated California Desert District energy corridor that has been in place for many years, contains I-10 as well as several transmission lines and pipelines, and has capacity for additional infrastructure. Moving the Section 368 energy corridor could distribute energy infrastructure over a wider area rather than simply confining it to the existing corridor with infrastructure in place. Moreover, there are designated wilderness areas to the south of the corridor. While the corridor overlaps with specially designated areas across its length, there is no nearby alternative route that would avoid these areas in an area with existing infrastructure (Figures 3-7b and 3-7c).

***Cultural Resources and Tribal Concerns*.** The Agua Caliente Reservation abuts the corridor to the south, and the Colorado River Indian Reservation is close to the corridor, but the corridor is routed to avoid crossing the reservations.

***Agency Analysis*.** Many California and Arizona tribes would be consulted on any proposal for use of the corridor. Crossing the Colorado River Indian Reservation was avoided during the initial Section 368 corridor designation because the corridor could be designated only on BLM- and USFS-administered lands. As a result, the corridor is located in a sensitive area, including near Cunningham Peak in the Dome Rock Mountains, Arizona. The topography through the Copper Bottom Pass constrains the corridor and could push development proposals onto tribal lands since the corridor abuts the reservation through the pass. Proponents would have to work with the tribes to obtain a tribal resolution consenting to the grant of ROW by BIA. BIA cannot grant ROWs without tribal consent.

***Visual Resources*.** The VRM classification for areas within the corridor varies the entire length of the corridor. VRM Class I areas intersect and are adjacent to the corridor throughout various portions of the corridor.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM Class objectives even when the proposed action is in conformance with those VRM class objectives.

Interagency Operating Procedures. There were stakeholder suggestions for IOPs including minimizing impacts from new energy infrastructure development to the maximum extent practicable, and maintaining wildlife connectivity in this region.

***Agency Analysis*.** Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws, and the appropriate agencies would be consulted. The Agencies have identified the need for a new IOP to address wildlife connectivity (see Section 3.3.1.1).

Other Issues. One stakeholder requested that the Agencies analyze current power being transmitted in the corridor as well as information about pending applications to establish need and/or opportunity to retrofit existing infrastructure. Input was also provided clarifying existing capacity and potential for new capacity.

Agency Analysis. The Agencies collected additional GIS data (including information developed for the DRECP to address pending applications and existing infrastructure, as well as new designations, species connectivity and habitat), and have added the data to the corridor abstracts and the Section 368 Energy Corridor Mapping Tool. 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.

Corridor 37-39

(East Apex Connector)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office

Nevada County

Clark County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 37-39 Summary

Corridor 37-39 provides continuity among multiple Section 368 energy corridors (Corridors 39-113, 39-231, and 37-232), has capacity for future infrastructure development, and is close to the Dry Lake SEZ, which provides an opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor is sited across an area with energy development infrastructure. The corridor begins near the southeast corner of the Desert National Wildlife Range (DNWR) and Nellis Air Force Base (AFB) at the junction of Corridors 37-223 (N and S) and 37-232, continues 9 miles east, and ends at the junction of Corridors 39-113 and 39-231 in Clark County. The corridor is 3,500 ft wide over most of its length, but narrows to approximately 1,800 ft in some areas because of the limits of Federal lands; it is multimodal to accommodate both electrical transmission and pipeline projects. A natural gas pipeline follows the northwestern portion of the corridor, which is transected by six transmission lines, a natural gas pipeline, a petroleum product pipeline, a railroad, and I-15. There is some interest in using the corridor, including one pending ROW (230-kV line) and conceptual routes for four projects crossing the corridor.

The corridor was not identified as a corridor of concern in the Settlement Agreement. While desert tortoise connectivity habitat exists throughout corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid tortoise habitat and provide the link between other Section 368 energy corridors (Figure 3-8).

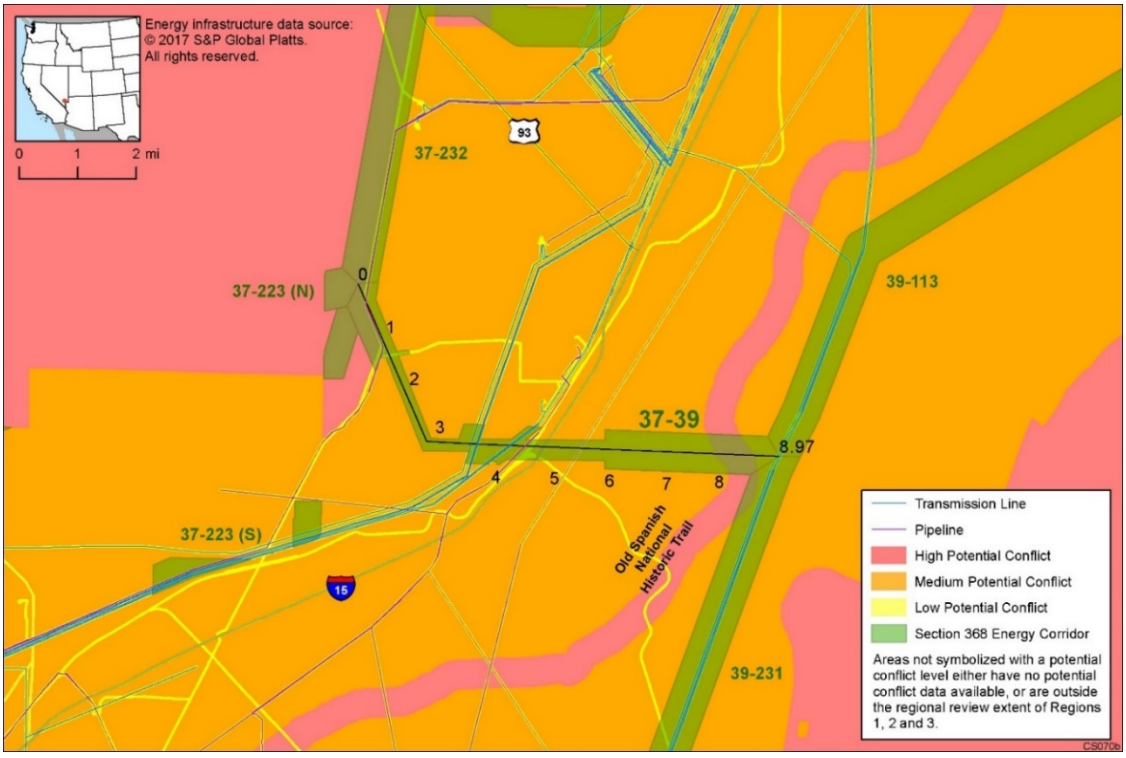


Figure 3-8 Mapping of Potential Conflict Areas in Vicinity of Corridor 37-39

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-8; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

***Ecological Resources*.** The corridor crosses desert tortoise critical habitat, TCAs, and Priority 1 and 2 connectivity habitat. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid siting new facilities in TCAs and Priority 1 and 2 tortoise connectivity habitat without existing transmission, and to minimize additional transmission siting in these areas. Input was received requesting the Agencies collect missing data to minimize potential impacts on TCAs.

Agency Analysis. While desert tortoise connectivity habitat exists throughout corridor, there is no nearby alternative route that would avoid tortoise habitat and provide the link between Corridor 37-39 and other Section 368 energy corridors (see Figure 3-8). Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. The Agencies collected additional GIS data to identify desert tortoise habitat and have added the data to the corridor abstracts and the Section 368 Energy Corridor Mapping Tool.

Lands and Realty, Military and Civilian Aviation. There are potential impacts on Nellis AFB. The corridor is 1.4 miles northeast of Nellis AFB and is under the Nellis AFB approach-departure corridor.

Agency Analysis. All obstacles will need to be evaluated when DoD is provided exact locations and heights to evaluate departure/approach effects. Coordination with Federal Aviation Administration (FAA) and Nellis AFB on structures exceeding 199 ft is required.

Specially Designated Areas

- Corridor is within the Coyote Springs ACEC between MP 0 and MP 1.1. Stakeholders suggested that the Agencies limit the width, or remove corridor designation, in the Coyote Springs ACEC to further reduce impacts by concentrating future transmission development. A stakeholder suggested that if the corridor designation is not removed in the ACEC, BLM should mitigate potential development by applying highly protective management prescriptions to the remaining lands within the ACEC.
- Corridor crosses the OSNHT from MP 7.9 to MP 8.4. One stakeholder suggested rerouting the corridor to the north to lessen the impacts on the OSNHT and its viewshed.

Agency Analysis. The Coyote Springs ACEC is specifically designated to protect desert tortoise critical habitat. The ACEC is managed as an avoidance area, except for areas within designated utility corridors. The OSNHT is a congressionally designated trail. The stakeholder suggestion to reroute the corridor to the north may create additional effect on the OSNHT. There is a ROW for the existing 230-kV transmission line through the existing designated corridor, as it is currently located. Therefore shifting Corridor 37-39 to the north would essentially create a second location for infrastructure in the same

vicinity and could add to the effect on the OSHNT and its viewshed. Corridor 37-39 intersects the OSNHT from MP 7.9 to MP 8.4; therefore the OSNHT trail administrator will be advised and invited to attend pre-authorization or pre-application meetings, as applicable in accordance with applicable law. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs (NTSA Sec. 5(a)) that will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established (NTSA Sec. 7(c)). While ROW may be granted, conditions shall be related to the policy and purposes of the NTSA (Sec. 9(a)). Through project-specific review, as required under NEPA, impacts would be analyzed in relation to any other alternatives that would be identified. Adherence to IOPs would be required.

Visual Resources. The entire corridor is within a VRM Class III area.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. One stakeholder urged the Agencies to consider transportation, drainage, and all utility uses to be included in the appropriate and acceptable uses for the corridor. Input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. The West-wide Energy Corridor RODs designated Section 368 energy corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities to provide long-distance pathways for future pipelines as well as long-distance electrical transmission lines. Therefore, “transportation, drainage, and all utility uses” are generally not considered appropriate and acceptable uses for the designated Section 368 energy corridors. The input provided by stakeholders regarding existing capacity and potential for future capacity has been added to the corridor abstract and has been considered in the Agencies’ analysis.

Corridor 37-223

(West Apex)

Agency Jurisdiction

Bureau of Land Management

Las Vegas Field Office

Nevada County

Clark County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 37-223 (N and S) Summary

The Workgroup has identified a potential corridor deletion for Corridor 37-223 (N) and revision of Corridor 37-22 (S) (Figure 3-9a) to address jurisdictional gaps with the USFWS Desert National Wildlife Refuge and the DoD Nellis Small Arms Range.

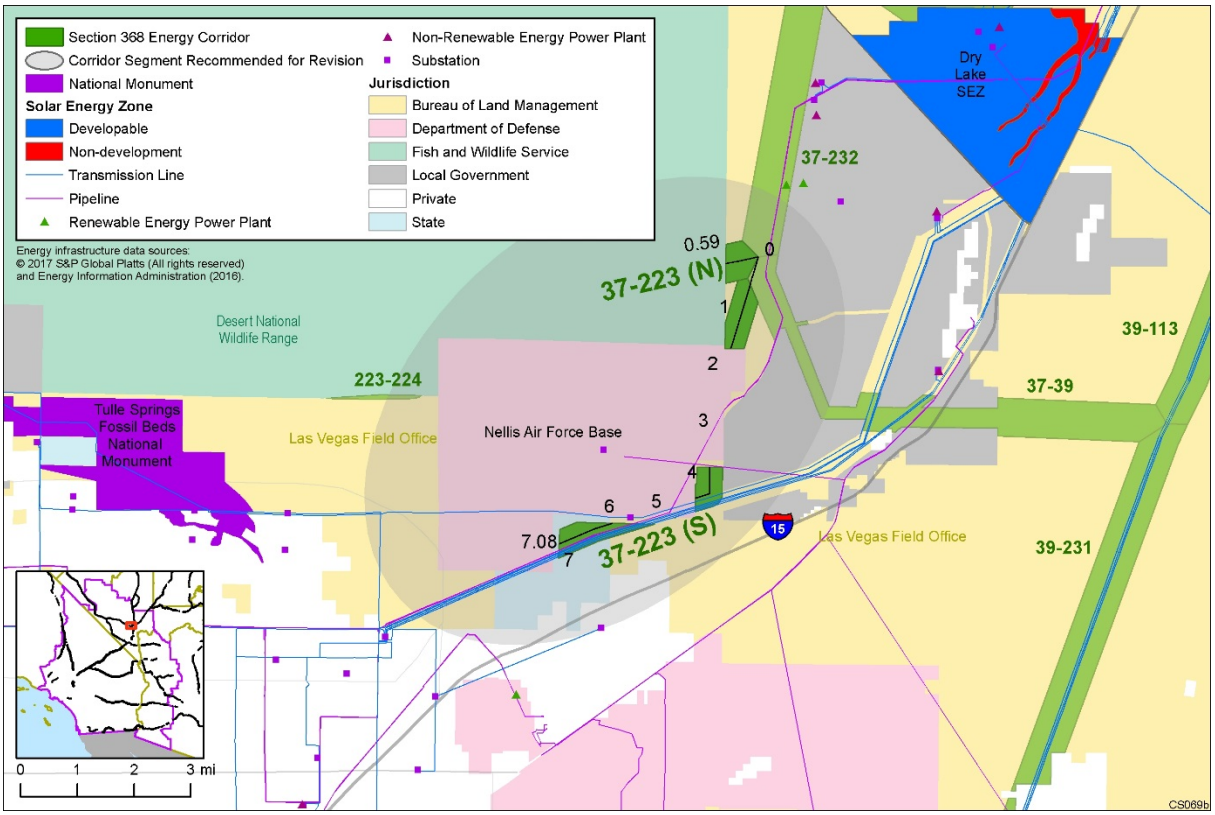


Figure 3-9a Potential Deletion of Corridor 37-223 (N and S)

Corridor Overview: Existing Use and Opportunity

In general, the corridor was sited in its current location with the intent to complete a Section 368 route across the northern portion of Las Vegas in response to anticipated demand for alternative routes in this high-use area [Corridor 223-224 to connect to Corridor 37-232 via Corridor 37-223 (N and S)]. However, because Section 368 energy corridors were not designated on DoD- or USFWS-administered lands as anticipated, the connection is not complete.

Corridor 37-223 (N) begins about 10 miles northeast of Las Vegas just north of the southeast corner of the DNWR in southern Nevada and extends east for 0.6 miles to connect to Corridors 37-232 and 37-39 in Clark County. The corridor is 3,500 ft wide over its entire extent and is multimodal to accommodate both electrical transmission and pipeline projects. Corridor 37-223 (S) begins just east of the southeast corner of the DNWR in southern Nevada at the junction of Corridors 37-232 and 37-39 and extends 7.1 miles to the south and west. This corridor is 2,400 ft wide over its entire extent and is designated underground only because of military training requirements. There are two existing natural gas pipelines and six existing above-ground transmission lines within the (S) portion of the corridor.

There is interest for use of the corridor, including pending applications for transmission lines in both segments of Corridor 37-223 (N and S). The Dry Lake SEZ is 3.8 miles northeast of the corridors providing opportunity for the corridors to accommodate transmission generated from renewable energy development. The BLM Las Vegas and Pahrump Field Offices are currently in the process of revising the 1998 Las Vegas RMP.

The corridor was not identified as a corridor of concern in the Settlement Agreement. There does not appear to be a reasonable alternative route that could connect the corridors to other areas in the region while avoiding jurisdictional gaps and military concerns (Figure 3-9b).

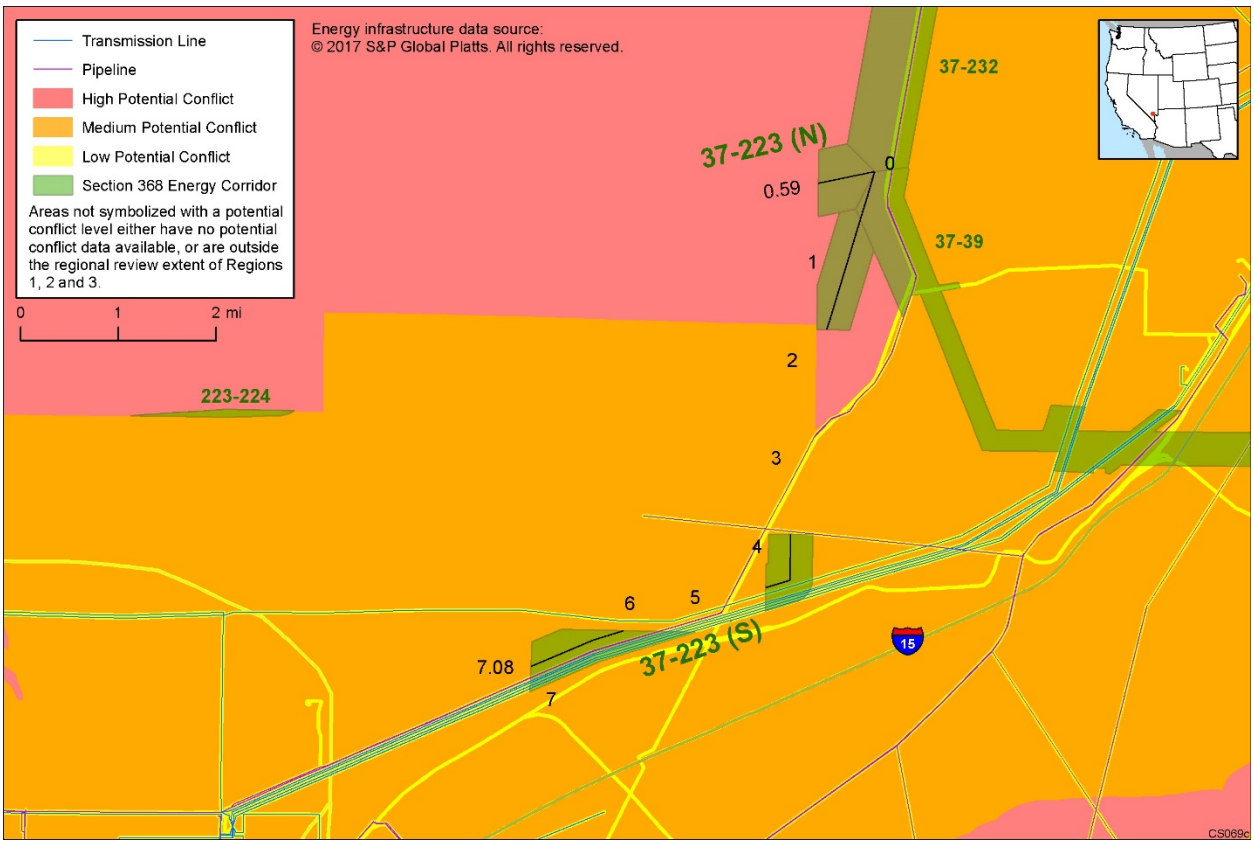


Figure 3-9b Mapping of Potential Conflict Areas in Vicinity of Corridor 37-223 (N and S)

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-9b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Jurisdictional Concerns. The corridor route runs through a jurisdictional gap where the corridor crosses the southeast corner of the USFWS-administered DNWR along its western edge from the corridor's end (MP 0.6). Stakeholders suggested moving the corridor south of the DNWR. An additional DoD land withdrawal overlaps the corridor. On December 19, 2014, Bill H. R. 3979 was enacted as Public Law 113-291. Section 3092(k) of P. L. 113-291 amended the Military Lands Withdrawal Act of 1999 (Public Law 106–65; 113 Stat. 886) to add approximately 1,120 acres to the existing withdrawal for Nellis AFB in Clark County, Nevada. The public land is to be withdrawn in accordance with the FLPMA of 1976 (43 U.S. Code § 1714).

Agency Analysis. The Workgroup has identified a potential corridor deletion. Meeting the original corridor objectives appears to be more difficult because of recent changes in the area, such as the changing of nearby land use designations.

Ecological Resources. The corridor intersects with TCAs and Priority 1 and 2 connectivity habitat. The corridor scores very high in risk for permeability. There were many stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid siting new facilities in TCAs and Priority 1 and 2 connectivity habitat in areas with no existing transmission, and to minimize additional transmission siting in these areas. Stakeholders also suggested rerouting the corridor to avoid the risk to permeability.

Agency Analysis. Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. The BLM policy on use of the mitigation hierarchy would be applied to avoid and minimize impacts. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

***Lands and Realty, Civilian and Military Aviation*.** DoD training and aircraft safety were the primary concern.

Agency Analysis. The Agencies have identified a potential corridor deletion for Corridor 37-223 (N and S).

Specially Designated Areas

- Corridor 37-223(N) is within the Coyote Springs ACEC throughout its entire extent (MP 0 to 0.6) and Corridor 37-223(S) from MP 0 to MP 2.
- Tule Springs Fossil Beds National Monument is located to the west of the designated segments of the corridor.

Agency Analysis. The Coyote Springs ACEC is specifically designated to protect desert tortoise critical habitat. Except within designated corridors, the ACEC is managed as an avoidance area to linear ROWs and as an exclusion area to site-type ROWs. Use of IOPs would be required to avoid incompatible uses within the corridor. The Agencies have identified a potential corridor deletion to avoid indirect impacts on the undesignated gap (where the corridor crosses the DNWR), which prevents the corridor from connecting to other existing Section 368 energy corridors (Figure 3-9a).

Visual Resources. The entire corridor is classified as a VRM Class III area.

Agency 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

impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. Input was received requesting the Agencies to provide missing data to determine whether new projects in the corridor require rerouting due to TCAs, Priority 1 and 2 connectivity habitat, and wildlife connectivity. One stakeholder urged the Agencies to consider that transportation, drainage, and all utility uses be included in the appropriate and acceptable uses for the corridor. Last, input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. The Agencies have updated the corridor abstracts and the Section 368 Energy Corridor Mapping Tool with new information, including new designations and species connectivity data. The West-wide Energy Corridor RODs designated Section 368 energy corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities to provide long-distance pathways for future pipelines as well as long-distance electrical transmission lines. Therefore, transportation, drainage, and all utility uses are not generally considered appropriate and acceptable uses for the designated Section 368 energy corridors. 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.

Corridor 37-232

(Coyote Springs)

Agency Jurisdiction

Bureau of Land Management

Las Vegas Field Office
Caliente Field Office

Nevada Counties

Clark County
Lincoln County

Resource Management Plans

Las Vegas Resource Management Plan (BLM 1998)
Ely District Resource Management Plan (BLM 2008)

Corridor 37-232 Summary

Corridor 37-232 provides a Section 368 route between Las Vegas and southern Idaho. The corridor contains infrastructure throughout much of its length, has additional capacity for future infrastructure development, is adjacent to the Dry Lake SEZ, and provides a route to move energy to Las Vegas. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor is sited consistent with a locally designated corridor and contains existing transmission lines and natural gas pipelines and connects to Corridors 37-223(N) and 37-223(S) and Corridors 232-233(E) and 232-233(W). The Dry Lake SEZ is adjacent to and partially overlaps the corridor, which provides opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor was not identified as a corridor of concern in the Settlement Agreement. While desert tortoise critical habitat and connectivity habitat exist throughout the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternate route that would avoid tortoise habitat and still provide a north–south route in the area. Additional development within the corridor would avoid undeveloped areas (Figure 3-10).

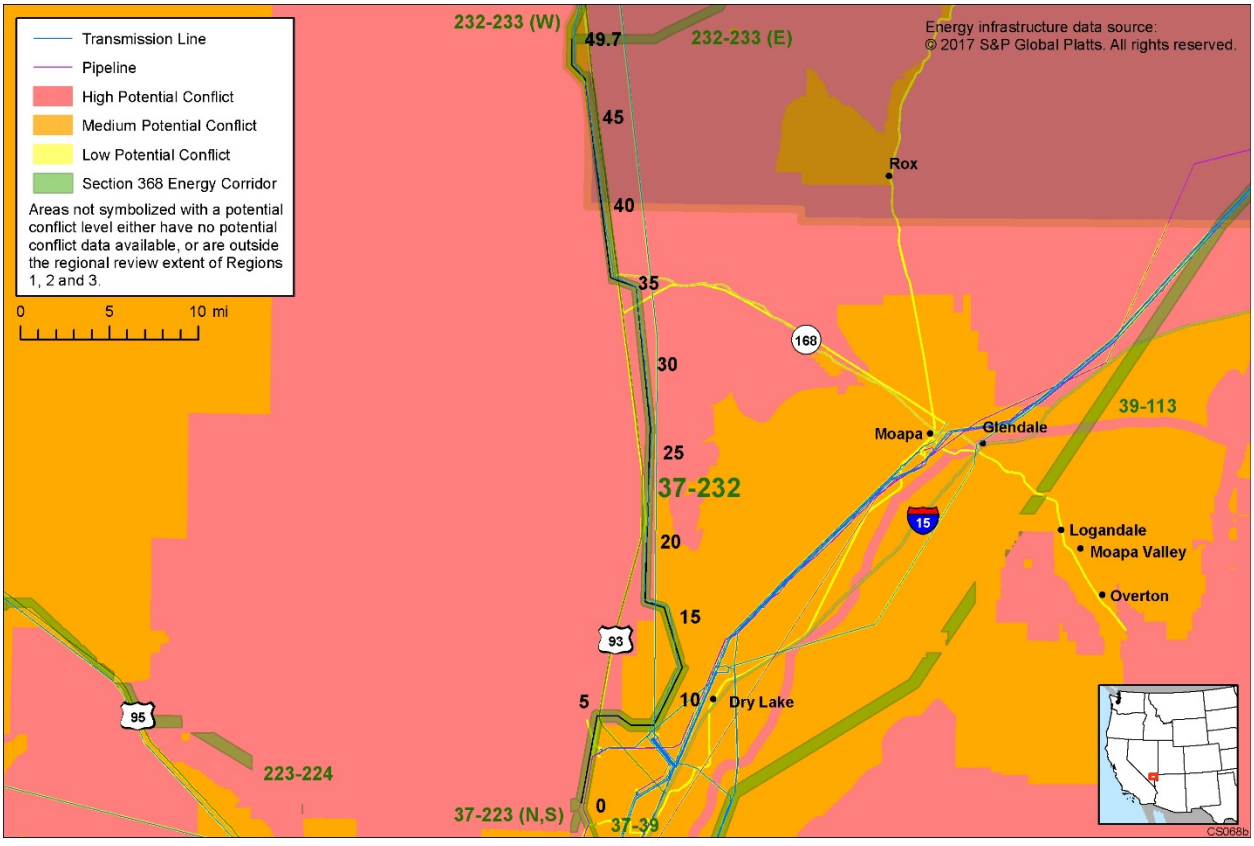


Figure 3-10 Mapping of Potential Conflict Areas in Vicinity of Corridor 37-232

The corridor begins at the junction of Corridors 37-223(N) and 37-39 about 10 miles northeast of Las Vegas, runs 49 miles north, and ends at the junction of Corridors 232-233(E) and 232-233(W) in Lincoln County. The last 9 miles of the corridor are located in Region 3. The corridor begins near the southeast corner of the DNWR and Nellis AFB and runs along the eastern edge of the DNWR for most of its length. The corridor is 3,500 ft wide from MP 0 to MP 12.0, 2,640 ft wide from MP 12.0 to MP 35.5, and of variable width from MP 35.5 to MP 49.7. The corridor is multimodal to accommodate both electrical transmission and pipeline projects. Much of the corridor follows two 500-kV transmission lines, and a small portion of the corridor contains two natural gas pipelines. There is interest for use of the corridor, including pending ROWs and planned transmission lines.

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-10; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

***Ecological Resources*.** The corridor overlaps with desert tortoise critical habitat for most of its length between MP 0 and MP 47.7. Other potential impacts from development in the corridor include TCAs and Priority 1 and 2 tortoise Connectivity Habitat (MP 0 to MP 9.4). There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid those areas. Input was also received requesting the Agencies to provide missing data to minimize potential impacts on the tortoise.

Agency Analysis. While desert tortoise critical habitat and connectivity habitat exist throughout the corridor, there is no nearby alternative route that would avoid tortoise habitat and provide a route from southern Idaho to Las Vegas in a corridor with existing infrastructure (Figure 3-10). Analysis would be completed through the NEPA process (i.e., for RMP revision) case by case with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. The Agencies collected additional GIS data to identify desert tortoise habitat and have added the data to the corridor abstracts and the Section 368 Energy Corridor Mapping Tool.

Military and Civilian Aviation. There is a potential for impacts on Nellis AFB: the corridor is located within the Nevada Test and Training Range (NTTR) Military Operations Area (MOA).

Agency Analysis. Development within the corridor may affect training if it is higher than 100 ft AGL. It may affect testing at lower heights. All restricted airspace needs to be avoided. Coordination with DoD and Nellis AFB is recommended.

Specially Designated Areas

- Corridor is within the Coyote Springs ACEC between MP 0 and MP 6.5 and MP 16 and MP 35.6.
- Corridor is adjacent to Arrow Canyon Wilderness between MP 19.7 and MP 34.3.

Agency Analysis. The Coyote Springs ACEC is specifically designated to protect desert tortoise critical habitat. Except within designated corridors, the ACEC is managed as an avoidance area to linear ROWs and as an exclusion area to site-type ROWs. Use of IOPs and BMPs would be required to avoid incompatible uses within the corridor. The corridor is not located within the Arrow Canyon Wilderness. Impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

Tribal Concerns. The corridor is adjacent to the Moapa River Indian Reservation for 3 miles (MP 12.2 to MP 15.5). The Moapa River Indian Reservation is located northeast of Las Vegas and is the land base for the Moapa Band of Paiute Indians, a local band of Southern Paiute Indians.

Agency Analysis. The Moapa Band of Paiute Indians would be consulted to avoid and minimize any potential effects from development in the corridor. Adherence to IOPs would be required.

***Visual Resources*.** The corridor is a VRM Class III area throughout except for a VRM Class IV area between MP 6.2 and MP 16.3.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM class objectives even when the proposed action is in conformance with those VRM class objectives.

Other Issues. One stakeholder urged the Agencies to consider transportation, drainage, and all utility uses to be included in the appropriate and acceptable uses for the corridor. Input was also provided clarifying existing capacity and potential for new capacity.

Agency Analysis. The West-wide Energy Corridor RODs designated Section 368 energy corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities to provide long-distance pathways for future pipelines as well as long-distance electrical transmission lines. Therefore, transportation, drainage, and all utility uses are not generally considered appropriate and acceptable uses for the designated Section 368 energy corridors. 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.

Corridor 39-113

(East Apex/Mormon Mesa to St. George)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office
Ely District Office
Caliente Field Office

Nevada Counties

Clark County
Lincoln County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998) (portion in Region 1)

Corridor 39-113 Summary

The Workgroup has identified a potential corridor revision to address the corridor gap at the intersection with Valley of Fire State Park from MP 0 to MP 46. The BLM could consider realigning the corridor segment to follow an existing locally designated corridor to the west (Figure 3-11a). A revision could realign the Section 368 energy corridor with an existing locally designated corridor that contains existing transmission lines and avoids identified environmental and recreational issues. The potential realignment, if acceptable, would connect with the existing designated Moapa Corridor, following existing infrastructure, avoiding currently undeveloped areas, and better achieving the objective of Section 368 energy corridors to provide long-distance pathways for electrical transmission and pipeline needs. The Moapa Ban of Paiute Indians, the BIA, and the Office of Special Trustee for American Indians (OST) would need to be engaged.

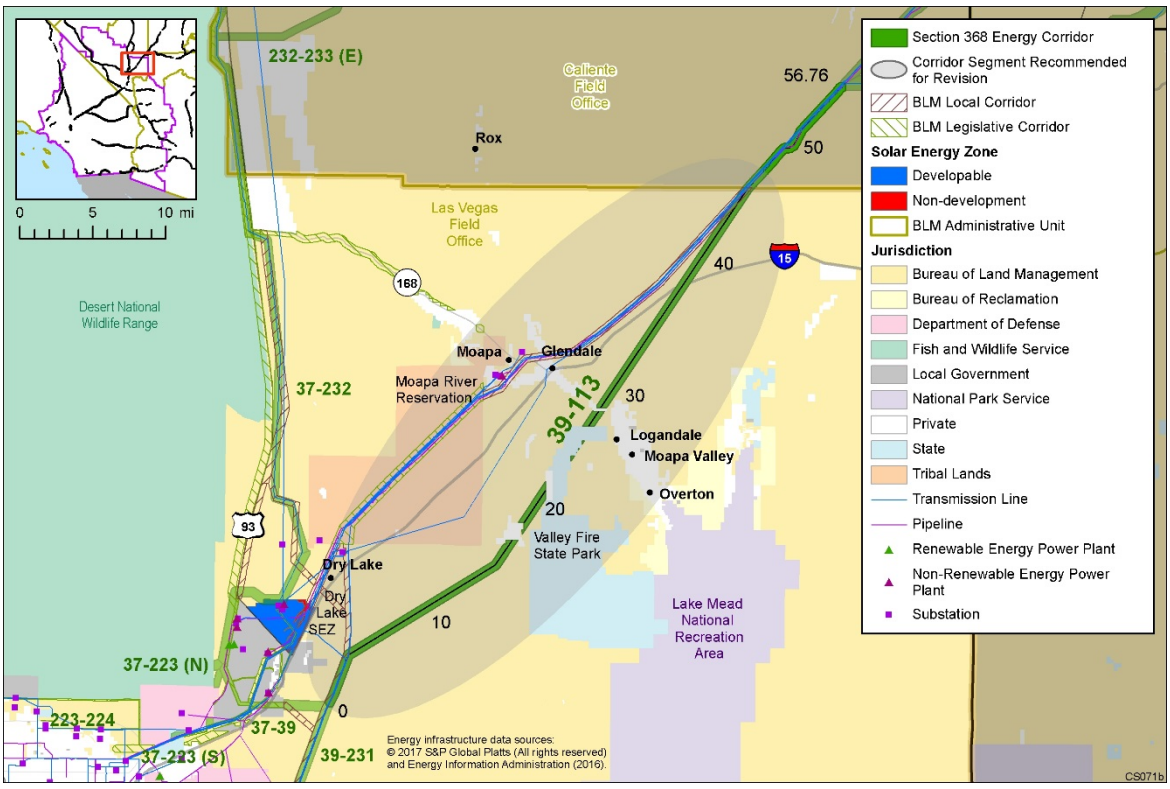


Figure 3-11a Potential Revision to Corridor 39-113

Corridor Overview: Existing Use and Opportunity

The corridor was sited to connect routes from the north, through Utah, to the Las Vegas area. It partially contains two natural gas pipelines and five transmission lines and generally follows I-15. The corridor also connects to Corridors 39-231, 113-114, and 113-116. The 250-MW Moapa Southern Paiute Solar Project and the Dry Lake SEZ, located 3.5 miles west of the corridor, provide opportunity for the corridor to accommodate transmission tied to renewable energy development.

The corridor begins at the intersection with Corridors 37-39 and 37-231 northeast of Las Vegas in southern Nevada and continues northeast for 57 miles to intersect with Corridors 113-114 and 113-116, northwest of Mesquite in Lincoln County. The last 10 miles of the corridor are located in Region 3. The corridor is 3,500 ft wide over its entire length and is multimodal to accommodate both electrical transmission and pipeline projects. There is considerable interest for use of the corridor, including pending ROWs and planned transmission lines. In general, the corridor was sited in its current location because of multiple proposals during scoping for the West-wide Energy Corridor PEIS. The BLM Las Vegas and Pahrump Field Offices are currently in the process of revising the 1998 Las Vegas RMP.

The corridor was identified as a corridor of concern in the Settlement Agreement due to concerns regarding Black Mountain tortoise habitat, the Rainbow Gardens ACEC, the proposed Gold Butte NCA, and the Pahranagat NWR. Neither the Pahranagat NWR nor the Rainbow Gardens ACEC is in close proximity to the corridor; the proposed Gold Butte NCA did not achieve NCA status; and the Gold Butte National Monument is 10 miles from the corridor at its closest point. While desert tortoise habitat and connectivity habitat exist throughout the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid tortoise habitat and still provide a route from Las Vegas north (Figure 3-11b).

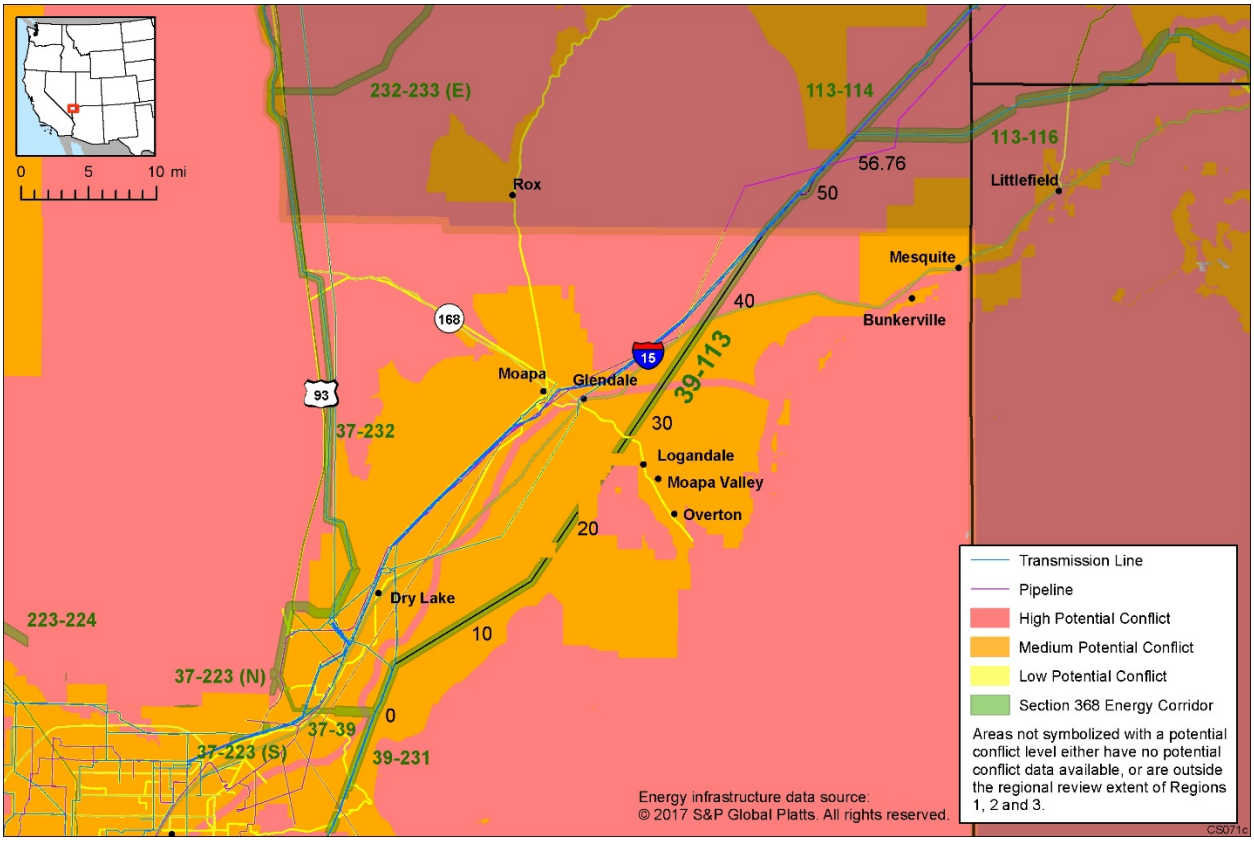


Figure 3-11b Mapping of Potential Conflict Areas in Vicinity of Corridor 39-113

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-11b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Jurisdictional Concerns. The Valley of Fire State Park intersects the corridor between MP 18 and MP 28. There were stakeholder suggestions to delete the corridor to avoid Valley of Fire State Park.

Agency Analysis. The Workgroup identified a potential reroute along a locally designated corridor that contains infrastructure. The potential corridor realignment would connect to an existing 3,000-ft-wide transportation and utility corridor referred as the Moapa Corridor, which passes through the Moapa River Indian Reservation. Consistent with Public Law 96-491, the BLM administers the Moapa Corridor; any fees or rental collected for use of the Moapa Corridor (i.e., ROWs) would be transferred to the OST for the benefit of the Moapa Band of Paiutes Indians. A tribal resolution would be needed from the Moapa Band of Paiute Indians consenting to the grant of a ROW by BIA. BIA cannot grant ROWs without tribal consent.

Cultural Resources. The corridor is near the Arrowhead Highway from approximately MP 4.0 to MP 40.0. The Arrowhead Highway was built in the 1920s and was the first automobile road to connect Los Angeles to Salt Lake City via Las Vegas. The road was later numbered Highway 91, and parts of the road are now part of I-15.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA, the NHPA, and other Federal laws.

Ecological Resources. The corridor intersects with desert tortoise habitat, TCAs, and Priority 1 and 2 connectivity habitat throughout various portions of the corridor. The corridor also intersects a Southern California Wildlands Linkage. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid Black Mountain tortoise habitat. Suggestions for corridor revision in response to the release of the draft abstracts included deleting the corridor to avoid desert tortoise habitat.

Agency Analysis. While desert tortoise habitat and connectivity habitat exist throughout the corridor, there is no nearby alternative route that would avoid tortoise habitat and provide a route from southern Idaho to Las Vegas in a corridor with existing infrastructure (Figure 3-11b). Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Lands and Realty, Military and Civilian Aviation. There are potential impacts on military training routes: visual routes MP 46 with a floor of 200 ft AGL, and an instrument route from MP 52.6 to MP 56.8.

Agency Analysis. The DoD recommends that structures remain below 200 ft AGL. Taller structures will require FAA approval and further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

***Public Access and Recreation*.** The Logandale Trails Recreation Area is located east of the corridor and Valley of Fire State Park.

Agency Analysis. Logandale Trails is a developed non-fee site within the Southern Nevada District planning area. The Logandale Trails area is not an exclusion area for linear ROWs, but the corridor could have a major impact on recreation as linear ROWs may change the recreation-setting characteristics and detract from the naturalness and remoteness of the area. Impacts would be analyzed as part of the project-specific environmental review required under NEPA.

Specially Designated Areas

- Bitter Springs Back Country Byway crosses the corridor at MP 10.
- OSNHT and Mormon Mesa trails cross the corridor at MP 33.
- Mormon Mesa ACEC intersects the corridor between MP 39 and MP 57.
- At MP 0, Rainbow Gardens ACEC is located 5.8 miles from the corridor to the southwest. At MP 45.3, Pahranagat National Wildlife Refuge is located 48.5 miles from the corridor to the northwest.

Stakeholder suggestions for corridor revision in response to the release of the draft abstracts included removing the corridor to avoid scenic landscapes and ACECs or realigning the corridor to follow the existing Las Vegas Field Office designated corridors.

***Agency Analysis*.** The Bitter Springs National Backcountry Byway is managed for the scenic viewshed and other resource values. The Agencies will consider realigning the corridor northwest so that it crosses at the start of the byway, not at the center. If the Agencies do not reroute the corridor, adherence to IOPs and other mitigation stipulations would be required. The OSNHT is a congressionally designated trail. Corridor 39-113 intersects the OSNHT and Mormon Mesa Trail at MP 33; therefore the appropriate trail administrators will be advised and invited to attend pre-authorization or pre-application meetings, as applicable in accordance with applicable law. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs (NTSA Sec. 5(a)), which will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established (NTSA Sec. 7(c)). While ROWs may be granted, conditions shall be related to the policy and purposes of the NTSA (Sec. 9(a)). Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. The Mormon Mesa ACEC is specifically designated to protect desert tortoise critical habitat, and the corridor traverses the ACEC for approximately 8 miles. Except within designated corridors, the ACEC is managed as an avoidance area to linear ROWs and as an exclusion area to site-type ROWs. Use of IOPs and other BMPs would be required to avoid incompatible uses within the corridor. The corridor is not within the Rainbow Gardens ACEC on BLM-administered lands, nor is it within the Pahranagat NWR. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. The Agencies have identified a potential corridor revision that would avoid impacts on the Logandale trails (recreation area), the Mormon Mesa ACEC, and the OSNHT (Figure 3-11a).

***Visual Resources*.** The VRM classification for areas within the corridor varies the entire length of the corridor.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of applicable VRM class objectives even when the proposed action is in conformance with those VRM class objectives.

Other Issues. Stakeholders clarified existing capacity and identified potential for new capacity.

Agency Analysis. 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.

Corridor 39-231

(East Las Vegas/Sunrise Mountain)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office

Nevada County

Clark County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 39-231 Summary

Corridor 39-231, despite the short segment with a reduced width, preserves the route for the extremely critical pathway for electrical transmission around the east side of the Las Vegas area. The Workgroup has identified a potential corridor revision to widen the pinched segment between MP 9.5 and MP 11 from 500 ft to 3,500 ft (Figure 3-12a). This potential revision was identified because the corridor is unnecessarily narrow due to a previously identified Instant Study Area (ISA). The ISA designation was removed, but the corridor was not widened at that time. Widening the corridor could improve spatial capacity of the corridor in this location, and the potential revision would adhere to the siting principles by helping the Agencies achieve the objective of Section 368 energy corridors to provide long-distance pathways for electrical transmission and pipeline needs. The widened corridor would be located alongside existing infrastructure, avoiding undeveloped areas.

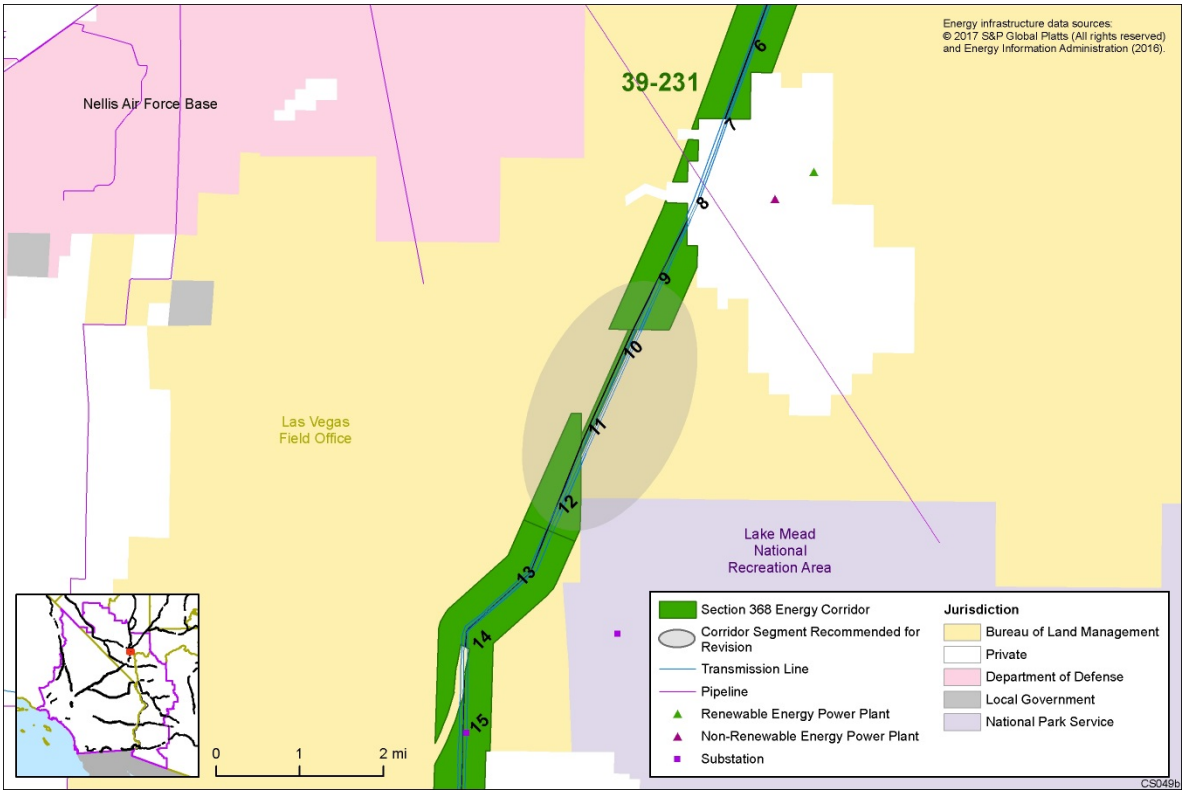


Figure 3-12a Potential Revision to Corridor 39-231

Corridor Overview: Existing Use and Opportunity

The corridor begins at the junction of Corridors 39-113 and 37-39, continues 36.4 miles south, and ends adjacent to the Sloan Canyon NCA in Clark County. The corridor is 3,500 ft wide over most of its length. The corridor is multimodal to accommodate both electrical transmission and pipeline projects. Three transmission lines follow the entire length of the corridor, and some pipelines cross it. There is some expressed interest for use of the corridor, including a pending application for a 600-kV direct current (DC) transmission line, interest in two 500-kV transmission lines and a 1,000-kV DC transmission line, and other interest in a conceptual route that overlaps part of the corridor.

The corridor was identified as a corridor of concern in the Settlement Agreement because of Black Mountain tortoise habitat, the Rainbow Gardens ACEC, the proposed Gold Butte NCA, and the Pahranagat NWR. While special status species and specially designated areas exist throughout the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas and still preserve the route for the critical transmission pathway around the eastern side of the Las Vegas area (Figure 3-12b).

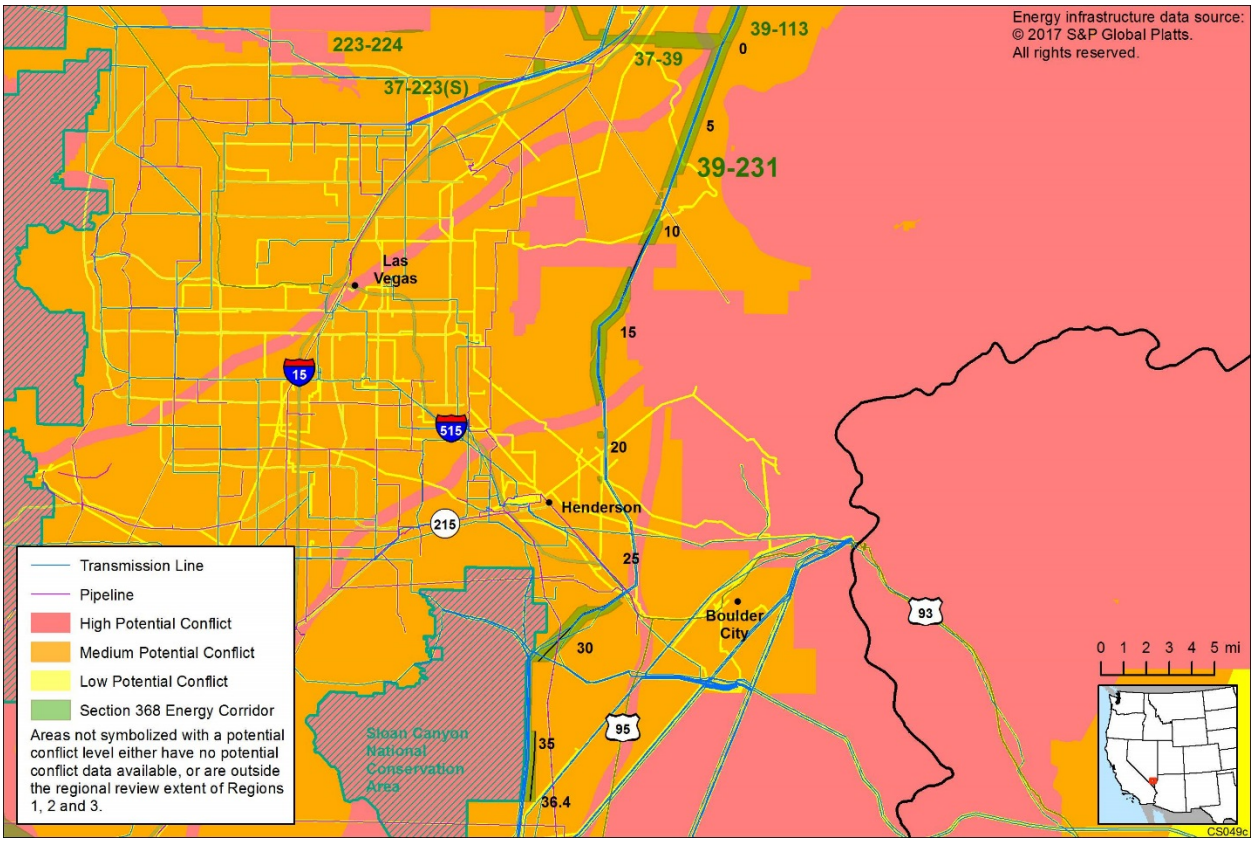


Figure 3-12b Mapping of Potential Conflict Areas in Vicinity of Corridor 39-231

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-12b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Physical Barrier. There is a 500-ft pinch point between Gypsum Cave (West) and Papco Gypsum Plant (East), and the corridor is too small for electricity and a utility pipeline, specifically within the Lava Butte area and within a rough hog-back ridge along the back side of the corridor between MP 13 and MP 14.

Agency Analysis. There is an increased interest in transmission of more power, specifically renewable energy, into the Southwest through the Market Place Hub, particularly through difficult pinch points such as the 1.5-mile Sunrise 500-ft-wide corridor, including topography constraints adjacent to the Lava Butte volcanic mountainous rock and major residential development (e.g., City of Henderson, community of Lake Las Vegas, etc.). The primary area of concern is the Lava Buttes narrows where there are three existing 500-kV transmission lines and additional 500-kV and 230-kV transmission lines approved to be built through the very narrow corridor limited by Lava Butte on one side and a rough hog-back ridge along the other side of the corridor. There are several interests in the additional use of this corridor, such as a pending application for a 600-kV DC transmission line and potential interest in two 500-kV transmission lines. The Lava Butte area is severely limited by the terrain of the land and the positioning of existing transmission lines within this narrow valley. It will be very difficult to site any more than one new line adjacent to the existing lines without affecting the fragile geologic features nearby. 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. Corridors may be modified during project-specific NEPA review and land use plan revisions. The BLM Las Vegas and Pahrump Field Offices are currently in the process of revising the 1998 Las Vegas RMP.

Jurisdictional Concern. The Pahranagat NWR is approximately 60 miles north of the corridor. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid the NWR. There is a discontinuous section of corridor on BOR-administered lands that was studied in the West-wide Energy Corridor PEIS as part of this corridor, but was not designated. Corridor 39-231 connects to existing designated transportation and utility corridors reserved to the United States for administration by the BLM when those certain lands were transferred (patented) out of Federal ownership. The designated transportation and utility corridors commonly referred to as the Eldorado Valley Corridors follow existing infrastructure. Impacts would be analyzed with a full range of alternatives as part of the project-specific environmental review required under NEPA and other Federal laws. The Eldorado Valley Corridors intersect the Boulder City Conservation Easement (BCCE), which is managed by the Clark County Desert Conservation Program as partial mitigation for impacts on desert tortoise under a regional Section 10 incidental take permit.

Agency Analysis. The Pahranagat NWR is not adjacent to the corridor. Coordination and authorization from BOR would be required to traverse through the corridor segment on BOR-administered lands. BOR reviews applications for rights-of-use on BOR-administered land within the corridor on a case-by-case basis. The corridor does not intersect the BCCE. The corridor connects to existing designated transportation and utility corridors reserved to the United States for administration by the BLM when those certain lands were transferred (patented) out of Federal ownership. Impacts would be analyzed with a full range of alternatives as part of the project-specific environmental review required under NEPA and other Federal laws.

Corridor Alignment and Spacing. There is a 500-ft pinch point at the former Sunrise Mountain ISA. In January 2014, Congress released the Sunrise Mountain ISA, although the width of the corridor was unchanged. Stakeholders suggested that BLM consider whether widening the corridor (as identified in the draft RMP revision) is necessary.

Agency Analysis. The Workgroup has identified a potential corridor revision to widen the corridor from 500 ft to 3,500 ft in this area because the route is a critical pathway for electrical transmission around the east side of the Las Vegas area, and the pinch point prevents additional capacity for future infrastructure development (Figure 3-12a).

Cultural Resources and Tribal Concerns. The Gypsum Cave is a Traditional Cultural Property (TCP) that is partially located within the corridor.

Agency Analysis. Adherence to IOPs would be required; however, note that the agency is responsible for cultural compliance and tribal consultation, not the applicant or the applicant's contractor. The applicant may assist in the compliance activities with the approval of the agency.

Ecological Resources. The corridor overlaps with Black Mountain tortoise habitat, TCAs, and Priority 1 and 2 connectivity habitat along the entire corridor. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid those areas.

Agency Analysis. While desert tortoise habitat and connectivity habitat exist throughout the corridor, there is no nearby alternative route that would avoid tortoise habitat and preserve the route for the critical transmission pathway around the east side of the Las Vegas area in a corridor with existing infrastructure (Figure 3-12b). There is no Black Mountain Desert Tortoise habitat; however, Mojave Desert Tortoise habitat is present in the entire corridor. There is no TCA within the subject area on BLM-administered land. There is a TCA within private land that is managed under the BCCE and would be mitigated under the Multiple Species Habitat Conservation Plan (MSHCP) Section 10 permit. Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. The BLM policy on use of the mitigation hierarchy would be applied to first avoid and then minimize impacts. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Hydrology, Surface Water and Groundwater. The Robert B. Griffith Water Project is located along the corridor route and is federally administered, but was not designated.

Agency Analysis. The corridor segment includes BLM-administered land. Coordination with holders of valid existing rights (i.e., BOR) would be required. 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.

Public Access and Recreation. The Lake Mead National Recreation Area (NRA) is near the corridor and abuts it on the east side at MP 12 before veering west. There were stakeholder suggestions in the 2014 RFI to reroute this corridor by expanding the corridor west and not into the Lake Mead NRA.

Agency Analysis. The corridor has a reduced width due to proximity to NPS land. 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.

Socioeconomics. Stakeholders encouraged the Agencies to minimize impacts on the residents of Lake Las Vegas. There is limited space, and existing lines are in close proximity to residential development and along the east side of the city.

Agency Analysis. Impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

Specially Designated Areas

- Proposed Gold Butte NCA. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid the proposed NCA.
- Rainbow Gardens ACEC is located within the corridor from MP 6.1 to 16.9. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid the ACEC.
- Sunrise Mountain ISA is located between MPs 9.5 and MP 10.9.
- BOR-administered land along the corridor was withdrawn for the Robert B. Griffith water project. Project facilities such as pipelines and a water treatment plant are owned and administered by the Southern Nevada Water Authority in an undesignated portion of the corridor from MP 17.0 to MP 36.4.
- There is a nearly perpendicular crossing of the OSNHT in an undesignated portion of corridor across BOR-administered land at MP 17.2 The OSNHT is also within 350 ft of the west side of the corridor between MP 0.0 and MP 1.1. There were stakeholder suggestions to keep the corridor as narrow as possible in the vicinity of the Las Vegas Wash and realign the corridor so that the preexisting transmission line becomes the western edge of the corridor.
- The River Mountains ACEC is east of the corridor between MP 19.7 and MP 22.0.
- Sloan Canyon NCA is located between MP 30.3 and MP 36.4.

Agency Analysis. The corridor overlaps the Rainbow Gardens ACEC, as well as the Sunrise Special Recreation Management Area. The ACEC is a linear ROW avoidance area and a site-type ROW exclusion area. Consistent with the 1998 Las Vegas RMP (BLM 1998), public land outside of the 500-ft-wide corridor, which is within the Rainbow Gardens ACEC, must be managed as a ROW "avoidance area." The River Mountains ACEC is also managed as avoidance area except within the designated corridor. Analysis would be completed through the NEPA process on a case-by-case basis with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. The proposed NCA was not designated. The Gold Butte National Monument was designated but is located more than 10 miles away from the corridor. In January 2014, through an appropriations act, Congress released the Sunrise Mountain ISA from further wilderness consideration. Coordination with holders of valid existing rights (i.e., Southern Nevada Water Authority, City of Henderson) would be required for development through the Robert B. Griffith Water Project. Use of IOPs would be required for development within the OSNHT. The corridor width narrows to approximately 2,000 ft because of proximity to the Sloan Canyon NCA, but the corridor does not traverse the NCA. Corridor 39-231 intersects the OSNHT at MP 17.2; therefore the OSNHT trail administrator will be advised and invited to attend pre-authorization or pre-application meetings, as applicable in accordance with applicable law. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs (NTSA Sec. 5(a)), which will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established (NTSA Sec. 7(c)). While ROWs may be granted, conditions shall be related to the policy and purposes of NTSA (Sec. 9(a)). While specially designated areas are located within and in close proximity to the corridor, there is no nearby alternative route that would avoid these areas and preserve the route for the critical transmission pathway around the east side of the Las Vegas area in a corridor with existing infrastructure (Figure 3-12b).

Visual Resources. The corridor is classified as a VRM Class III area.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. One stakeholder requested that the Agencies analyze current power being transmitted in the corridor as well as information about pending applications to establish need and/or opportunity to retrofit existing infrastructure. There was concern about whether the corridor abstracts accurately describe the existing capacity and the potential for new capacity in the corridor. Input was received requesting that the Agencies collect missing data to minimize potential impacts on TCAs and that all concerns identified in the Settlement Agreement be addressed with updated data. Last, input was provided clarifying existing infrastructure and capacity and the potential for new capacity.

Agency Analysis. The Agencies collected additional GIS data about pending applications and existing infrastructure, as well as new designations and species connectivity and habitat, and have added the data to the corridor abstracts and the Section 368 Energy Corridor Mapping Tool. 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.

Corridor 41-46

(Davis Dam Southeast)

Agency Jurisdiction

Bureau of Land Management

Colorado River District
Kingman Field Office
Lake Havasu Field Office

Arizona County

Mohave County

Resource Management Plans

Lake Havasu Resource Management Plan (BLM 2007)
Kingman Resource Management Plan (BLM 1995)

Corridor 41-46 Summary

Corridor 41-46 provides continuity with other Section 368 corridors in the vicinity of Laughlin, Nevada, and avoids crossing the Havasu NWR. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated corridor, and transmission lines and pipelines are located throughout the entire corridor. The predominantly east–west corridor segment follows I-40. The 58.6-mile corridor begins near Bullhead City in Mohave County, Arizona, and connects to Corridors 46-269 and 46-270, about 20 miles east of Lake Havasu City.

Corridor 41-46 was identified as a corridor of concern in the Settlement Agreement because of potential impacts on the Black Mountain population of desert tortoise, although the USFWS determined that listing of the Black Mountain population of desert tortoise under ESA was not warranted. While desert tortoise habitat exists throughout the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route on BLM-administered lands that would avoid tortoise habitat, avoid the refuge, and still provide continuity with other Section 368 energy corridors (Figure 3-13).

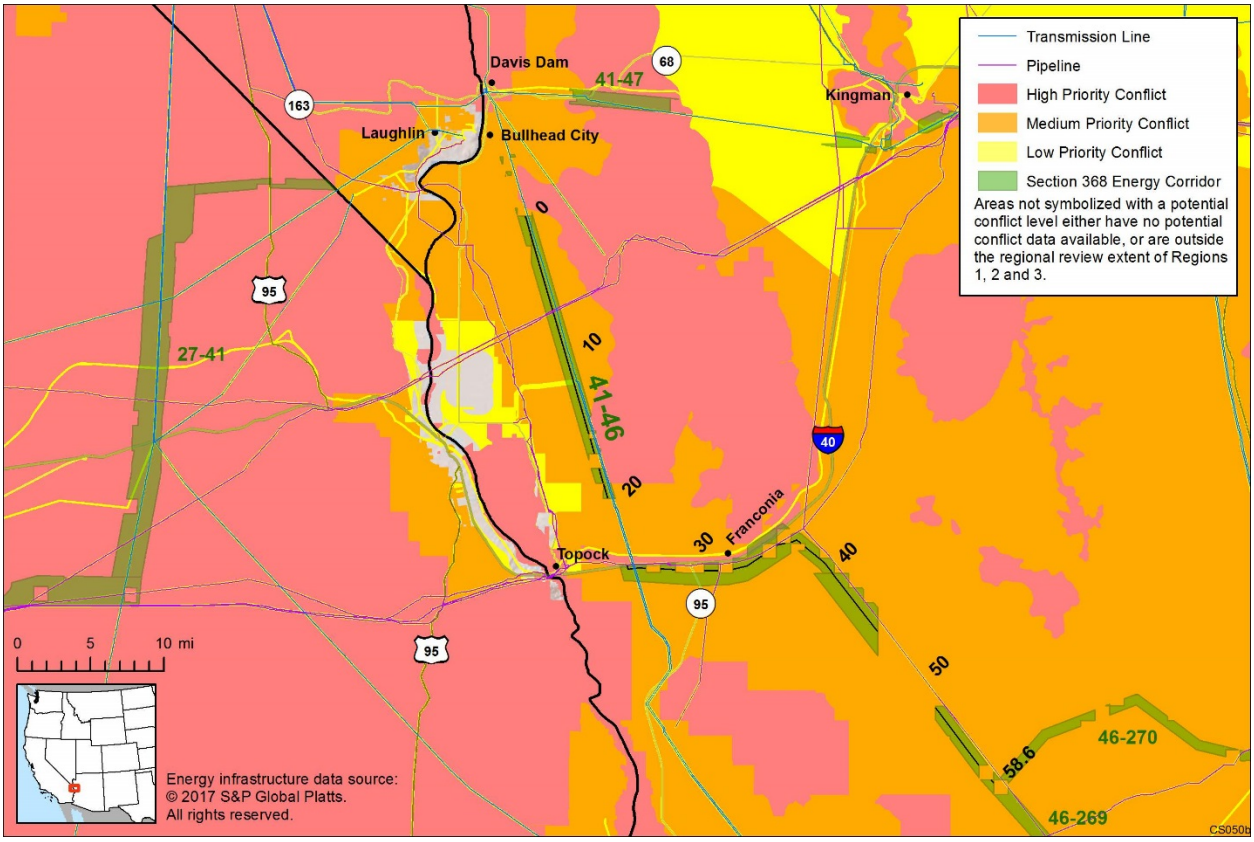


Figure 3-13 Mapping of Potential Conflict Areas in Vicinity of Corridor 41-46

The corridor's width varies across its extent: portions at the northern end and in the Kingman Field Office jurisdiction are 5,280-ft wide; remaining portions in the Lake Havasu Field Office are 10,560-ft wide. The corridor is consistent with the RMPs approved prior to Section 368 designation, except for MP 40.6 to MP 45.3, which was not previously designated. Most of the corridor is multimodal to accommodate both electrical transmission and pipeline projects; however, two 5,280-ft-wide extents in Kingman Field Office jurisdiction are underground only from MP 36.9 to MP 40.5 and MP 45.5 to MP 58.6. Existing transmission lines and pipelines are located throughout the entire corridor, but the corridor is wide enough to accommodate additional projects. Platts data indicated that a planned project with a preliminary/conceptual route overlaps a small section of the corridor.

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional review by the Agencies. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-13; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Location-Specific Physical Barrier. The corridor is designated as underground only in portions of the corridor, reducing the potential for future electrical transmission projects but not for pipeline projects.

***Agency Analysis*.** The Section 368 energy corridor was designated as underground only consistent with the current land use plan (BLM 1995) and existing underground pipeline infrastructure. BLM may revisit this issue during the RMP revision process.

Jurisdictional Concerns. Development, protected areas, and non-Federal land jurisdictions within undesignated portion of the northern end of corridor limit the potential to use the corridor.

Agency Analysis. There is an existing 230-kV electric transmission line in both the undesignated segment at the northern end of the corridor and between MP 19 and MP 25. However, BLM can only analyze impacts on BLM-administered lands. Development in undesignated segments would require coordination with non-BLM jurisdictional land owners.

Ecological Resources. The corridor intersects with Sonoran Desert Tortoise Category I or II Habitat throughout various portions of the corridor. Stakeholders suggested that limited data are available on distribution of Black Mountain population of desert tortoises and BLM should perform studies to determine the regional extent and specific identities of this population. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the Black Mountain population of desert tortoise and Sonoran Desert Tortoise Category I and II Habitat in areas where there is no existing transmission and to minimize transmission siting in these areas.

Agency Analysis. While desert tortoise habitat exists throughout the corridor, there is no nearby alternative route that would avoid tortoise habitat and provide continuity with other Section 368 energy corridors in an area that already contains infrastructure and that would avoid crossing the Havasu NWR (Figure 3-13). Sonoran Desert tortoise is not listed, and the USFWS determined that listing of the Black Mountain population of desert tortoise under ESA was not warranted, but the Sonoran desert tortoise

and Black Mountain population of desert tortoise are BLM sensitive species subject to conservation measures regardless of taxonomy. BLM would consult on ESA-listed and proposed species during individual project review.

Lands and Realty, Military and Civilian Aviation. There is a potential for impacts on a military training route: instrument route at MP 0.0–7.6 with a floor of 200 ft AGL. The Sagebrush Trails Estates Airpark is located from MP 51.6 to MP 52.6 in line with corridor in an undesignated non-Federal gap.

Agency Analysis. The DoD recommends that structures remain below 200 ft AGL. Taller structures will require further analysis for operational impact. Adherence to IOP 1 Project Planning, regarding coordination with DoD would be required. The Sagebrush Trails Estates Airpark is currently not operational and may never be developed. The corridor is designated as underground only in the area where the airpark is located; no conflict with the airpark is anticipated.

Public Access and Recreation. The corridor is within the Arizona Peace Trail (unofficial OHV recreation trail) between MP 0 and MP 20 and MP 25 and MP 50.

Agency Analysis. 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

- Corridor crosses the Bullhead Bajada Natural and Cultural ACEC between MP 0.0 and MP 2.1.
- Corridor crosses the Historic Route 66 National Scenic Byway between MP 14.3 and MP 15.3.
- Corridor is adjacent to the Warm Springs Wilderness Area between MP 14.4 and MP 19.0.

Agency Analysis. RMP decision LR-12 contemplates and allows for utility ROWs within designated corridors in ACECs and other specially designated areas. The Agencies would need to review the Arizona Department of Transportation Route 66 Corridor Management Plan (CMP) as part of project-specific environmental review. When wilderness was designated in 1990, many existing ROWs served as boundaries to those Wilderness Areas and predate the wilderness designation. Impacts would be analyzed and mitigated as part of the project-specific review required under NEPA and other Federal laws.

***Visual Resources*.** The majority of the corridor traverses VRM Class IV areas. No VRM Class I areas are within the corridor but are adjacent to the corridor in the segment between MP 14.4 and MP 19.0. VRM Class II areas are located between MP 33.5 and MP 37. No data are available for the corridor segment between MP 43 and MP 46.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Interagency Operating Procedures. The Agencies received input related to IOPs, including concerns regarding pipeline trenching and avian contact with power lines in the corridor, as well as suggestions for additional IOPs to address ACECs and desert tortoise habitat.

Agency Analysis. Many of the topics regarding trenching and avian contact with power lines are incorporated into existing BMPs. There is an existing IOP that addresses important, sensitive, or unique habitats and BLM special status, USFS sensitive, and state-listed species. RMPs specify the management prescriptions of individual ACECs. Guidance for reducing impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

Other Issues. There were concerns about habitat alterations from development within the corridor and suggestions to follow existing disturbed areas, among other development suggestions related to soil erosion.

Agency Analysis. 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 of the reasons that Corridor 41-46 was designated in the West-wide Energy Corridor PEIS.

Corridor 41-47

(Davis—Prescott)

Agency Jurisdiction

Bureau of Land Management

Colorado River District
Kingman Field Office

Arizona County

Mohave County

Resource Management Plan

Kingman Resource Management Plan (BLM 1995)

Corridor 41-47 Summary

Corridor 41-47 was sited in its current location to include existing infrastructure and to provide a pathway for additional energy transport. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

This corridor was sited consistent with a locally designated corridor, provides continuity with other Section 368 energy corridors, and contains a 600-kV transmission line along its length. The corridor begins near the junction of Corridors 27-41 and 41-46 near Bullhead City in Mohave County, Arizona, and runs 31.3 miles east just past Kingman, where BLM-administered land is no longer available. The 5,280 ft wide corridor is entirely within Mohave County, is consistent with existing plans, and was designated in a local RMP prior to designation as a Section 368 corridor. The corridor is multimodal to accommodate both electrical transmission and pipeline projects.

The corridor was identified as a corridor of concern in the Settlement Agreement because of the Black Mountain population of desert tortoise, although the USFWS determined that listing of the Black Mountain population of desert tortoise under ESA was not warranted. 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 (Figure 3-14).

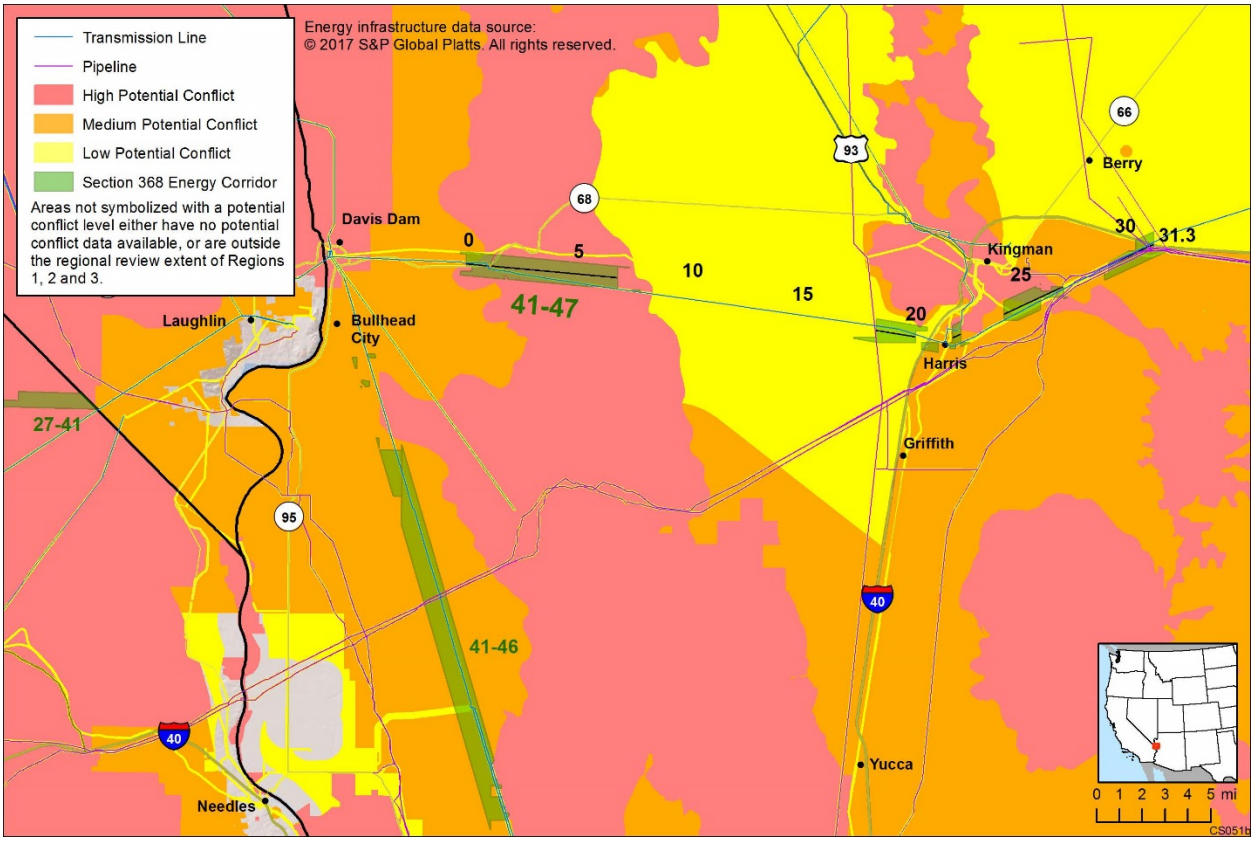


Figure 3-14 Mapping of Potential Conflict Areas in Vicinity of Corridor 41-47

Existing transmission lines and pipelines are located within the corridor, but the corridor is wide enough to accommodate additional projects. Existing infrastructure includes a 230-kV transmission line, a 69-kV line in a portion of the corridor, and another 230-kV intersecting the corridor. There are conceptual routes for planned projects that cross or are near the corridor. Proposed out-of-state transmission projects (e.g., Southwest Intertie Project [SWIP], TransWest Express Transmission Project, and Zephyr Power Transmission Project) could stimulate development in Region 1 and affect this corridor.

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-14; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Ecological Resources. The corridor comes within 0.5 miles of Sonoran Desert Tortoise Category I or II Habitat throughout various portions of the corridor. Stakeholders suggested that limited data are available on distribution of Black Mountain population for tortoises and that BLM should perform studies to determine the regional extent and specific identities of the Black Mountain population of tortoise. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the Black Mountain population of desert tortoise and Sonoran Desert Tortoise Category I and II Habitat without existing transmission, and minimize additional transmission siting in these areas. The corridor also intersects an AGFD-identified wildlife corridor (Mount Perkins–Warm Springs Linkage and Cerbat–Hualapai Linkage). There were also concerns that the corridor traverses through the Black Mountain Range and desert bighorn sheep habitat.

Agency Analysis. 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 (Figure 3-14). The USFWS determined that listing of this population of desert tortoise under ESA was not warranted, but it is a BLM sensitive species subject to conservation measures regardless of taxonomy. Impacts on habitat connectivity can be avoided, minimized, or mitigated through consultation with the USFWS during individual project review. Impacts on bighorn sheep habitat would be analyzed as part of the project-specific environmental review required under NEPA.

Public Access and Recreation. Corridor is within the Arizona Peace Trail (unofficial OHV recreation trail) from MP 0 to MP 5 and MP 18 to MP 20.

Agency Analysis. 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

- Corridor crosses the Black Mountains ACEC from MP 0.7 to MP 6.6.
- Corridor crosses the Historic Route 66 National Scenic Byway from MP 20.0 to MP 21.0.

- Corridor is adjacent to the Mount Nutt Wilderness Area from MP 5.6 to MP 7.7.

Agency Analysis. The Kingman RMP provides for routing major ROWs in corridors in ACECs, including the Black Mountains ACEC. The Agencies would need to review the Arizona Department of Transportation Route 66 CMP as part of project-specific environmental review required under NEPA and other Federal laws. When Wilderness was designated in 1990, many existing ROWs served as boundaries to those Wilderness Areas and predate the wilderness designation. Impacts would be analyzed and mitigated as part of the project-specific review required under NEPA and other Federal laws.

Visual Resources. The VRM classification for areas within the corridor varies the entire length of the corridor. No VRM Class I areas are within the corridor but are adjacent to the corridor in the segment between MP 5.6 and MP 7.7.

Agency 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 impact analysis outlined in *BLM Handbook H-8431*-1. Minimizing visual contrast remains a requirement of applicable VRM Class objectives even when the proposed action is in conformance with those VRM class objectives.

Interagency Operating Procedures. The Agencies received input related to IOPs, including concerns with pipeline trenching and avian contact with power lines in the corridor, as well as suggestions for additional IOPs to address ACECs and desert tortoise habitat.

***Agency Analysis*.** There is an existing IOP that addresses important, sensitive, or unique habitats and BLM special status, USFS sensitive, and state-listed species. RMPs specify the management prescriptions of individual ACECs. 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.

Other Issues. There were stakeholder concerns about habitat alterations from developing within the corridor and suggestions to follow existing disturbed areas, among other development suggestions related to soil erosion. Input was also provided clarifying existing capacity and potential for new capacity.

Agency Analysis. 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. 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.

Corridor 46-269

(Bill Williams Corridor)

Agency Jurisdiction

Bureau of Land Management

Colorado River District
Kingman Field Office
Lake Havasu Field Office
Phoenix District
Hassayampa Field Office

Arizona Counties

Mohave County
La Paz County
Maricopa County

Resource Management Plans

Lake Havasu Resource Management Plan (BLM 2007)
Kingman Resource Management Plan (BLM 1995)
Bradshaw-Harquahala RMP (BLM 2010b)

Corridor 46-269 Summary

Corridor 46-269 provides a pathway for additional energy transport including electricity transmission from the Palo Verde Nuclear Generating Station. The corridor is located alongside existing infrastructure and is adjacent to a REDA, providing opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor begins near the junction of Corridors 41-46 and 46-270, about 20 miles east of Lake Havasu City in Mohave County, Arizona, and runs 93.7 miles ending west of Phoenix in Maricopa County. The corridor is 5,280 ft wide from MP 0.0 to MP 42.9, and 10,560 ft wide from MP 42.9 to MP 93.7. The corridor is multimodal to accommodate both electrical transmission and pipeline projects, except for the section from MP 0.0 to MP 13.8, which is designated as underground only.

The corridor was identified as a corridor of concern in the Settlement Agreement because of concerns regarding proposed and designated Wilderness Areas, Wild and Scenic River (WSRs), and Three Rivers ACEC. While desert tortoise habitat exists throughout the corridor and the corridor crosses specially designated areas, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid this habitat and these areas (Figure 3-15).

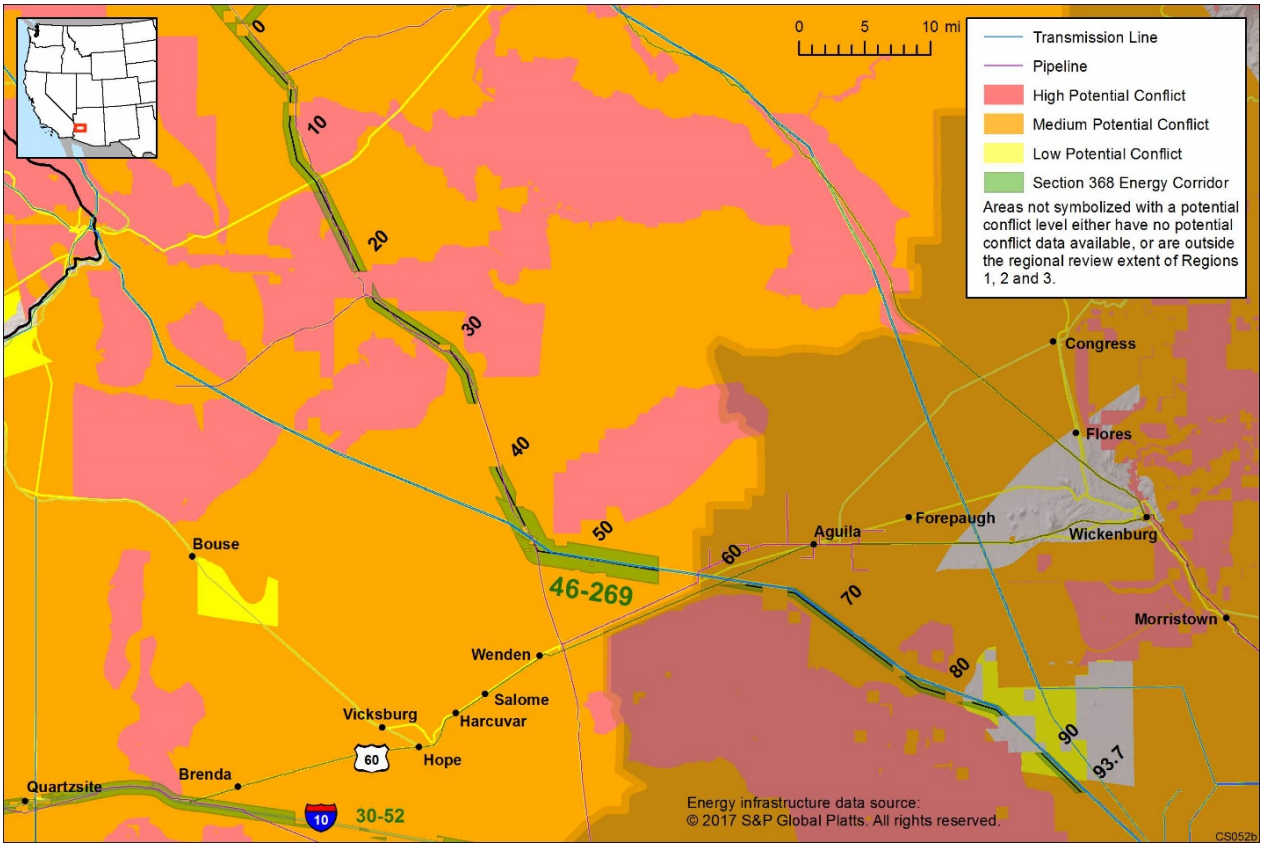


Figure 3-15 Mapping of Potential Conflict Areas in Vicinity of Corridor 46-269

Existing transmission lines are located within the corridor between MP 43.6 and MP 93.7, and pipelines are located within the corridor between MP 0.0 and MP 47.4, but the corridor is wide enough to accommodate additional projects. The corridor is adjacent to a DLA, that is, a REDA identified in the RDEP ROD, and overlaps the corridor between MP 40 and MP 42 and between MP 5 and MP 56, providing opportunity for the corridor to accommodate renewable energy development and transmission.

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-15; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Ecological Resources. The corridor is 200 meters from Southwestern willow flycatcher critical habitat and Northern Mexican garter snake critical habitat in a non-Federal corridor gap (MP 21.6 to MP 21.9). The corridor intersects with Sonoran Desert Tortoise Category I or II Habitat throughout various portions of the corridor. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the Sonoran Desert Tortoise Category I and II Habitat in areas where there is no existing transmission and minimize transmission siting in these areas; to avoid areas that scored very high in risk to the number and magnitude of flowline crossings by designated corridor segments; and where flowlines must unavoidably be crossed, to minimize impact on connectivity.

Agency Analysis. While desert tortoise habitat exists throughout the corridor, there is no nearby alternative route that would avoid tortoise habitat, connectivity, and undeveloped areas (Figure 3-15). Sonoran Desert tortoise is not an ESA-listed species but is a BLM sensitive species subject to conservation measures. BLM would consult on ESA-listed and proposed species during individual project review. Impacts on habitat connectivity would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. The designated corridor follows existing BLM corridors designated through the RMP process, which followed existing utilities.

Lands and Realty, Military and Civilian Aviation. There is a potential for impacts on military training routes: visual route at MP 32 to MP 36 with a floor of 200 ft AGL; instrument route from MP 4 to MP 10 and from MP 32 to MP 37 with a floor of 200 ft AGL; and instrument route from MP 46 to MP 62 with a surface floor (i.e., 0 ft AGL). There is potential for an obstruction in airspace used for high-speed, low-altitude military aircraft operations, which presents a potential safety risk.

Agency Analysis. For routes with a floor of 200 ft, DoD recommends structures remain below 200 ft AGL. Taller structures will require further analysis for operational and safety impact. For routes with a surface floor, DoD recommends structures remain below the height of existing structures. Taller structures, higher than 200 ft AGL, will require further analysis for operational and safety impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

Lands with Wilderness Characteristics. Corridor intersects the edge of or overlaps several citizen-proposed wilderness (CPW) units.

Agency Analysis. For CPW units, prior to designating new corridors, conducting surface disturbance activities in areas of designated corridors, or making future corridor revisions, deletions, or additions, the BLM will be required to follow the procedures as outlined in *BLM Manuals MS-6310 and MS-632*0.

Specially Designated Areas

- Corridor abuts the Aubrey Peak Wilderness Area from MP 7.4 to MP 12.4.
- Corridor crosses the Bill Williams WSR eligible segment (in a non-Federal gap) at MP 21.8.
- Corridor intersects the Three Rivers ACEC from MP 20.6 to MP 22.8.

There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid CPW areas, designated wilderness areas, WSRs, and ACECs.

Agency Analysis. When Wilderness was designated in 1990, many existing ROWs served as boundaries to those Wilderness Areas and predate the wilderness designation. The Bill Williams WSR segment has not been designated by Congress, and designation is possible but is not being considered at this time. If designated, a management plan would be developed within 3 years of the designation, and existing corridor designations would be considered in the planning process. Impacts would be analyzed and mitigated as part of the project-specific review, as required under NEPA. While the corridor crosses specially designated areas, there is no nearby alternative route that would avoid both specially designated areas and undeveloped areas (Figure 3-15). The designated corridor follows existing BLM corridors designated in local RMPs, which followed existing utilities.

Visual Resources. The VRM classification for areas within the corridor varies the entire length of the corridor. No VRM Class I areas are within the corridor, but are adjacent to the corridor in the segment between MP 7.4 and MP 12.4.

Agency 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 impact analysis outlined in *BLM Handbook H-8431*-1. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Interagency Operating Procedures. The Agencies received input related to IOPs, including concerns with pipeline trenching.

Agency Analysis. Best practices would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. 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.

Corridor 46-270

(Bagdad Corridor)

Agency Jurisdiction

Bureau of Land Management
Colorado River District
Kingman Field Office

Arizona Counties

Mohave County
Yavapai County

Resource Management Plan

Kingman Resource Management Plan (BLM 1995)

Corridor 46-270 Summary

Corridor 46-270 helps ensure future electric transmission access to the large copper mine near Bagdad, Arizona, as well as the community associated with the mine. The corridor was locally designated, has existing infrastructure in portions of the corridor, and has additional capacity for future infrastructure development. A REDA located adjacent to the corridor provides opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor was sited consistent with a locally designated corridor to ensure future electric transmission access to the community of Bagdad, Arizona. A low-voltage transmission line follows a portion of the corridor, and a natural gas pipeline runs through about one-third of the corridor. The corridor begins near the junction of Corridors 41-46 and 46-269, east of Lake Havasu City in Mohave County, Arizona, and ends northwest of Bagdad in Yavapai County. The corridor is 3,500 ft wide. The corridor is multimodal to accommodate both electrical transmission and pipeline projects.

The corridor was identified as a corridor of concern in the Settlement Agreement because of concerns regarding a WSR and Southwestern willow flycatcher critical habitat. While critical habitat and connectivity habitat exist within or near the corridor, mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas (Figure 3-16).

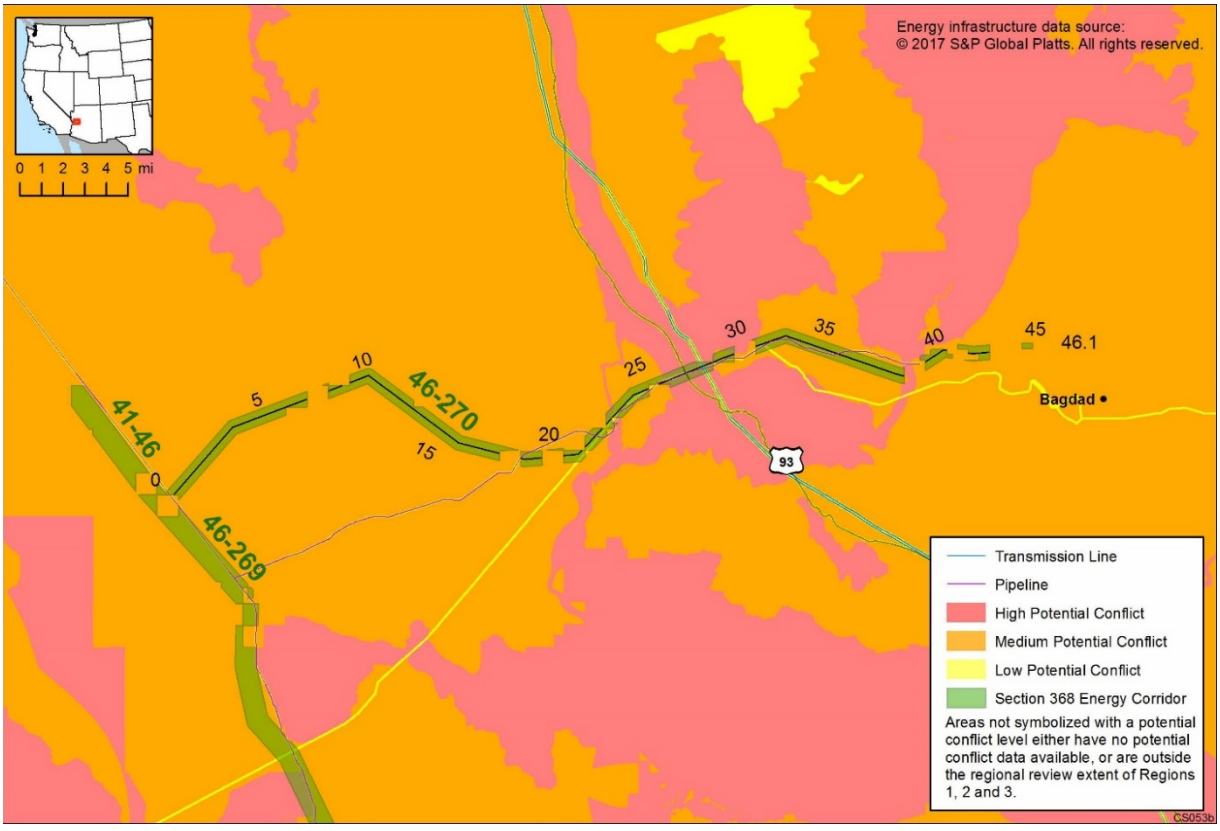


Figure 3-16 Mapping of Potential Conflict Areas in Vicinity of Corridor 46-270

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-16; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Ecological Resources. The corridor intersects with Sonoran Desert Tortoise Category I or II Habitat from MP 7.1 to MP 9.0 and from MP 10.0 to MP 26.9. Southwestern willow flycatcher critical habitat appears to be along creeks and rivers in the region and crosses the corridor between MP 23.8 and MP 24.3. A portion of the corridor is located in habitat of the federally listed endangered Arizona cliffrose. There were stakeholder concerns regarding wildlife connectivity and stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid siting new facilities in Sonoran Desert Tortoise Category I and II Habitat, in Southwestern willow flycatcher critical habitat, and in areas of very high risk to the number and magnitude of flowline crossings by West-wide Energy Corridor segments.

Agency Analysis. There does not appear to be a nearby alternative route that would avoid critical habitat and connectivity habitat while also providing a link with other Section 368 energy corridors in an area with existing infrastructure (Figure 3-16). Sonoran desert tortoise is not an ESA-listed species but is a BLM sensitive species subject to conservation measures. BLM would consult with USFWS under ESA Section 7(a)(2) if the corridor crosses Southwestern willow flycatcher critical habitat or habitat of the Arizona cliffrose. Impacts on habitat and habitat connectivity would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. BLM would apply its policy on use of the mitigation hierarchy to first avoid and then minimize impacts. While Southwestern willow flycatcher critical habitat crosses the corridor and there are potential impacts on habitat connectivity, there is existing infrastructure in the corridor where it crosses critical habitat.

Lands and Realty, Military and Civilian Aviation. There is a potential for impacts on military training routes: instrument route from MP 21 to MP 45 with a surface floor (0 ft) and MP 10 to MP 17 with a floor of 200 ft AGL.

Agency Analysis. For the instrument route with a surface floor, DoD recommends structures remain below any existing structures. For the instrument route with a floor of 200 ft AGL, DoD recommends structures remain lower than 200 ft. Taller structures will require further analysis for operational impact. Adherence to IOP 1, Project Planning, regarding coordination with DoD would be required.

Lands with Wilderness Characteristics. Corridor overlaps Aquarius Cliffs and Lower Burro Creek CPW units located from MP 30 to MP 32, respectively. Stakeholders suggested that the corridor be removed from areas because transmission and pipeline development in lands with wilderness characteristics is not appropriate.

Agency Analysis. For CPW units, prior to designating new corridors or prior to conducting surface disturbance activities in areas of designated corridors or potential corridor revisions, deletions, or additions, the BLM will be required to follow the procedures as outlined in *BLM Manuals MS-6310 and MS-6320*.

Specially Designated Areas

- Corridor crosses the WSR eligible segment of the Big Sandy River between MP 23.8 and MP 24.3. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the WSR eligible segment.
- Corridor intersects Burro Creek, Three Rivers, and McCracken ACECs from MP 6.2 to MP 10.0, MP 21.0 to MP 22.3, and MP 38.3 to MP 43.1, respectively. The corridor comes within 0.3 miles of the Clay Hills ACEC between MP 37 and 38.
- Corridor crosses Joshua Forest Scenic Road at MP 28.

Agency Analysis. The Big Sandy River WSR eligible segment crosses the corridor but has not been designated by Congress; designation is possible but is not being considered at this time. If designated, a management plan would be developed within 3 years of the designation and existing corridor designations would be considered in the planning process. The Kingman RMP decision for all three ACECs provides for routing major ROWs in existing corridors in ACECs. Under the RMP, development is allowed in existing designated corridors within the Joshua Forest Scenic Road. Impacts would be analyzed as part of the project-specific environmental review required under NEPA.

Visual Resources. The VRM classification for areas within the corridor varies the entire length of the corridor.

Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Interagency Operating Procedures. The Agencies received input related to IOPs, including concerns with pipeline trenching in the corridor as well as suggestions for additional IOPs to address Southwestern willow flycatcher critical habitat and ACECs.

Agency Analysis. There is an existing IOP that addresses important, sensitive, or unique habitats and BLM special status, USFS sensitive, and state-listed species. RMPs specify the management prescriptions of individual ACECs. 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.

Corridor 47-231

(Moenkopi Substation, AZ to Eldorado Substation)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office
Colorado River District
Kingman Field Office

Nevada County

Clark County

Arizona County

Mohave County

Resource Management Plans

Las Vegas Resource Management Plan (BLM 1998)
Kingman Resource Management Plan (BLM 1995)

Corridor 47-231 Summary

Corridor 47-231 was sited consistent with a locally designated corridor. There are two transmission lines within it, one traversing its entire length. A REDA is adjacent to the corridor, providing opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

Corridor 47-231 begins at the western side of the Hualapai Reservation; however, tribal lands are interspersed with BLM lands for a short distance. The corridor, north of Kingman, Arizona, runs west for about 74 miles through the Lake Mead NRA into southern Nevada, and ends at the intersection with the Eldorado-Aztec Corridor. Although not designated a Section 368 energy corridor across the Lake Mead NRA, the 500-kV lines within the corridor cross the NRA in a NPS-designated utility corridor with space for additional infrastructure. This was viewed as an opportunity for future projects and led to the Section 368 designation on BLM-administered land on each side of the NRA.

The corridor was identified as a corridor of concern in the Settlement Agreement because of desert tortoise and bonytail chub critical habitat, an ACEC, and the Lake Mead NRA. While the corridor crosses special status species habitat and there is a potential for impacts on habitat connectivity, future siting along existing infrastructure in the corridor is expected to be preferred over crossing undisturbed critical habitat. Mapping of potential conflict areas indicates there is no nearby previously disturbed alternative route that would avoid important habitat and provide an opportunity for future projects (Figure 3-17).

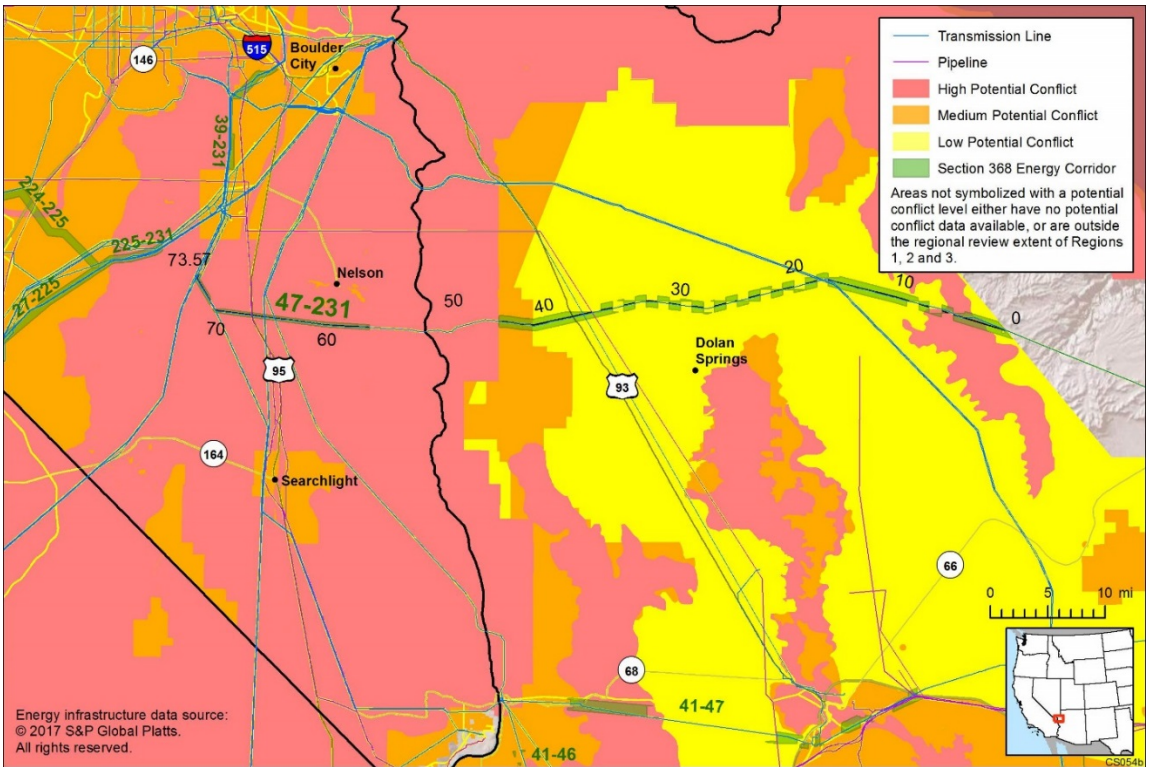


Figure 3-17 Mapping of Potential Conflict Areas in Vicinity of Corridor 47-231

The corridor is 5,280 ft wide east of the Lake Mead NRA but narrows to approximately 2,000 ft west of the NRA. It is designated electric-only east of the Lake Mead NRA and is multimodal to accommodate both electrical transmission and pipeline projects west of the Lake Mead NRA. Two transmission lines are within the corridor, one of which follows the corridor throughout its entire length, and several ROWs intersect the corridor. There is some expressed interest for use of the corridor, including two planned transmission lines.

General Issues Identified in Abstracts and Through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-17; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

***Jurisdictional Concerns*.** The corridor crosses the Lake Mead NRA but was not designated within the NRA. The corridor intersects the BCCE, which is managed by the Clark County Desert Conservation Program as partial mitigation for impacts on desert tortoise under a regional Section 10 incidental take permit.

Agency Analysis. Impacts would be analyzed through the NEPA process on a case-by-case basis with a full range of alternatives. The Lake Mead NRA is outside of BLM jurisdiction; however, there is an existing SCE 500-kV transmission line that traverses the NRA.

Ecological Resources. The corridor intersects with desert tortoise critical habitat between MP 60.5 and MP 73.6, razorback sucker critical habitat within the undesignated gap in the Lake Mead NRA between MP 51.6 and MP 52.0, and bonytail chub critical habitat between MP 51.6 and MP 52.0. The corridor also intersects TCAs and USFWS-identified Priority 1 and 2 connectivity habitat. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid siting new facilities in desert tortoise critical habitat, bonytail chub critical habitat, TCAs, Priority 1 and 2 connectivity habitat, and Southwestern willow flycatcher critical habitat.

Agency Analysis. While the corridor crosses special status species habitat and there are potential impacts on habitat connectivity, there is existing infrastructure in the corridor where it crosses critical habitat. There is no nearby alternative route that would avoid critical habitat and connectivity habitat while also providing an opportunity for future projects a on each side of the NRA in a corridor with existing infrastructure (Figure 3-17). Impacts on critical habitat and habitat connectivity can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Analysis would be completed through the NEPA process case by case with a full range of alternatives.

Lands and Realty, Military and Civilian Aviation. The Triangle Airpark has a north–south runway 2.3 miles north of the corridor.

Agency Analysis. The existing transmission line has coexisted with the airpark for many years.

Lands with Wilderness Characteristics. There is overlap with the citizen-inventoried lands with wilderness characteristics: the Mount Perkins lands with wilderness characteristics unit (Mockingbird, Mount Davis unit) located between MP 42 and MP 45. There were stakeholder suggestions to remove the corridor from this area.

***Agency Analysis*.** Wilderness inventory would be done during project NEPA review, and BLM would consider citizen-proposed wilderness during that time. If there were existing transmission, the existing lines would not be included in lands with wilderness characteristics, but could be a boundary to wilderness inventory areas.

***Public Access and Recreation*.** Corridor route crosses the Lake Mead NRA within an undesignated gap between MP 45.1 and MP 56.7. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the NRA.

***Agency Analysis*.** An existing SCE 500-kV transmission line traverses the NRA. This area is outside of BLM jurisdiction. Proponents for projects within the non-BLM jurisdictional gap would have to coordinate with the NPS.

Specially Designated Areas

- The corridor intersects the Black Mountains ACEC from MP 42.1 to MP 45.0. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid the ACEC.
- The corridor intersects the Piute/Eldorado Valley ACEC from MP 60.4 to MP 73.6.
- The corridor is just north of the Ireteba Wilderness from MP 52.0 to MP 60.7.
- OSNHT intersects the corridor at MP 66. Apart from the one transmission line and U.S. Highway 95, this area has a highly intact viewshed.

Agency Analysis. The Kingman RMP provides for routing major ROWs in corridors in ACECs. The Piute/Eldorado Valley ACEC is one of four ACECs within the BLM Southern Nevada District Office, which is specifically designated to protect desert tortoise critical habitat. Corridor 47-231 traverses along the northerly part of the ACEC for approximately 10 miles. Except within designated corridors, the ACEC is managed as an avoidance area to linear ROWs and as an exclusion area to site-type ROWs. Corridor 47-231 intersects the OSNHT at MP 66, and the OSNHT trail administrator will be advised and invited to attend pre-authorization or pre-application meetings, as applicable in accordance with applicable law. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs [NTSA Sec. 5(a)] that will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established [NTSA Sec. 7(c)]. While easements and ROWs may be granted, conditions shall be related to the policy and purposes of NTSA [Sec. 9(a)]. The corridor is located outside of the Wilderness Area. While the corridor intersects specially designated areas, there does not appear to be alternative routes that avoid the specially designated areas and also avoid undeveloped areas.

Tribal Concerns: The corridor begins near the jurisdictional boundary of the Hualapai Reservation, and the interspersed pattern of BLM and tribal lands would require projects to cross tribal lands if they are sited in this portion of the corridor.

Agency Analysis. Jurisdictional issues would require the proponent to secure authorization of projects from entities other than the BLM. Checkerboard land pattern ownership is unavoidable in this area and would require project proponents to work with the Hualapai Tribe to cross the Hualapai Reservation

along the existing Moenkopi-El Dorado line within the corridor. The Agencies would consult with the Hualapai Tribe, as required, for any proposed project in the corridor. Proponent would have to work with the tribe to obtain a tribal resolution consenting to the grant of ROW by BIA. BIA cannot grant ROWs without tribal consent.

***Visual Resources*.** The corridor is classified as VRM Class II along portions of the corridor.

***Agency 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 impact analysis outlined in *BLM Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. One stakeholder requested that no decisions on the corridor be made until the Southern Nevada RMP is finalized. One stakeholder requested that the Agencies analyze current power being transmitted in the corridor as well as information about pending applications to establish need and/or opportunity to retrofit existing infrastructure. Input was received requesting the Agencies collect missing data to minimize potential impacts on TCAs. Input was received that suggested the Agencies address concerns in the Settlement Agreement with updated data. Last, input was provided clarifying existing capacity and potential for new capacity

***Agency Analysis*.** Regional reviews are not a NEPA process and therefore do not encompass the level of analysis required under NEPA. Consideration of potential revision, deletion, or addition of Section 368 energy corridors will be used within subsequent NEPA scoping for any land use planning or project-specific planning and will be analyzed with any newer information that may become available. The Agencies collected additional GIS data about pending applications and existing infrastructure, as well as new designations, and about species connectivity and habitat and have added the data to the corridor abstracts and the Section 368 Energy Corridor Mapping Tool. 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.

Corridor 107-268

(Angeles National Forest Southeast)

Agency Jurisdiction

Forest Service

Angeles National Forest

California County

Los Angeles County

Resource Management Plan

Angeles National Forest Land Management Plan (USFS 2006a)

Corridor 107-268 Summary

Corridor 107-268 was locally designated, contains transmission infrastructure, and has potential for future development. The corridor is within the RETI 2.0 Tehachapi TAFA, providing opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor was previously designated by the USFS prior to its Section 368 designation. The corridor is 1,000 ft wide over its entire length and was designated for only electrical transmission projects. There is one transmission line within the corridor that is present throughout its length, and another transmission line follows a portion of the corridor. There is interest for use of the corridor, including a planned 500-kV transmission line. The corridor begins near San Fernando, California, to the east of Acton, continues 19.6 miles northeast, and ends at the edge of Angeles National Forest.

The corridor was identified as a corridor of concern in the Settlement Agreement because of the National Forest and citizen-proposed wilderness. While critical habitat is located adjacent to the corridor, mapping of potential conflict areas indicates there is no alternative corridor located along existing infrastructure that would further avoid California Red-Legged Frog critical habitat (Figure 3-18).

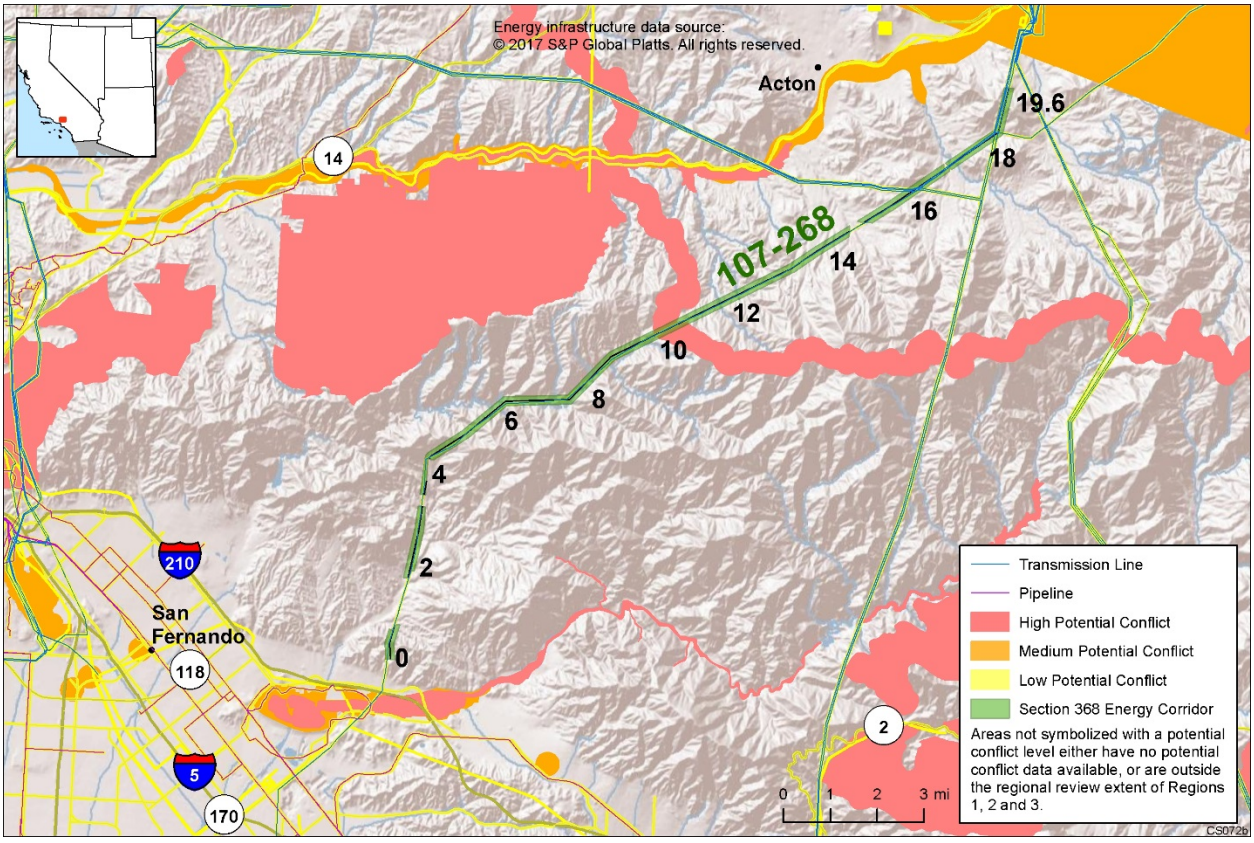


Figure 3-18 Mapping of Potential Conflict Areas in Vicinity of Corridor 107-268

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-18; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Corridor Alignment and Spacing. The corridor narrows to 270 ft between MP 3.6 and MP 4.5 because of a non-Federal inholding, and the corridor contains one project.

Agency Analysis. If another project cannot be accommodated within the narrow corridor, proponents for additional projects would have to negotiate with the non-USFS jurisdiction landowners on either side of the designated corridor.

Ecological Resources. The corridor is within 0.7 miles of Southwestern Willow Flycatcher and Santa Ana sucker critical habitat to the north and the south. There were stakeholder suggestions in the 2014 RFI to delete or replace the corridor segment that is adjacent to the California Red-Legged Frog critical habitat.

Agency Analysis. There is no alternative corridor located along existing infrastructure that would further avoid California red-legged frog critical habitat (Figure 3-18). Impacts on habitat and habitat connectivity can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Analysis would be completed through the NEPA process case by case with a full range of alternatives.

Specially Designated Areas.

- CPW was mentioned in stakeholder input as being located near the corridor, but no specific mileposts were identified. There were stakeholder suggestions in the 2014 RFI to reroute the corridor to avoid CPW.
- The corridor crosses the Pacific Crest NST between MP 10.3 and M 10.5.

Agency Analysis. Impacts would be analyzed and mitigated during project-specific environmental review required under NEPA and other Federal laws. Impacts on the Pacific Crest NST by future proposals would be analyzed and avoided, minimized, or mitigated on a case-by-case basis. For transmission corridors that intersect or parallel National Trail System components or trails under study for potential designation, the National Trail administering agency or trail administrator, regional or State program leader, and a primary National Trail partner organization representative (in accordance with applicable law) will be advised and invited to attend pre-authorization or pre-application meetings, as applicable. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs [NTSA Sec. 5(a)] that will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established [NTSA Sec. 7(c)]. While ROWs may be granted, conditions shall be related to the policy and purposes of NTSA [Sec. 9(a)]. Prior to designating new corridors, conducting surface-disturbing activities in areas of designated corridors, or making future corridor revisions, the USFS would conduct a site-specific evaluation for wilderness characteristics.

Tribal Concerns. The corridor is in Serrano Ancestral Territory from Acton to the east end.

***Agency Analysis*.** The California tribes, including the San Manuel Band of Mission Indians, would be consulted on project activities regarding the corridor.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity. One stakeholder noted that the corridor width needs to be clarified. There was a stakeholder suggestion to extend the corridor north approximately 1.5 miles to provide a more diverse path.

Agency Analysis. 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. The corridor width is described in the corridor abstract and in the corridor overview section of this corridor summary. While the Agencies cannot predict the number of additional projects that could potentially be sited within Section 368 energy corridors, they have determined that there is sufficient width to accommodate additional transmission lines. Section 368 energy corridors can be designated only on Federal lands. The corridor ends at the edge of the Angeles National Forest, and Federal lands do not extend north of the corridor. Proponents for projects extending north of Corridor 107-268 would have to negotiate with the non-Federal jurisdiction landowners.

Corridor 108-267

(Cajon Pass)

Agency Jurisdiction

Forest Service

San Bernardino National Forest

California County

San Bernardino County

Resource Management Plan

San Bernardino National Forest, Part 2: San Bernardino National Forest Strategy (USFS 2005c)

Corridor 108-267 Summary

Corridor 108-267 provides a key pathway for energy transport as well as a variety of other infrastructure across the San Bernardino National Forest and the San Gabriel Mountains and into the Los Angeles Basin. There are multiple transmission lines and natural gas pipelines, two railroads, and I-15 within this corridor. The corridor is located within the Victorville/Barstow RETI 2.0 TAFA and the Dry Lake SEZ is 3.2 miles north of the corridor, providing opportunity for the corridor to accommodate renewable energy development and transmission. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor as it was intended in the West-wide Energy Corridor PEIS; however, the Workgroup suggests the addition of lands inadvertently excluded in the ROD for lands within BLM's jurisdiction. During the course of the Region 1 Review, the Workgroup noted BLM parcels totaling 7,416 acres at the northeast end of the corridor were studied in the PEIS for designation, but were inadvertently left out of the BLM ROD and therefore not designated. Four railroad lines, three transmission lines, and a 36-inch natural gas pipeline cross this area of potential inclusion.

Corridor Overview: Existing Use and Opportunity

The corridor is fairly congested, but there is enough space within the corridor to parallel existing uses, reconductor to double circuits, and upgrade existing infrastructure. There is some expressed interest for use of the corridor, including a planned transmission line. Stakeholders provided input that large amounts of new generation into the substation could trigger the need for a new 500-kV line between the SCE substation north of the corridor to the SCE substation south of the corridor in a substation in either Etiwanda or Ontario. There is also opportunity for the corridor to accommodate renewable energy development and transmission. The corridor begins near Devore, California, to near Summit, California, and runs 12.5 miles north along I-15. The corridor width is variable, ranging from 7,800 to 28,000 ft, and the corridor is designated as a multimodal corridor to accommodate both electrical transmission and pipeline projects.

The corridor was not identified as a corridor of concern in the Settlement Agreement.

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI: a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-19; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool. The corridor was not identified as a corridor of concern in the Settlement Agreement.

Corridor Alignment and Spacing. Difficult terrain in the pass has resulted in less efficient use of the corridor width.

Agency Analysis. The corridor is currently fairly well occupied. There is, however, enough space within the corridor for parallel existing uses (power lines and pipelines), reconductor to double circuits, and for upgrading existing infrastructure.

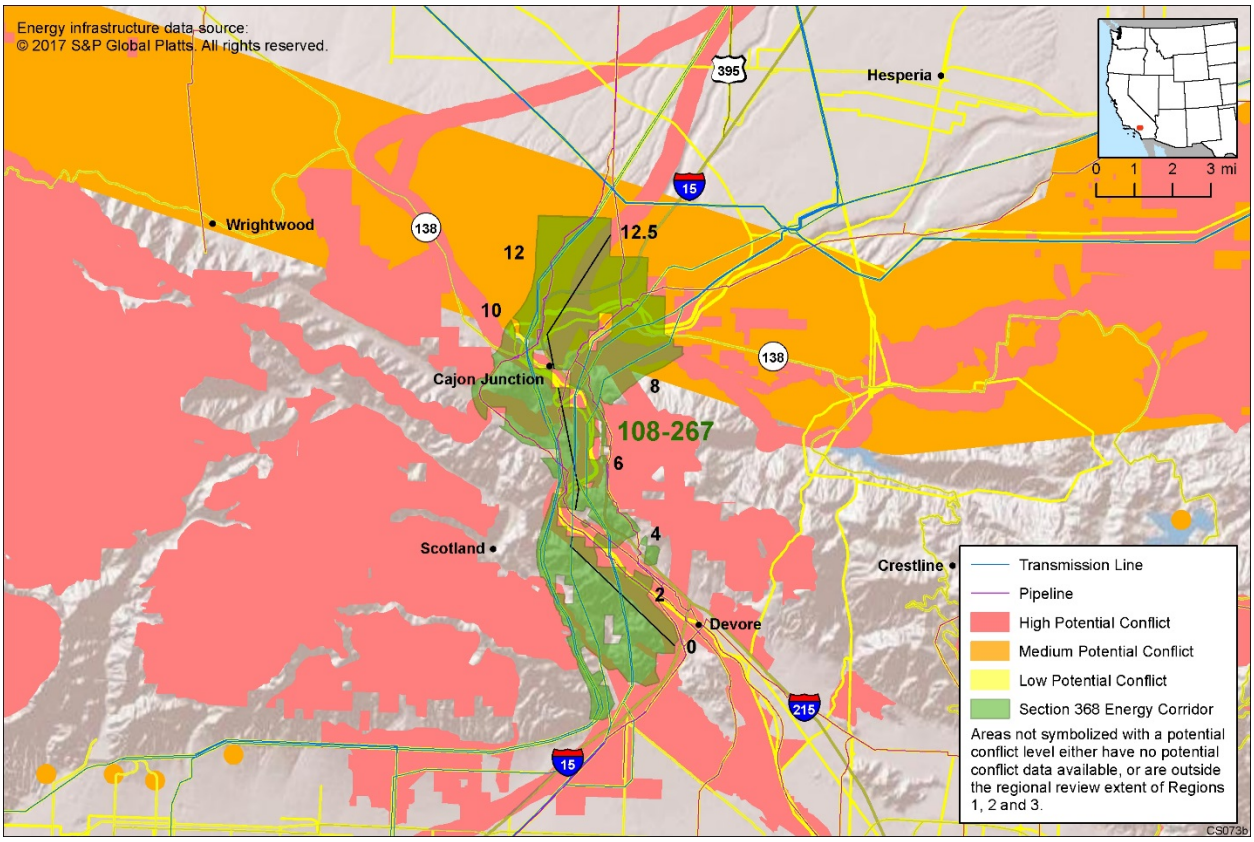


Figure 3-19 Mapping of Potential Conflict Areas in Vicinity of Corridor 108-267

Cultural Resources and Tribal Concerns. The corridor is located within Serrano ancestral territory and thus are of interest to the San Manuel Band of Mission Indians.

Agency Analysis. The Agencies would consult with the San Manuel Band of Mission Indians, as well as other California tribes, as required for any proposed project in the corridor.

Ecological Resources. There is occupied and designated critical habitat for San Bernardino's Merriam's kangaroo rat, Arroyo southwestern toad, southwestern willow flycatcher, and least Bell's vireo. There is also suitable habitat for the desert tortoise and occupied and critical habitat for the slender-horned spineflower.

Agency Analysis. There is no alternative corridor that would avoid special status species habitat in an area that contains existing infrastructure (Figure 3-19). Impacts on habitat and habitat connectivity can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Analysis would be completed through the NEPA process case by case with a full range of alternatives.

Lands and Realty, Military and Civilian Aviation. There is a potential for impacts on military training route: visual route from MP 8.5 to MP 12.5.

Agency Analysis. Adherence to IOP 1, Project Planning, in the West-wide Energy Corridor PEIS RODs regarding coordination with DoD would be required.

Specially Designated Areas

- Pacific Crest NST is located between MP 7.0 and MP 9.2. Stakeholders commented that 11 miles of the trail will have visual and aural impacts within the corridor and that the corridor is too wide and could have an impact on too many miles of the trail.
- Rim of the World Scenic Byway is located between MP 10.2 and MP 12.5.
- The north end of the corridor is adjacent to and intersects the Pacific Crest Trail SRMA at MP 12.5.
- The east and west sides of the entire corridor are adjacent to Inventoried Roadless Areas.
- The OSNHT is present along the entire corridor. This section of the OSNHT along the corridor is considered a high potential segment. There were stakeholder suggestions to confine impacts to the I-15 and State Highway 138 road corridors and to consider narrowing the corridor width.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Impacts on the Pacific Crest NST by future proposals would be analyzed and avoided, minimized, or mitigated on a case-by-case basis. The corridor is not designated in the roadless areas, but proposed development would not be able to deviate from the corridor in these areas. The Agencies have identified the need for an IOP to address development in Section 368 energy corridors while protecting values in congressionally designated NSTs and NHTs. The DRECP has specific CMAs to address impacts on the Pacific Coast NST, OSNHT, and other resources present in the California Desert Conservation Area during project implementation. For transmission corridors that intersect or parallel National Trail System components or trails under study for potential designation, the National Trail administering agency or trail administrator, regional or State program leader, and a primary National Trail partner organization representative (in accordance with applicable law) will be advised and invited to attend pre-authorization or pre-application meetings, as applicable. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs [NTSA Sec. 5(a)] that will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established [NTSA Sec. 7(c)]. While easements and ROWs may be granted, conditions shall be related to the policy and purposes of NTSA [Sec. 9(a)]. The information in the DRECP would be used in any project implementation.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity as well as providing corrections to the corridor abstract. One stakeholder commented that corridor width needs to be clarified.

Agency Analysis. 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. The corridor width is described in the corridor abstract and in the corridor overview section of this corridor summary. While the Agencies cannot predict the number of additional projects that could potentially be sited within Section 368 energy corridors, they have determined that there is sufficient width for parallel existing uses (power lines and pipelines), reconductor to double circuits, and for upgrading existing infrastructure.

Corridor 115-238

(Palo Verde - San Diego)

Agency Jurisdiction

Bureau of Land Management

California Desert District, California
Yuma Field Office, Arizona
Lower Sonoran Field Office, Arizona

Forest Service

Cleveland National Forest

Arizona Counties

Maricopa County
Yuma County

California Counties

San Diego, California
Imperial, California

Resource Management Plans

Northern and Eastern Colorado Desert/CDCA Plan Amendment (BLM 2016b)
Imperial Sand Dunes Recreation Area Management Plan/CDCA Plan Amendment (2016)
Western Colorado Desert/CDCA Plan Amendment, the South Coast Resource Management Plan (2016)
Eastern San Diego County Resource Management Plan (2016)
Lower Sonoran Resource Management Plan
Yuma Resource Management Plan (BLM 2010a)

Corridor 115-238 Summary

In general, the corridor could provide an opportunity to accommodate transmission tied to renewable energy development. The corridor is located within the Imperial East RETI 2.0 TAFA and the RETI 2.0 HSR to potentially support 3,000 MW of transmission between California and Arizona. The Agua Caliente SEZ is located within 1 mile of the corridor in Arizona, and the Imperial East SEZ overlaps the corridor in California. To improve corridor utility, the Workgroup has identified potential corridor revisions to address gaps from MP 103 to MP 144 and MP 241 to MP 248 (Figures 3-20a and 3-20b).

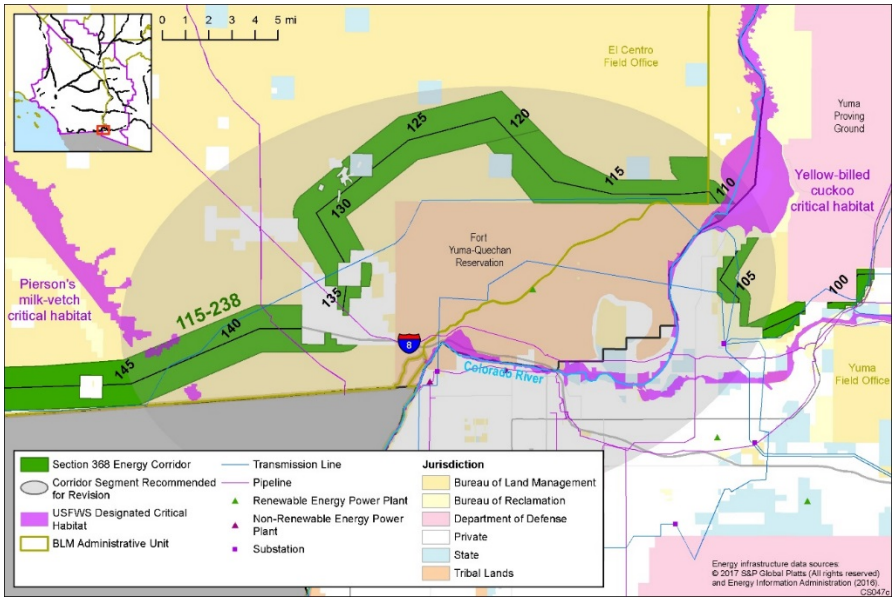


Figure 3-20a Potential Revision to Corridor 115-238 (1)

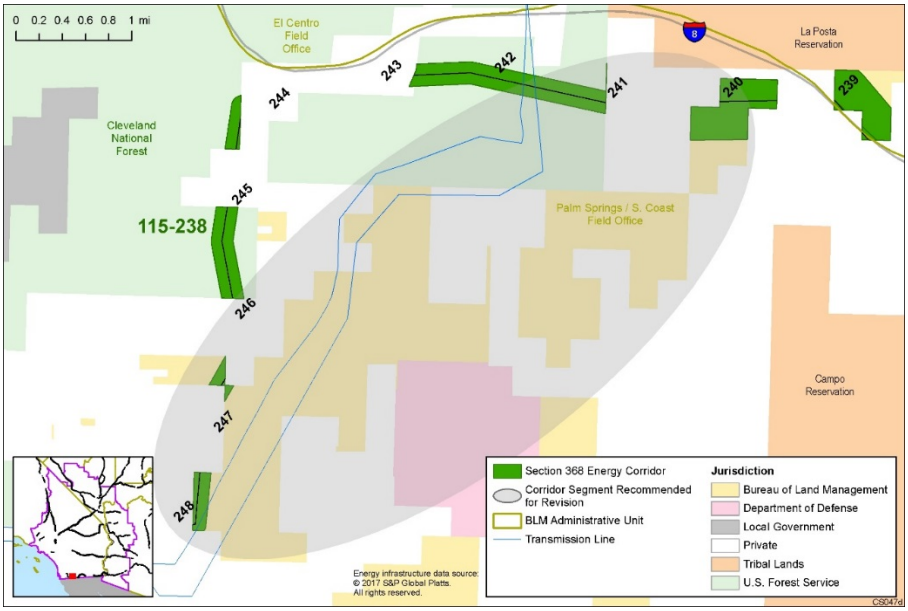


Figure 3-20b Potential Revision to Corridor 115-238 (2)

Corridor Overview: Existing Use and Opportunity

In California, the corridor was sited consistent with a locally designated California Desert District energy corridor for portions of its length. There are transmission lines throughout the length of the corridor. The corridor begins in Arizona near the Palo Verde Nuclear Generating Station and crosses into California to the eastern side of Cleveland National Forest. Tribal lands are located east of the corridor at the eastern side of the Cleveland National Forest. Future projects in this area would need to cross tribal lands or be routed around them. Existing transmission lines follow each of these paths. The corridor is designated electric-only on the western end through Cleveland National Forest, but otherwise is multimodal and can accommodate both electrical transmission and pipeline projects.

The corridor was not identified as a corridor of concern in the Settlement Agreement. While the corridor crosses critical habitat for the Pierson's milk-vetch and Arroyo toad, proposed critical habitat for the yellow-billed Cuckoo, Sonoran Desert Tortoise Category I and II Habitat, and bighorn sheep habitat, mapping of potential conflict areas indicates there is no previously disturbed alternative route that would avoid these habitats and provide connectivity to renewable energy generation (Figure 3-20c).

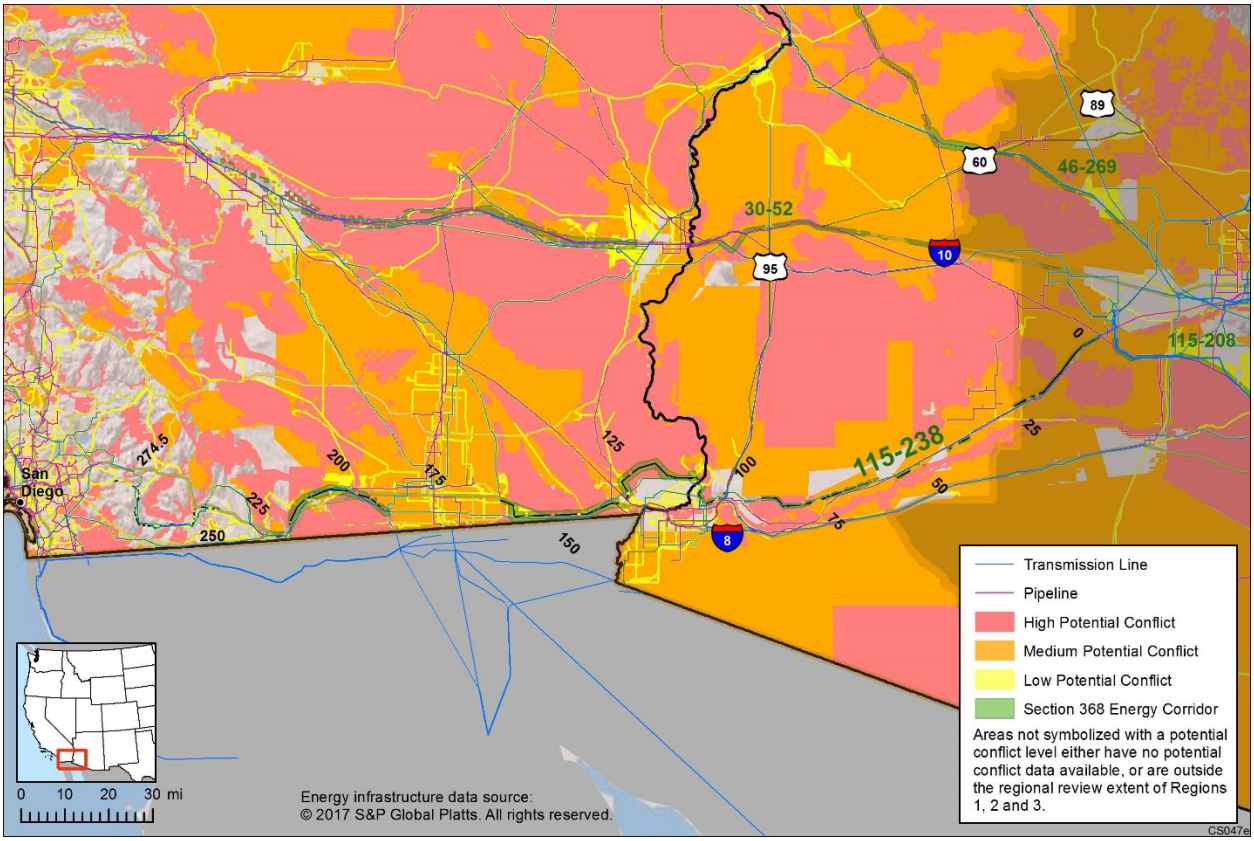


Figure 3-20c Mapping of Potential Conflict Areas in Vicinity of Corridor 115-238

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI, a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors, input from stakeholders in response to the release of the draft abstracts in September 2016, and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-20c; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Jurisdictional Concerns. Segments of the corridor abut or are in line with the boundary of Yuma Proving Ground between MP 84 and MP 100, but the corridor itself is not designated in the proving ground. In addition, the Muggins Mountains Wilderness abuts the Yuma Proving Ground boundary so there is no room between the proving ground and BLM land, and the corridor cannot be easily routed around the DoD land. The corridor also has another jurisdictional gap from MP 107 to MP 109 at the Colorado River, where projects would need to cross lands under the jurisdiction of BOR, requiring additional authorization from that agency. There were stakeholder suggestions to refine land ownership/jurisdiction coverages at the river crossing to better identify potential corridor options, to consider a corridor connecting existing corridors on both sides of the river to provide for the needed second high-voltage line in the area, and to consider a corridor circumventing Mittry Lake. There is another jurisdictional gap from MP 102.8 to MP 136.2 that causes the corridor to detour around the Fort Yuma-Quechan Reservation. An alternative direct route for a potential future project across the southern portion of the Fort Yuma Reservation was identified as a possibility by the Quechan Tribe; if this route were to be proposed for development, a corridor on BLM-administered lands would be necessary west of the reservation where no corridor is currently designated.

Agency Analysis. In consultation with the El Centro BLM office, two potential options were identified: one following the United States–Mexico border and another following the former and previously disturbed route of the now realigned All-American Canal. There are issues crossing the Colorado River, including tribal concerns about archaeological and wildlife resources from the area of the existing 500-kV crossing up to Imperial Dam; two areas that mitigate impacts from Colorado River operations and maintenance between Laguna and Imperial Dams; and Laguna Division Conservation Area, created by the Lower Colorado River Multi-Species Conservation Program (LCRMSCP) to manage as habitat for species listed under the ESA as well as other species covered by the LCRMSCP, a portion of which is within a discontinuous section of the corridor. Further, there are potential impacts on migratory birds from bird collisions with transmission lines.

The Muggins Mountains Wilderness abuts the Yuma Proving Ground (YPG) boundary so there is no room between YPG and the Wilderness on BLM-administered land. Coordination by the applicant with DoD would be required regarding issuance of a ROW. At MP 108, due to a gap in the corridor, future projects would need to cross BOR lands, subject to receiving authorization from that agency. BOR reviews applications for rights-of-use on BOR-administered lands within the corridor on a case-by-case basis to ensure BOR projects are not affected. Early coordination with BOR on proposed transmission lines and other facilities is encouraged.

There is not a BLM-only corridor that would provide a route across the Colorado River in this area. The Agencies have identified a potential corridor revision to address some of these jurisdictional gaps within the corridor (Figures 3-20a and 3-20b). Other options to address the concerns include

developing new infrastructure along existing transmission lines; BOR considering allowing additional lines outside of BLM jurisdiction; and coordinating and consulting with the Quechan Tribe to discuss possible corridor revisions in the area. To avoid significant environmental issues identified by the tribe to the north, project proponents would work with the tribe to potentially route a project through the southernmost part of the reservation. However, the proponent would have to work with the tribe to obtain a tribal resolution consenting to the grant of a ROW by the BIA. The BIA cannot grant ROWs without tribal consent.

Ecological Resources. The corridor intersects with Peirson's milk-vetch critical habitat between MP 141 and MP 143 and Sonoran Desert Tortoise Category I and II management habitat between MP 18 and MP 22. There is yellow-billed Cuckoo proposed critical habitat within 0.5 mile of the corridor from MP 79 to MP 80, within 0.1 mile of MP 98, and it crosses the corridor from MP 108 to MP 109. Arroyo toad critical habitat crosses the corridor between MP 242 and MP 245 and at MP 260 and intersects the corridor between MP 253 and MP 254 and MP 271 and MP 272. There are potential impacts on peninsular bighorn sheep from MP 216 to MP 220 and there is a location of desert bighorn sheep connectivity at MP 260. There were stakeholder concerns that the use of helicopters can be disruptive to golden eagles. There were stakeholder suggestions in the 2014 RFI to reroute this corridor to avoid siting new facilities in Sonoran Desert Tortoise Category I and II management habitat.

***Agency Analysis*.** While the corridor crosses critical habitat for the Peirson's milk-vetch and Arroyo toad, proposed critical habitat for the yellow-billed Cuckoo, Sonoran Desert Tortoise Category I and II Habitat, and bighorn sheep habitat, there is no alternative corridor that would avoid these habitats and provide connectivity to renewable energy generation in a corridor with existing transmission (Figure 3-20c). Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA, ESA, and other Federal laws and current agency policy and guidance (such as the BLM AZ Instruction Memorandum regarding compensation for impacts on tortoise habitat (BLM 2015b)). The Agencies suggest that future land use plans analyze corridor alternatives that do not have an impact on golden eagles. The Agencies also suggest that connectivity recommendations in California's Binational Conservation Initiative (BLM 2004) are followed for the San Diego/McAlmond Canyon section of the corridor to address desert bighorn sheep connectivity.

Lands and Realty, Military and Civilian Aviation. There are potential impacts to military training routes; visual routes between MPs 0.0 and MP 7.7 and MP 19.5 and MP 24.6; visual routes with a floor of 200 ft AGL between MP 49 and MP 58; instrument routes between MP 8.6 and MP 24.7 and MP 24.7 and MP 26.2; and instrument routes with a floor of 500 ft AGL between MP 61 and MP 81. There are two civilian airstrips in line with the corridor in a non-Federal gap.

Agency Analysis. For the visual routes with a floor of 200 ft AGL, the DoD recommends that structures remain below 200 ft AGL. For the instrument routes with a floor of 500 ft AGL, the DoD recommends that structures remain below 400 ft AGL. Taller structures will require further analysis for operational impact. Adherence to IOP 1 - Project Planning regarding coordination with DoD would be required. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Lands with Wilderness Characteristics

- Cargo Muchacho Mountains, Chocolate Mountains, Mining Districts and Townsites.

***Agency Analysis*.** The DRECP allows for development on lands inventoried with wilderness characteristics but not managed to give priority for full protection of lands with wilderness characteristics through CMAs designed to minimize impacts on this resource.

Public Access and Recreation. The Mountain Springs Park is located along the corridor between MP 218.8 and MP 219.4, and In-Ko-Pah Park is located along the corridor between MP 217.4 and MP 221.3. There were stakeholder comments that development within the corridor could have an impact on biological and visual resources within the parks. DRECP Plaster City Open OHV Area is located between MP 201.8 and MP 207.0, and the DRECP Imperial Sand Dunes OHV Area is between MP 137.8 and MP 145.4.

***Agency Analysis*.** Impacts on the parks would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. While renewable energy developments are not allowed in open OHV areas, transmission is allowed in these areas.

Specially Designated Areas

- Muggins Mountain Wilderness abuts the corridor to the south from MP 87 to MP 92.
- California Desert Conservation Areas are located between MP 110 and MP 218.
- Laguna Division Conservation Area is located between MP 107 and MP 109.
- Little Picacho Wilderness abuts the corridor to the north between MP 111 and MP 118.
- East Mesa ACEC is located between MP 144 and MP 155.
- Lake Cahuilla DRECP National Conservation Lands are located throughout various portions of the corridor. There were stakeholder suggestions to add a portion of the corridor in the ACEC; without the corridor extension, any new transmission lines following existing infrastructure would require up to seven additional miles to stay within the currently designated corridor.
- Lake Cahuilla C & D ACEC is located between MP 159.8 and MP 165.9.
- Yuha Basin ACEC is located between MP 191.3 and MP 204.8.
- Jacumba Wilderness abuts the corridor to the north from MP 218.4 to MP 220.4.
- Pacific Crest NST intersects the corridor between MP 251 and MP 252. Stakeholder concerns included potential impacts on the VRM for the trail. Stakeholders commented that the corridor is poorly located because it is located on a small swath of land between a BLM WSA and a USFS Federally Designated Wilderness, and although the PCTA typically encourages corridors to be tied to existing impacts on the trail experience, there are better options for the corridor. There were suggestions to reroute the corridor adjacent to the SouthWest Power & Light line (located near the Mexican border), continue adjacent to State Highway 94, and adjacent to I-8. Aligning the corridor with already existing, significant impacts on the trail is the best option.
- Hot Springs Long Term Visitor Area (LTVA) SRMA is located between MP 165.4 and MP 166.0.
- Tamarisk LTVA SRMA is located between MP 155.3 and MP 155.4.
- Plaster City SRMA is located between MP 201.9 and MP 207.0.
- Table Mountain ACEC is located between MP 222.3 and MP 225.6.
- Ocotillo ACEC is located between MP 209.6 and MP 211.8 and MP 214.0 and MP 220.8.
- Picacho ACEC is located between MP 116.9 and MP 131.6.
- Plank Road ACEC is located between MP 143.0 and MP 144.0.
- The Juan Bautista de Anza NHT intersects the corridor and parallels corridor within 0.5 to 1 mile throughout much of the corridor length. Potential impacts include recreational impacts at historic campsites, using the recreation retracement route; impacts on cultural resources, and visual impacts on the viewshed of the trail.

Agency Analysis. The corridor does not go through the Muggins Mountain Wilderness. Impacts would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws. Impacts on the Pacific Crest NST and the Juan Bautista de Anza NHT by future proposals would be analyzed and avoided, minimized, or mitigated on a case-by-case basis. When Wilderness was designated in 1990, many existing ROWs served as boundaries to those Wilderness Areas and predate the wilderness designation. The DRECP has CMAs for ACECs, SRMAs, VRM, National Historic and Recreational Trails, cultural resources, and the like plan-wide, by allocation, and specifically for impacts related to transmission. The Agencies have identified the need for an IOP to address development in Section 368 energy corridors while protecting values in congressionally designated National Scenic and Historic Trails, in this case recreational and scenic values for "no trace" trails. For transmission corridors that intersect or parallel National Trail System components, or trails under study for potential designation, the National Trail administering agency or trail administrator; regional or State program leader; and a primary National Trail partner organization representative (in accordance with applicable law) will be advised and invited to attend pre-authorization or pre-application meetings, as applicable. Agencies may not permit proposed uses along congressionally designated National Scenic or Historic Trails [NTSA Sec. 5(a)], which will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established [NTSA Sec. 7(c)]. While easements and rights-of-way may be granted, conditions shall be related to the policy and purposes of the National Trails Systems Act [NTSA Sec. 9(a)].

Cultural Resources and Tribal Concerns. There are tribal concerns about archaeological and wildlife resources at the Colorado River crossing from the area of the existing 500-kV transmission line crossing up to Imperial Dam. The routing of the corridor around the Fort Yuma-Quechan Reservation from MP 102.8 to MP 136 is a concern as it also has an impact on the Colorado River crossing. The designated corridor was sited to avoid tribal lands to the extent possible. Campo, La Posta, and Manzanita Reservations are located in gaps in corridor designation, creating a jurisdictional concern for development in the corridor.

***Agency Analysis*.** In past conversations, tribal representatives have indicated a preference for a more southern route than the northern one that has been designated on BLM lands and contains sensitive resources. However, a corridor revision adjacent to the Fort Yuma-Quechan Reservation could require proponent negotiations with the Quechan Tribe and the BIA for the corridor revision to be a viable alternative. Proponent would have to work with the tribe to obtain a tribal resolution consenting to the grant of ROW (by BIA). BIA cannot grant ROWs without tribal consent. The Agencies have identified a potential corridor revision to avoid crossing the reservation, if the tribe has identified avoidance of the reservation as its preference.

Visual Resources. The VRM classification for areas within the corridor varies the entire length of the corridor. No VRM Class I areas are within the corridor, but are adjacent to the corridor from MP 87.4 to MP 90.2, MP 111.5 to MP 118.9, MP 208.3 to MP 209.8, and MP 219.2 to MP 221.5.

***Agency 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 impact analysis outlined in *BLM VRM Contrast Rating Handbook H-8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. Some input clarified existing capacity and identified potential for new capacity. There were stakeholder suggestions for a second 500-kV line between the North Gila and Imperial Valley substations to address a gap in the high-voltage transmission system between Arizona and California and improve reliability of the southern California system.

Agency Analysis. 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. The Agencies designate corridors and process applications for energy transport infrastructure; they do not propose routes or initiate improvements to transmission systems.

Corridor 223-224

(Junction US-95/Hwy-160 to Northwest Las Vegas)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office
Pahrump Field Office

Nevada Counties

Clark County
Nye County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 223-224 Summary

In general, the corridor was sited in its current location to complete a Section 368 route across the northern portion of Las Vegas in response to anticipated demand for alternative routes in this high-use area. However, because Section 368 energy corridors were not designated on DoD- or USFWS-administered lands as anticipated, the intended connection is not complete. The BLM Southern Nevada District Office is currently in the process of revising their 1998 Las Vegas RMP.

The Workgroup has identified a potential corridor revision to avoid crossing the Tule Springs Fossil Beds National Monument and proximity to DoD-administered lands and the NTTR. The Agencies have identified a potential corridor revision to realign the corridor between MP 0.0 -17.0 with the existing locally designated corridors and where there is existing infrastructure (Figure 3-21a). The realignment would narrow the corridor width to approximately 1,400 feet.

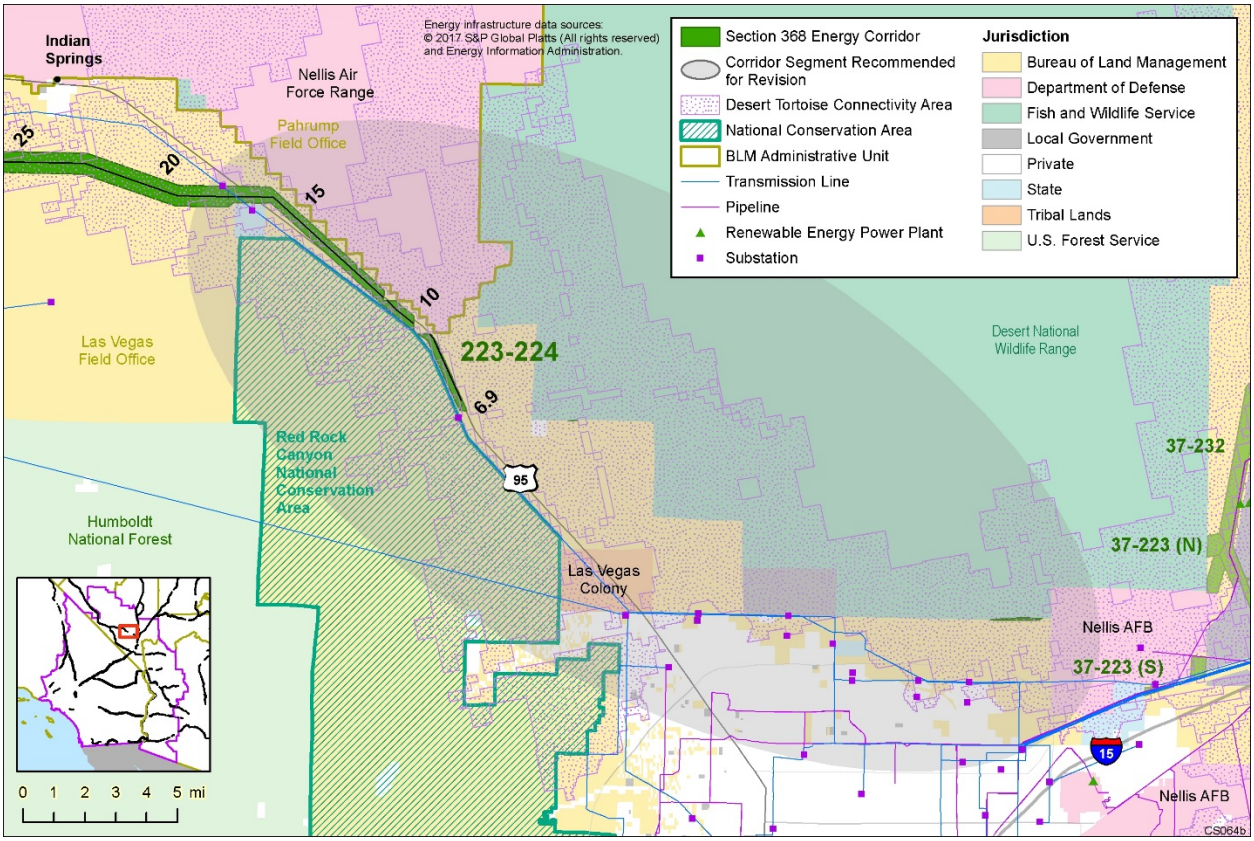


Figure 3-21a Potential Revision to Corridor 223-224

Corridor Overview: Existing Use and Opportunity

The corridor contains a transmission line along part of the corridor and U.S. Highway 95. The corridor begins near the southwest end of the DNWR and runs northwest for 47.2 miles to the junction of Corridors 18-224 and 224-225 just south of the NTTR in Nye County. It is 3,500 feet wide over most of its length but narrows to approximately 2,050 feet between the NTTR and Red Rock Canyon NCA from

MP 6.8 to MP 17.5. It is multimodal to accommodate both electrical transmission and pipeline projects. Several authorized ROWs cross the corridor. There is some expressed interest for use of the corridor, including several pending ROWs. The eastern portion of the corridor appears to overlap the 400-ft-wide Renewable Energy Transmission Corridor that was established by Congress in 2014 and falls within formerly used defense sites.

The corridor was identified as a corridor of concern in the Settlement Agreement because of ACECs and the DNWR. While the corridor contains important contiguous desert tortoise habitat, mapping of potential conflict areas indicates there are no previously disturbed alternative routes that would avoid TCAs and Priority 1 and 2 connectivity habitat (Figure 3-21b).

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-21b; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

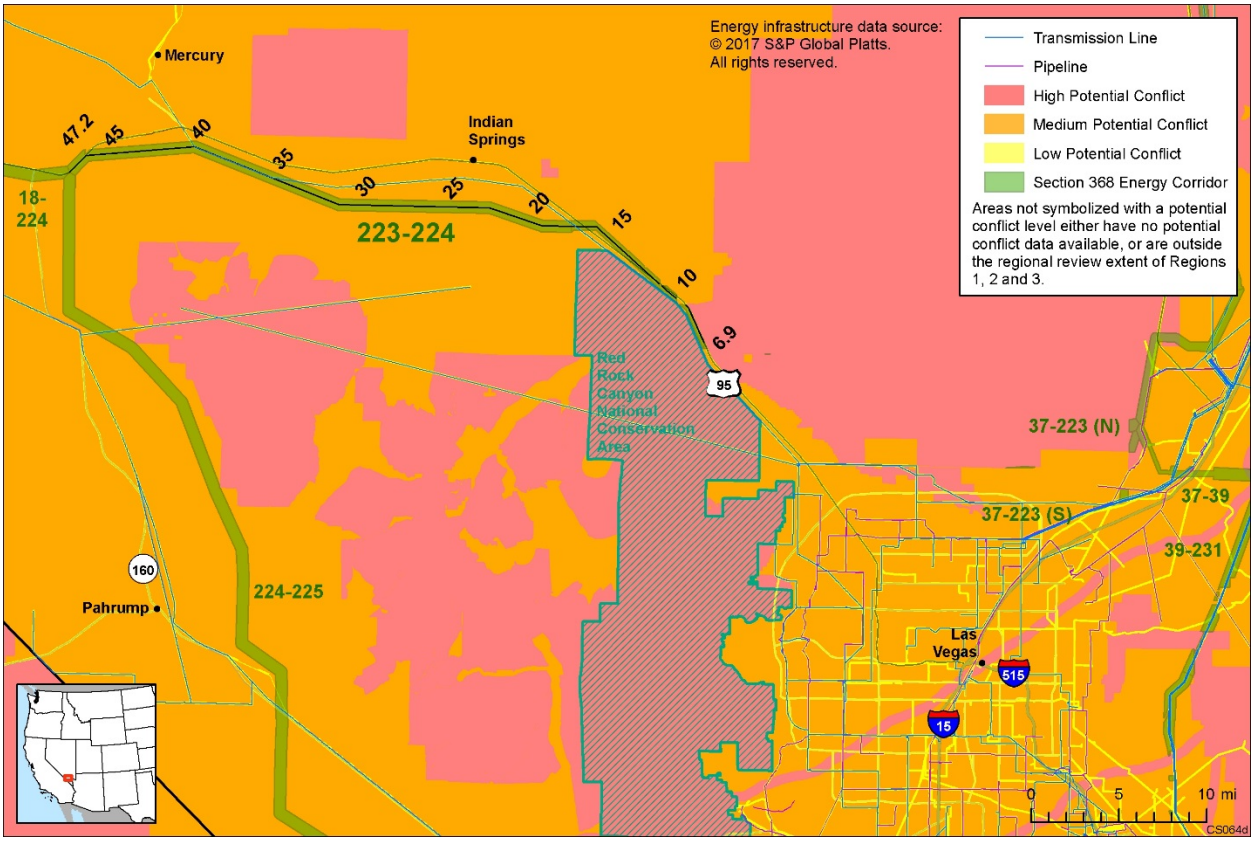


Figure 3-21b Mapping of Potential Conflict Areas in Vicinity of Corridor 223-224

Physical Barrier. There are possible terrain issues. There were stakeholder suggestions to realign the corridor east of MP 25 to better align it with the rugged terrain or follow existing transmission facilities whenever possible.

Agency Analysis. The Agencies have identified a potential corridor revision to realign the corridor with existing locally designated corridors where there is existing infrastructure.

Jurisdictional Concerns. There is a discontinuous or reduced width for a portion of the corridor, including two acres of DoD-administered land in Nellis AFB range that was not designated. There is also a gap in the eastern portion of the corridor connecting to Corridor 37-223 including USFWS-administered land in the DNWR that was not designated. A proposed new land acquisition by DoD intersects the corridor at MP 9.3 to MP 17.2. Lands were withdrawn between MP 0 and MP 9.3 for creation of the Tule Springs Fossil Beds National Monument operated by the National Park Service. There were stakeholder suggestions to reroute the corridor to avoid gaps in the designated corridor.

Agency Analysis. The Workgroup has identified a potential corridor revision to realign the corridor with existing locally designated corridors where there is existing infrastructure because of the multiple jurisdictional concerns. Use of the existing corridor is limited by lands withdrawn to DoD north of U.S. Highway 95 and Red Rock Canyon NCA south of U.S. Highway 5 and by lands withdrawn to the NPS for the Tule Springs Fossil Beds National Monument and the USFWS DNWR.

Ecological Resources. The corridor contains TCAs and Priority 1 and 2 connectivity habitat across the entire corridor. There were many stakeholder suggestions in the 2014 RFI to reroute or remove the corridor to avoid siting new facilities in TCAs and Priority 1 and 2 connectivity habitat in areas that do not already contain existing transmission, and to minimize transmission siting in these areas.

Agency Analysis. The corridor contains important contiguous desert tortoise habitat in the area providing connectivity; however, there are no alternative routes that would avoid TCAs and Priority 1 and 2 connectivity habitat in a corridor with existing transmission (Figure 3-21b). Analysis would be completed through the NEPA process case by case with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Environmental Justice. Stakeholders suggested that the Agencies evaluate the potential effects of valley fever on the communities of Corn Creek and Indian Springs from transmission construction and cumulative energy projects and how development would affect residents' quality of life.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Civilian and Military Aviation. There is a potential for impacts on military training routes: visual routes between MP 11.7 and MP 47.2 and instrument routes between MP 32.4 and MP 47.2.

***Agency Analysis*.** Adherence to IOP 1 -Project Planning regarding coordination with DoD would be required.

Specially Designated Areas

- Mt. Charleston Scenic Byway intersects the corridor at MP 10.7.

- The Red Rock Canyon NCA abuts the corridor on the south side between MP 4.6 and MP 17.1. Stakeholders suggested that the Agencies evaluate visual impacts.
- Tule Springs Fossil Beds National Monument. There is a 15-year sunset provision in the Tule Springs legislation that disallows transmission development along the Sheep Mountain Range. This constricts this corridor between the national monument and the Red Rock NCA. There was a request from stakeholders that all pending ROW applications be examined for viability given the new national monument status for Tule Springs Fossil Beds National Monument, as well as for the need for connection across the Las Vegas Valley. There were stakeholder suggestions to evaluate visual impacts and reroute the corridor to the south to avoid the concern.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. While the corridor is located adjacent to the Red Rock Canyon NCA, the corridor does not traverse the NCA. However, the proximity to the NCA does require a narrower corridor width and limits the amount of additional development that would be allowed. Lands were withdrawn to the National Park Service for a National Monument between MP 0.0 to MP 9.3. The Workgroup has identified a potential corridor revision to avoid crossing the Tule Springs Fossil Beds National Monument.

***Visual Resources*.** The entire corridor is classified as a VRM Class III area. Stakeholders were concerned that the corridor may create a cumulative polarized glare if solar plants are developed.

Agency 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 impact analysis outlined in *BLM VRM Contrast Rating Handbook H 8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. One stakeholder requested that the Agencies analyze current power being transmitted in the corridor as well as information about pending applications to establish need and/or opportunity to retrofit existing infrastructure. One stakeholder requested that no decisions on the corridor be made until the Southern Nevada District Office completes its revision to the 1998 Las Vegas RMP. There was a concern that corridor designations tend to induce ROW applications and development in corridor gaps. Last, input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. The Agencies have updated the corridor abstracts and the Section 368 Energy Corridor Mapping Tool with new information on pending applications and existing infrastructure within the Section 368 energy corridors. Regional reviews are not a NEPA process and therefore do not encompass the level of analysis required under NEPA. Revision, deletion, or addition of Section 368 energy corridors will be considered within subsequent NEPA scoping for any land use planning or project-specific planning and will be analyzed with any newer information that may become available. 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. 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.

Corridor 224-225

(North Pahrump/US-95 to Las Vegas/Ivanpah Valley)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office
Pahrump Field Office

Nevada County

Clark County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 224-225 Summary

Corridor 224-225 was sited to avoid encroachment on DoD activities in California and to meet demand for more energy in southern California. There are existing solar energy facilities as well as pending solar energy projects near the corridor, providing opportunity for the corridor to accommodate transmission tied to renewable energy development. The corridor does not contain existing infrastructure, but multiple transmission lines cross the corridor. The Workgroup has identified an opportunity for a potential corridor revision between MP 33.5 and MP 61 to realign with an existing locally designated corridor and state highway (Figure 3-22a). The potential revision would adhere to the siting principles by avoiding sensitive resources and realigning the corridor with a locally designated corridor alongside existing infrastructure to avoid currently undeveloped areas. There is also a pinch point between MP 6 and MP 9, and future consideration should be given to find alternatives to navigate the difficult terrain issues (Figure 3-22b).

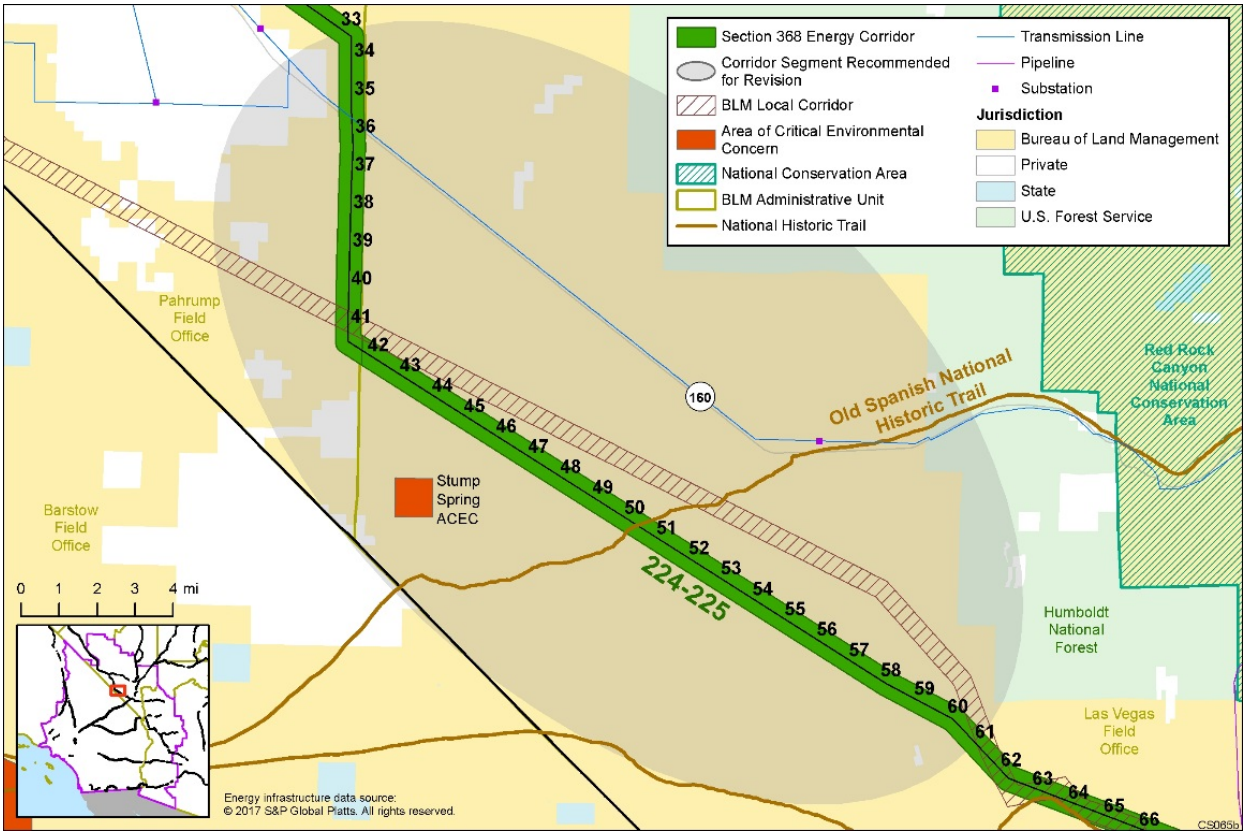


Figure 3-22a Potential Revision to Corridor 224-225 (1)

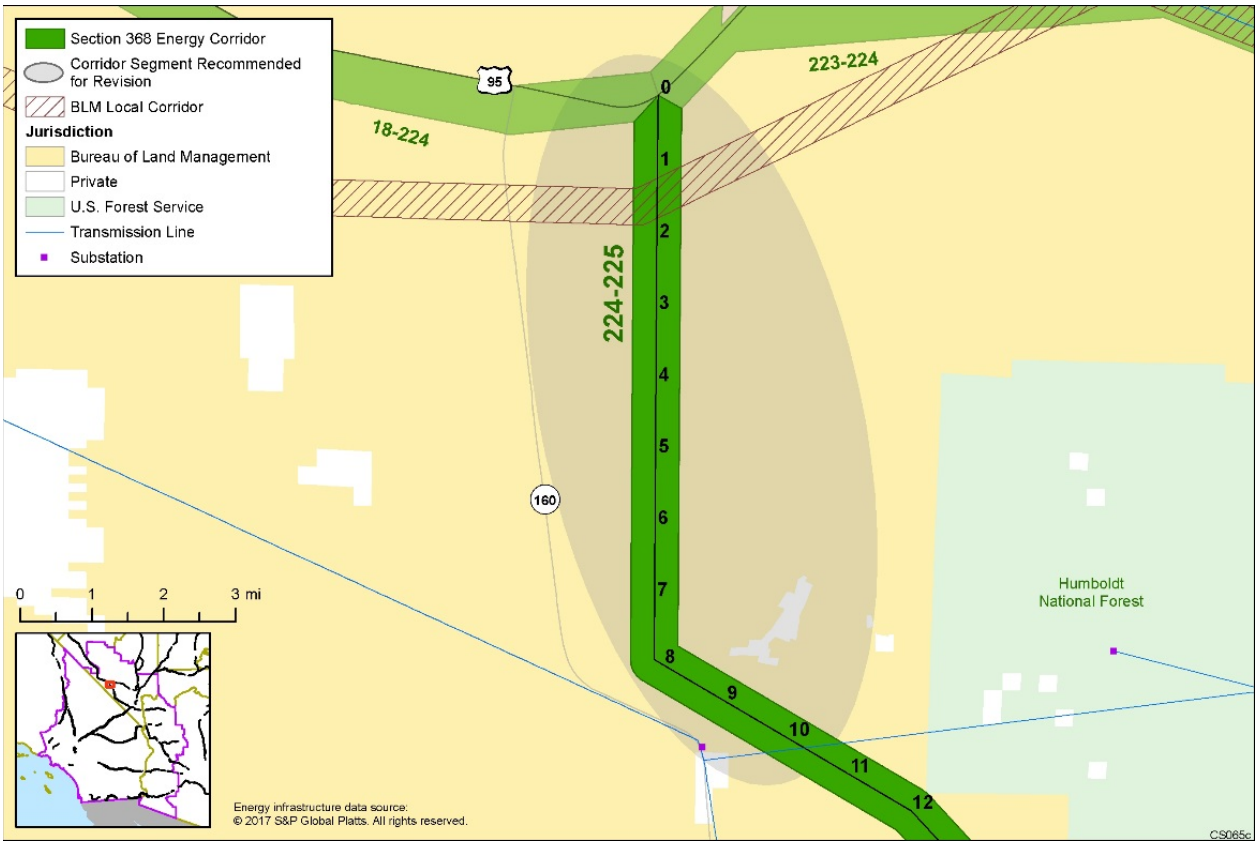


Figure 3-22b Potential Revision to Corridor 224-225 (2)

Corridor Overview: Existing Use and Opportunity

The corridor begins at the junction of Corridors 18-224 and 223-224 along U.S. Highway 95 in Nye County, continues 85.9 miles southeast, and ends at the junction of Corridors 27-225 and 225-231, approximately 7 miles southeast of Jean in Clark County, Nevada. If there is significant solar energy development in Nye County, this corridor will be needed. The corridor is 3,500 ft wide over its entire length and is multimodal to accommodate both electrical transmission and pipeline projects. It was not a designated corridor prior to Section 368 designation. The corridor is currently unoccupied, but multiple transmission lines cross the corridor. There is interest for use of the corridor, including multiple pending ROWs and conceptual routes that follow existing transmission lines for most of its route. A natural gas and solar energy power plant are near the southern end of the corridor, and there are pending solar projects in the vicinity of the corridor. The BLM Southern Nevada District Office is currently in the process of revising the 1998 Las Vegas RMP (BLM 1998). There is a potential new SEZ in the Southern Nevada RMP update allowing opportunity for the corridor to accommodate renewable energy development and transmission.

The corridor was not identified as a corridor of concern in the Settlement Agreement. Mapping of potential conflict areas indicates that the potential revision would adhere to the siting principles by avoiding sensitive resources and realigning the corridor with a locally designated corridor alongside existing infrastructure to avoid currently undeveloped areas (Figure 3-22c).

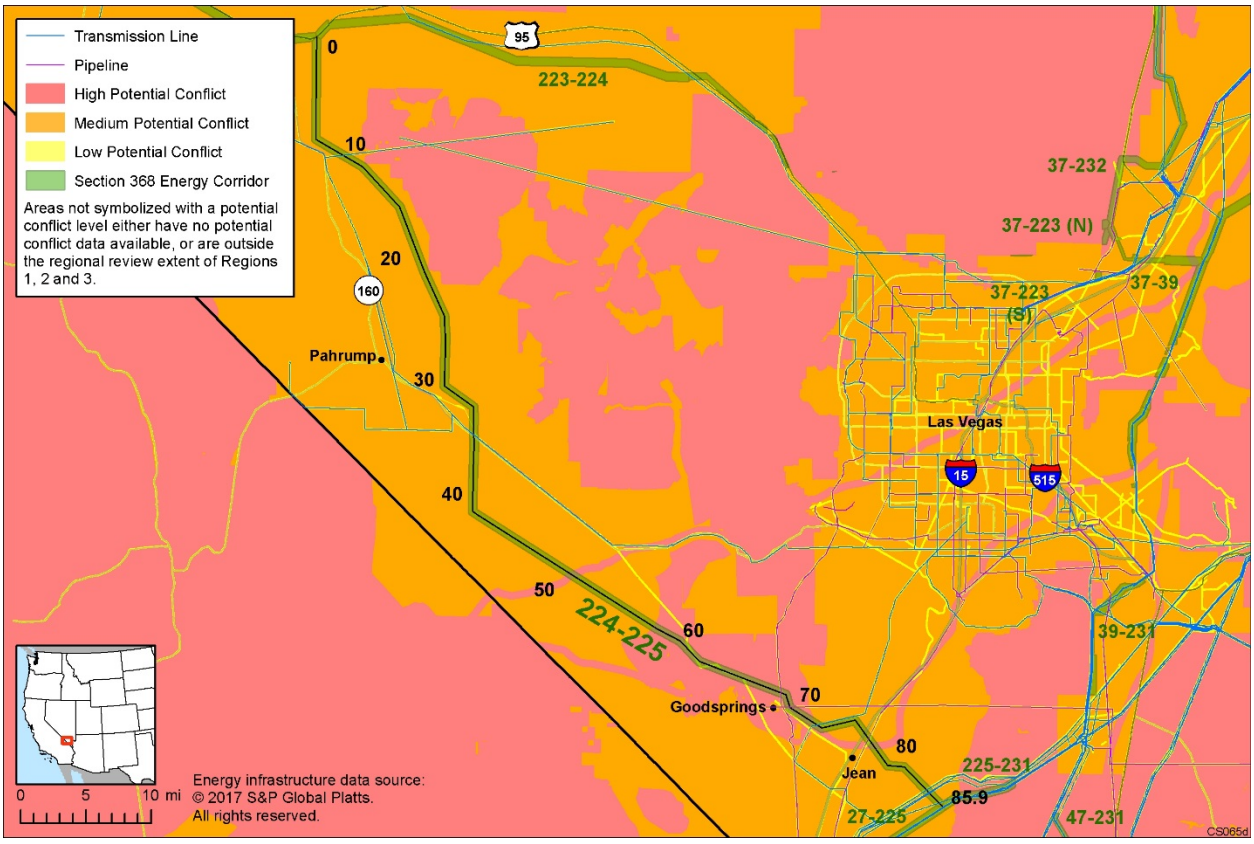


Figure 3-22c Mapping of Potential Conflict Areas in Vicinity of Corridor 224-225

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-22c; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Physical Barrier. There are possible terrain issues in this corridor between MP 6 and MP 9, and stakeholders suggested that the Agencies realign the corridor west to better align it with State Highway 160.

Agency Analysis. Although no potential corridor revision is being proposed in this corridor segment to resolve the terrain issues, the Agencies agree that additional analysis may be needed in this area in the future to address the potential for future development within the corridor.

Jurisdictional Concerns. The corridor bisects the Transportation and Utilities Corridor (TUC) between Las Vegas, Nevada, and the proposed new airport for the placement of utilities and transportation infrastructure to serve the new airport. Stakeholders stated that development must be compatible with the utilization of the TUC for utilities and transportation infrastructure to serve the new airport and that Congress has indicated its intention to convey to Clark County an additional 17,000 acres. The corridor

would cross it in two places. No energy corridor can be sited on this land adjacent to the proposed new airport. The energy corridor under consideration would be sited near the north and south ends of runways in the proposed new airport.

***Agency Analysis*.** Corridor 224-225 crosses the I-15 South Corridor (or Ivanpah Corridor) and approximately 100 acres of the northerly portion of the Ivanpah Airport Environs Overlay that was established pursuant to the Clark County Conservation of Public Land and Natural Resources Act of 2002 (Public Law 107-282) to support development of a proposed supplemental airport (Ivanpah Valley Airport). The Ivanpah corridor is 2,640-ft wide and was established for the placement, on a nonexclusive basis, of utilities and transportation to provide for high-quality development in Clark County. The Ivanpah Airport Environs Overlay is a disposal boundary encompassing approximately 15,000 acres of BLM-administered public land. Subject to valid existing rights, this overlay disposal boundary is withdrawn from location and entry under the mining laws, and from operation under the mineral leasing and geothermal leasing laws, until the Secretary terminates the withdrawal or the land is patented. If any portion of the transferred land is sold, leased, or otherwise conveyed by Clark County, such lands shall be subject to the same limitations as the 2004 land transfer to Clark County (Patent No. 27-2004-0104/N-73950) for the proposed supplemental airport facility and related infrastructure, which requires that any use of the transferred land be consistent with the Interim Cooperative Management Agreement between the BLM and Clark County dated November 4, 1992, and Title 49, *United States Code* (49 USC), § 47504. Use of IOPs and BMPs would be required to avoid incompatible uses within the corridors. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Air Quality. There are possible impacts on air quality from transmission and large-scale energy projects construction activity in an arid region where water resources are in over-draft. There are also potential impacts on visual and biological resources as well as on public health.

***Agency Analysis*.** Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws.

Cultural Resources and Tribal Concerns. Stakeholders suggested that BLM analyze the potential impact from development of the corridor on cultural resources and Native American values in the region. The corridor crosses Arrowhead Highway at MP 78. The Arrowhead Highway was built in the 1920s and was the first automobile road to connect Los Angeles to Salt Lake City via Las Vegas. The road was later numbered Highway 91 and parts of the road are now part of Interstate 15.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA, the NHPA, and other Federal laws.

Ecological Resources. The corridor contains TCAs, Priority 1 and 2 connectivity habitat, and desert tortoise connectivity areas across the corridor. There were stakeholder suggestions in the 2014 RFI to reroute or remove the corridor to avoid siting new facilities in TCAs and Priority 1 and 2 connectivity habitat without existing transmission and in areas scored very high in risk to permeability. The Stump Springs Translocation Area compensated for the closure of the Desert Tortoise Conservation Center run by USFWS and Clark County and grandfathered in four applications for large-scale solar projects (25,000 acres). Stakeholders wanted to know how development of a major transmission line could affect the translocation area (number of disturbed tortoises). Stakeholders also expressed concern for

burrowing owls in the Armargosa Valley and sky island montane endemic birds and neotropical migrants in the Kingston Range, the Clark Range, and the Spring Range.

Agency Analysis. The Agencies have identified a potential corridor revision between MP 33.5 and MP 61 to realign with an existing locally designated corridor and state highway to avoid impacts on sensitive resources (Figures 3-22a and 3-22b). Figure 3-22c depicts the conflict mapping of sensitive areas in the vicinity of the corridor. Analysis would be completed through the NEPA process case by case with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Lands and Realty, Civilian and Military Aviation. There are potential impacts on military training routes: visual routes between MP 0.0 and MP 12.8.

Agency Analysis. Adherence to IOP 1 - Project Planning regarding coordination with DoD would be required.

Public Access and Recreation. The Jean Roach Dry Lake SRMA is highly used by recreationists for model rocket launches, remote control airplanes, and manned aircraft landing and takeoffs and is a known landing zone for hangliders and paragliders. There were stakeholder suggestions to realign the corridor north behind the mountain to avoid the dry lakebed. Existing transmission lines appear to follow the southern route and stakeholders suggested realigning the corridor to follow existing lines.

Agency Analysis. To mitigate the impacts on the Jean Roach Dry Lake SRMA, realigning the corridor north behind the mountain to avoid the dry lakebed should be considered.

Socioeconomics. There are potential impacts to the town of Pahrump, Nevada, which has seen growth since the Section 368 corridors were designated. Specifically, stakeholders suggested that the Agencies evaluate impacts on new properties, property values, and visual resources, and whether an increased demand for large-scale solar projects could cause soil disturbance and spread valley fever.

Agency Analysis. Impacts would be analyzed and mitigated during project-specific reviews required under NEPA and other Federal laws.

Lands with Wilderness Characteristics. The corridor intersects five citizen identified lands with wilderness characteristics inventory units including Lowell Wash South, Arden Quarries, North of Wilson Pass, and Potosi Wash, as well as the Appaloosa Springs inventory unit. There were stakeholder suggestions to realign the corridor to the north to avoid impacts on lands with wilderness characteristics.

***Agency Analysis*.** Wilderness inventory would be done during project-specific NEPA analysis and BLM would consider CPW during that time. If there were existing transmission, the existing lines would not be included in lands with wilderness characteristics units, but could be a boundary to wilderness inventory areas.

Specially Designated Areas

- The corridor is adjacent to inventoried roadless areas from MP 11.8 to MP 12.3 and MP 21.5 to MP 21.7.

- The corridor is adjacent to Spring Mountains NRA from MP 11.8 to 12.3 and MP 21.5 to MP 21.7.
- The corridor is adjacent to Mount Sterling WSA from MP 21.5 to MP 21.7.
- The corridor is adjacent to the OSNHT, a congressionally designated trail. Development of the corridor would directly affect the earliest route of the trail, the Armijo Route of 1829–1830. There were stakeholder suggestions to realign the corridor to follow State Highway 160 as much as practicable, particularly between MP 30 and MP 60; to remove the corridor; and to realign the corridor to avoid Pahrump Valley and high-potential segments of the OSNHT.
- Stump Springs ACEC.

Stakeholder concerns included new NCAs and ACECs approved in the DRECP in the California Desert. Many of these regions border the Nevada region near Sandy Valley, Clark Mountain, Mesquite Dry Lake, and so on, and energy sprawl in Nevada would be visible from these areas. Wildlife connectivity between these conservation areas and the Nevada desert could be affected.

Agency Analysis. The Workgroup has identified an opportunity for a potential corridor revision between MP 33.5 and MP 61 to align with an existing locally designated corridor and state highway because of potential impacts on the OSNHT and Stump Springs ACEC (Figures 3-22a). The corridor is adjacent to the roadless areas, the Spring Mountain National Recreation Area, and Mount Sterling WSA but does not intersect any of them. The corridor is adjacent to the OSNHT; therefore, the OSNHT trail administrator will be advised and invited to attend pre-authorization or pre-application meetings, as applicable in accordance with applicable law. The Agencies have identified the need for an IOP to address development in Section 368 energy corridors while protecting values in congressionally designated NHTs. Agencies may not permit proposed uses along congressionally designated NSTs or NHTs [NTSA Sec. 5(a)], which will substantially interfere with the nature and purposes of the trail, and shall make efforts, to the extent practicable, to avoid authorizing activities that are incompatible with the purposes for which such trails were established [NTSA Sec. 7(c)]. While easements and rights-of-way may be granted, conditions shall be related to the policy and purposes of the National Trails Systems Act [NTSA Sec. 9(a)].

***Visual Resources*.** The VRM classification for areas within the corridor varies the entire length of the corridor.

Agency 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 impact analysis outlined in *BLM VRM Contrast Rating Handbook H 8431-1.* Minimizing visual contrast remains a requirement of applicable VRM Class objectives even when the proposed action is in conformance with those VRM class objectives.

Wild Horses and Burros. The corridor is within three Wild Horse and Burro Herd Management Areas (HMAs): Wheeler Pass HMA, Johnnie HMA, and Red Rock HMA. Corridor development and associated ROWs would decrease the number of acres of habitat and connectivity for the wild horses and burros to roam and forage. This reduction could lead to a significant reduction in the primary forage areas within the HMAs, especially the Johnnie HMA. There is a narrowing section of BLM land located between MP 8.0 and MP 15.0 (not clearly visible in Figure 3-22c) between the upper northeast part of Pahrump private lands and the National Forest System (NFS) lands where the terrain steepens, and it is somewhat of a pinch-point area for a 3,500-ft-wide corridor. This pinch-point area is within the Johnnie HMA and

would decrease the capability for wild horses and burros to roam north and south. Construction of transmission and associated roads and infrastructure in this area would greatly reduce the forage.

Agency Analysis. NEPA analysis would be needed during project level planning and assessment to determine mitigation measures, possibly corridor limits within this narrowed area, realignment of the segment MP 8.0–41.0, or creation of an alternative corridor route west to better align the corridor with State Highway 160 and to avoid the prime connectivity and forage areas within the Johnnie HMA.

Other Issues. One stakeholder requested that the Agencies analyze current power being transmitted in the corridor as well as information about pending applications to establish need and/or opportunity to retrofit existing infrastructure. Input was received requesting the Agencies collect missing data to minimize potential impacts on TCAs. Input was also provided clarifying existing capacity and potential for new capacity.

At least one stakeholder suggested deleting the corridor entirely because of to its proximity to Ash Meadows NWR. There was a stakeholder suggestion to realign the corridor to follow existing transmission facilities whenever possible, specifically east of Jean (near MP 84) to follow existing transmission facilities. One stakeholder requested that no decisions on the corridor be made until the Southern Nevada RMP is finalized. There was concern about the cumulative impacts, including the effects of energy sprawl in the area that new transmission might bring.

Agency Analysis. The Agencies have updated the corridor abstracts and the Section 368 Energy Corridor Mapping Tool with new information about pending applications and existing infrastructure as well as new designations and species connectivity data. The Ash Meadows NWR is more than 10 miles from Corridor 224-225, and development within the corridor is not likely to affect the NWR. The Agencies have identified a potential corridor revision between MP 33.5 and MP 61 to align with an existing locally designated corridor and state highway (Figure 3-22a). This potential revision could be considered during future land use planning activities. Regional reviews are not a NEPA process and therefore do not encompass the level of analysis required under NEPA, including analysis of cumulative impacts. Revision, deletion, or addition to Section 368 energy corridors will be considered within subsequent NEPA scoping for any land use planning or project-specific planning and will be analyzed with any newer information that may become available. 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.

Corridor 225-231

(South McCullough Wilderness)

Agency Jurisdiction

Bureau of Land Management

Southern Nevada District
Las Vegas Field Office

Nevada County

Clark County

Resource Management Plan

Las Vegas Resource Management Plan (BLM 1998)

Corridor 225-231 Summary

Corridor 225-231 was sited to provide continuity to the north and east from the southern portion of the Las Vegas metropolitan area and constitutes part of a large east-west pathway that includes Corridors 223-224 and 47-231. The corridor is occupied by eight transmission lines along its entire length. The corridor contains existing infrastructure and additional capacity for future infrastructure development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

The corridor begins at the junction of Corridors 224-225 and 27-225 south of Las Vegas in southern Nevada and runs east for 6 miles in Clark County. The corridor is just north of the South McCullough Wilderness Area. The corridor is 3,500-ft wide over its entire length, is multimodal to accommodate both electrical transmission and pipeline projects, and was not previously designated. The corridor contains eight existing transmission lines along its entire extent. There is interest for use of the corridor, including one pending ROW and two planned transmission lines.

Corridor 225 231 was not identified as a corridor of concern in the Settlement Agreement. While the corridor overlaps with TCAs, desert tortoise critical habitat, and desert tortoise connectivity habitat, mapping of potential conflict areas indicates there is no previously disturbed alternative route that could carry power east-west across southern Nevada and avoid desert tortoise habitat (Figure 3-23).

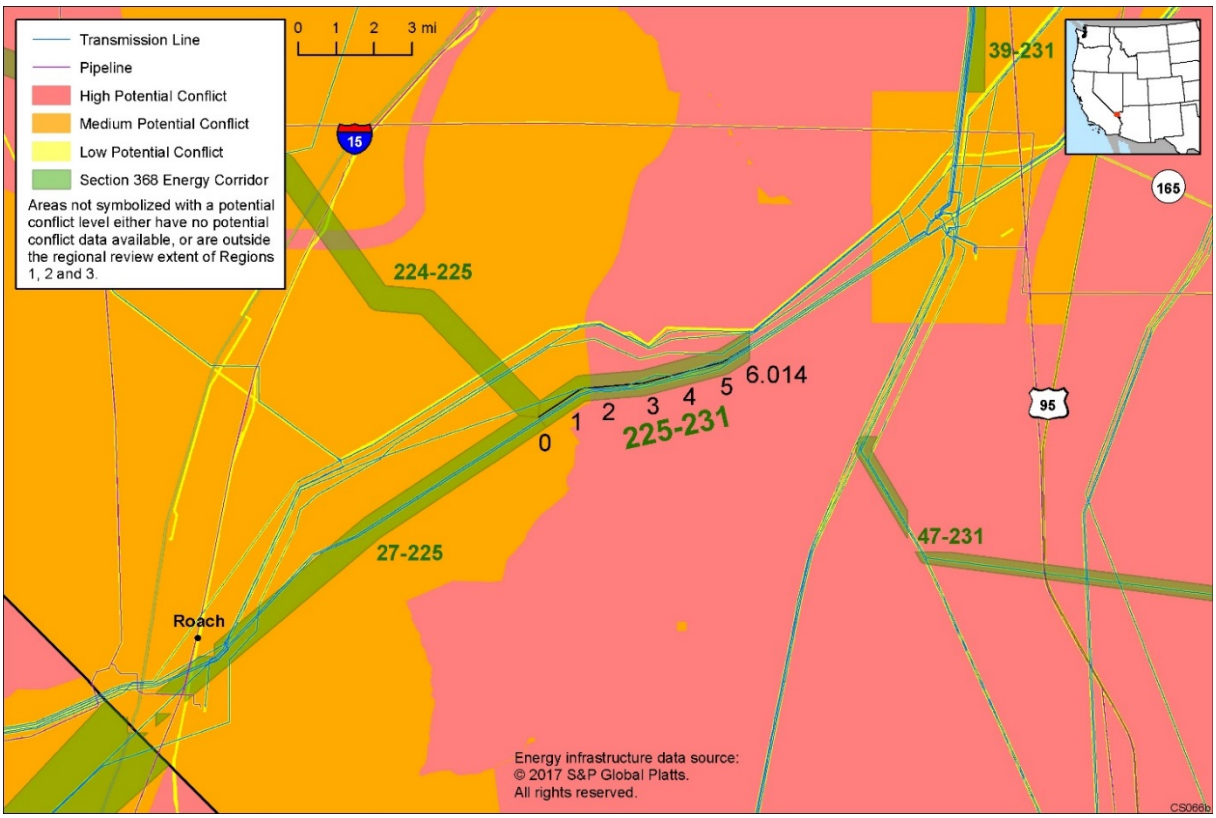


Figure 3-23 Mapping of Potential Conflict Areas in Vicinity of Corridor 225-231

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-23; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Jurisdictional Concerns. The corridor connects to existing designated transportation and utility corridors referred as the Eldorado Valley Corridors, which were reserved to the United States for administration by the BLM when those certain lands were transferred (patented) out of Federal ownership. The Eldorado Valley Corridors follow existing infrastructure within the patent area and adjacent to the BCCE. Impacts would be analyzed with a full range of alternatives as part of the project-specific environmental review required under NEPA and other Federal laws. The BCCE is managed by the Clark County Desert Conservation Program as partial mitigation for impacts on desert tortoise under a regional Section 10 incidental take permit.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Because BLM maintains administrative authority over the utility corridors located in the easement, any disturbance within these corridors would be permitted and mitigated through Section 7 processes, not Section 10.

Cultural Resources. The corridor crosses Arrowhead Highway at MP 100. The Arrowhead Highway was built in the 1920s and was the first automobile road to connect Los Angeles to Salt Lake City via Las Vegas. The road was later numbered Highway 91 and parts of the road are now part of Interstate 15.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA, the NHPA, and other Federal laws.

Ecological Resources. The corridor intersects with desert tortoise critical habitat for approximately 4 miles between MP 2.3 and MP 6, and TCAs and Priority 1 and 2 connectivity habitat across the entire corridor. There were stakeholder suggestions to reroute the corridor to avoid TCAs and Priority 1 and 2 connectivity habitat in areas where there are no existing transmission lines and to minimize transmission line siting in these areas.

Agency Analysis. Analysis would be completed through the NEPA process (i.e., for RMP revision) case by case with a full range of alternatives. Impacts on habitat and habitat connectivity may be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7.

Specially Designated Areas. The corridor is adjacent to the South McCullough Wilderness Area between MP 0.9 and MP 5.2.

Agency Analysis. The corridor is not within this Wilderness Area.

Visual Resources. The corridor is within VRM Class II and Class III areas. It is VRM Class III from MP 0.0 to MP 1.6 and again from MP 5.7 to MP 6.0. It is VRM Class II from MP 1.6 to MP 6.0.

Agency 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 impact analysis outlined in *BLM VRM Contrast Rating Handbook H 8431-1*. Minimizing visual contrast remains a requirement of the VRM Class objective even when the proposed action is in conformance.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity, and one stakeholder requested that the corridor abstracts clarify references to planned projects.

***Agency Analysis*.** 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. The Agencies have updated the corridor abstracts and the Section 368 Energy Corridor Mapping Tool with new information about pending applications.

Corridor 236-237

(Cleveland National Forest)

Agency Jurisdiction

Forest Service

Cleveland National Forest

California Counties

Orange County
Riverside County

Resource Management Plan

Cleveland National Forest Plan (USFS 2006b)

Corridor 236-237 Summary

Corridor 236-237 provides a pathway for energy transport into the Los Angeles Basin through the Cleveland National Forest. The corridor was previously designated. A portion of the corridor contains existing infrastructure and has potential for future development. The corridor is located within a RETI 2.0 TAFA, providing opportunity for the corridor to accommodate transmission tied to renewable energy development. No potential revisions, deletions, or additions have been identified for this corridor.

Corridor Overview: Existing Use and Opportunity

This corridor was sited consistent with a locally designated corridor to provide continuity across the Cleveland National Forest for an existing 500-kV transmission line from Arizona to the Los Angeles metropolitan area. There are three transmission lines, one substation, and one planned transmission line within the corridor. Despite existing infrastructure, the corridor could still accommodate new development. The corridor extends east from north of Silverado, California, east of I-5 to west of I-15. Federally designated portions of this corridor are entirely on NFS land. The corridor is 2,000 ft wide across its entire length and is designated for electrical transmission projects only.

The corridor was not identified as a corridor of concern in the Settlement Agreement. Crucial habitat is pervasive near the corridor, and mapping of potential conflict areas indicates there is no nearby alternate route that would avoid crucial habitat and provide continuity across the Cleveland National Forest from Arizona into the Los Angeles metropolitan area (Figure 3-24).

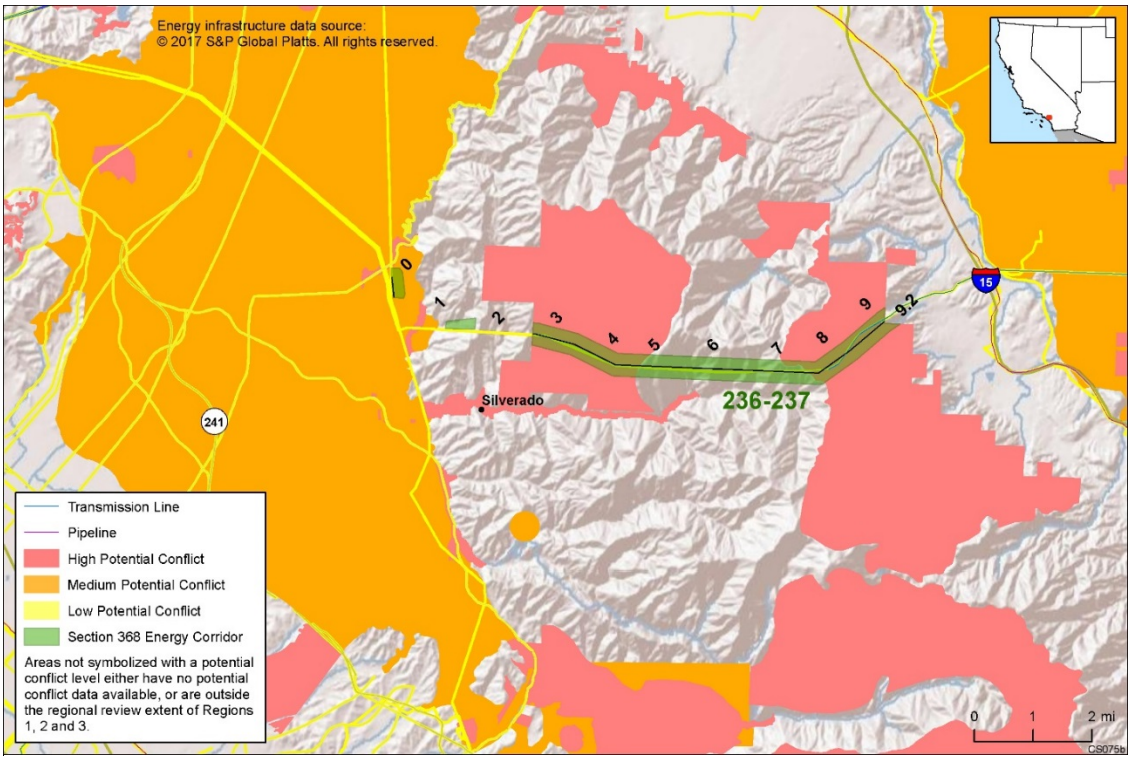


Figure 3-24 Mapping of Potential Conflict Areas in Vicinity of Corridor 236-237

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, is presented in Figure 3-24; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

Ecological Resources. The corridor scores very high in risk for both CHAT (Crucial Habitat Assessment Tool) and Imperiled Species across much of the corridor. The corridor intersects Arroyo southwestern toad and Coastal California gnatcatcher designated critical habitat. There were stakeholder suggestions in the 2014 RFI to delete or replace the corridor segment that scores very high in risk for both CHAT and imperiled species.

Agency Analysis. Crucial habitat is pervasive in the vicinity of the corridor, and there is no nearby alternative route that would avoid crucial habitat and provide continuity across the Cleveland National Forest from Arizona into the Los Angeles area in a corridor with existing infrastructure (Figure 3-24). The Cleveland National Forest would need to complete a full NEPA analysis to specifically outline where those species are located. There are currently no new designations of land status in this area, but there is high fire danger most of the year.

Specially Designated Areas. The corridor intersects Inventoried Roadless Areas (Ladd, Coldwater) from MP 2.8 to MP 4.9 and MP 7.2 to MP 9.2.

Agency Analysis. Impacts from proposed development would be analyzed as part of the project-specific environmental review required under NEPA. The USFS is unlikely to approve development of new roads within the corridor.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. 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.

Corridor 264-265

(Angeles National Forest Northwest)

Agency Jurisdiction

Forest Service

Angeles National Forest

California County

Los Angeles County

Resource Management Plan

Angeles National Forest Land Management Plan (USFS 2006a)

Corridor 264-265 Summary

Corridor 264-265 was sited consistent with a locally designated corridor. The corridor contains infrastructure and has potential for future development. Two hydroelectric power plants and substations are within 1 mile of the corridor and it is located within a RETI 2.0 TAFA that provides opportunity for the corridor to accommodate transmission tied to renewable energy development. The Workgroup has not identified any potential revisions, deletions, or additions to this corridor.

Corridor Overview: Existing Use and Opportunity

There are four transmission lines within the corridor, Francisquito Canyon Road runs parallel to and within 1 mile of the corridor. Despite existing infrastructure, the corridor could still accommodate new development. Proposed projects include an upgrade to an existing transmission line. The corridor begins near Saugus and runs 15 miles northeast toward Elizabeth Lake, California. Federally designated portions of this corridor are entirely on NFS land. The corridor is 1,000 ft wide across its entire length and is designated as a corridor that can accommodate only electrical transmission projects.

The corridor was identified as a corridor of concern in the Settlement Agreement because of critical habitat, NCA, CPW, and a USFS-Inventoried Roadless Area. Although designated critical habitat exist along and adjacent to the corridor and a USFS roadless area is adjacent to the corridor, mapping of potential conflict areas indicate there are no nearby previously disturbed alternate routes that would avoid these areas (Figure 3-25).

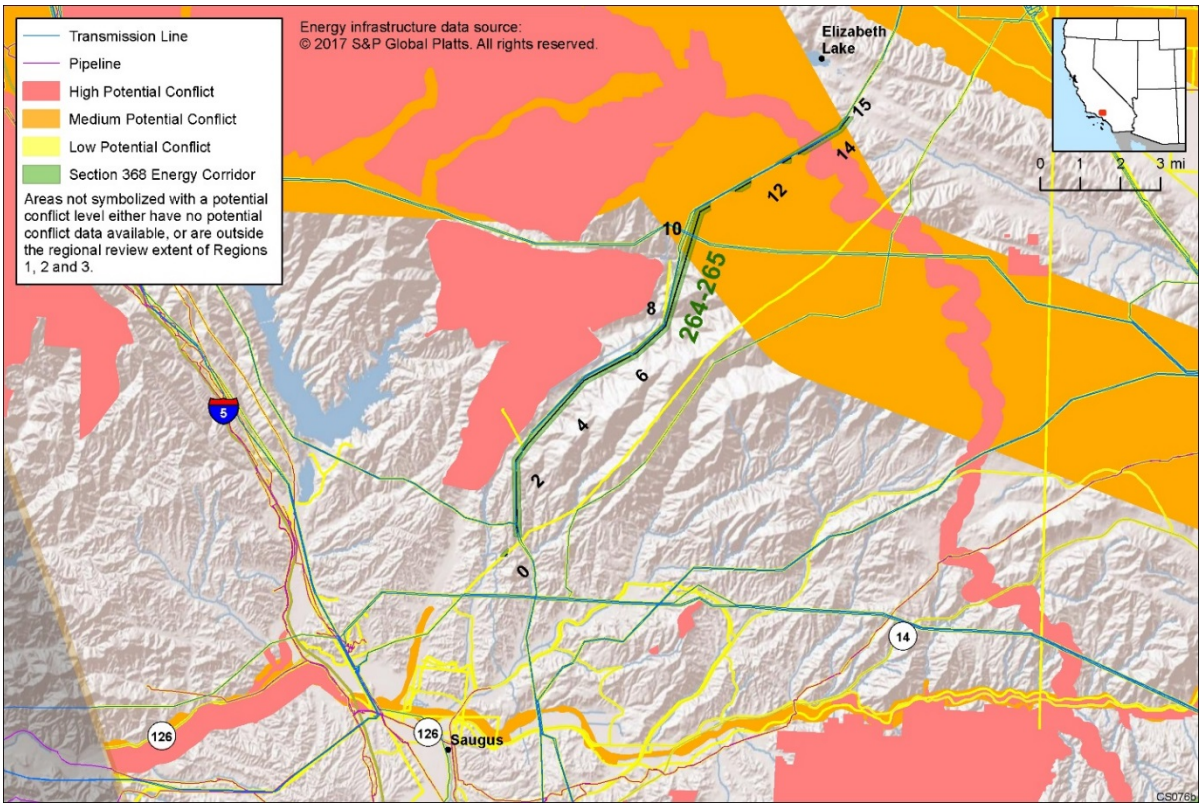


Figure 3-25 Mapping of Potential Conflict Areas in Vicinity of Corridor 264-265

General Issues Identified in Abstracts and through Stakeholder Input

The following issues were identified through the 2014 RFI; a GIS and aerial imagery evaluation of pinch points along the Section 368 energy corridors; input from stakeholders in response to the release of the draft abstracts in September 2016; and additional Agency analysis. A visual representation of potential conflict areas for which GIS data are available, as identified in Table 1-1, are presented in Figure 3-25; further information regarding specific conflict areas can be accessed through the Section 368 Energy Corridor Mapping Tool.

***Ecological Resources*.** The corridor is adjacent to the California Red-Legged Frog critical habitat. The corridor intersects Arroyo Southwestern Toad and Coastal California Gnatcatcher designated critical habitat. The Unarmored Threespine Stickleback is present in San Francisquito Creek resulting from an emergency translocation of the species there in 2014. There were stakeholder suggestions in the 2014 RFI to delete or replace the corridor segment that is adjacent to the California Red-Legged Frog critical habitat.

***Agency Analysis*.** Critical habitat for the California Red-Legged Frog is adjacent to the corridor and is avoided by the current alignment that contains existing infrastructure (Figure 3-25). Impacts on habitat and habitat connectivity can be avoided, minimized, or mitigated through activities identified and implemented in consultation with the USFWS under ESA Section 7. Analysis would be completed through the NEPA process case by case with a full range of alternatives.

Lands and Realty, Military and Civilian Aviation

- Military Training Route, visual route is located between MP 9.4 and MP 14.8.

Agency Analysis. Impacts would be analyzed and mitigated as part of the project-specific environmental review required under NEPA and other Federal laws. Adherence to IOP 1 - Project Planning regarding coordination with DoD would be required.

Specially Designated Areas

- The northern end of the corridor is adjacent to the CDCA at MP 15.
- Red Mountain Inventoried Roadless Area is located between MP 5.2 and MP 9.2.
- CPW was identified as a concern in the Settlement Agreement, but the affected portions of the corridor were not disclosed.
- Pacific Crest NST is located for 0.6 mi through the corridor from MP 13.7 to MP 14.2.

There were stakeholder suggestions in the 2014 RFI to delete or replace this corridor segment because of these concerns.

Agency Analysis. The corridor is not located in the CDCA. The Red Mountain Roadless Area is adjacent to the corridor and would not affect development and management inside the corridor. Prior to designating new corridors, conducting surface-disturbing activities in areas of designated corridors, or making future corridor revisions, the USFS would conduct a site-specific evaluation for wilderness characteristics. Impacts on the Pacific Crest NST by future development proposals would be analyzed and mitigated on a case-by-case basis but along with impacts on specially designated areas would be analyzed as part of the project-specific environmental review required under NEPA and other Federal laws.

Other Issues. Input was provided clarifying existing capacity and potential for new capacity.

Agency Analysis. 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.

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5. GIS Data Layers in Section 368 Energy Corridor Mapping Tool

GIS Data Layers in Section 368 Energy Corridor Mapping Tool by Group and Layer

Energy/Infrastructure - Electrical
Transmission Line - Operational
Transmission Line - Other
Electric Substations - Operational
Electric Substations - Other
Power Plant (EIA)
Power Plant (EIA) with Labels
Energy/ Infrastructure - Pipeline
Pipelines: Natural Gas - Operational
Pipelines: Natural Gas - Other
Pipelines: Refined Product - Operational
Pipelines: Refined Product - Other
Pipelines: Crude Oil - Operational
Pipelines: Crude Oil - Other
Energy/ Oil and Gas Resources
Bakken Shale Gas Play Elevation Contours
Bakken Shale Gas Play Isopach Contours
Niobrara Shale Gas Play Elevation Contours
Niobrara Shale Gas Play Isopach Contours
Sedimentary Basins with EIA Shale Plays
Three Forks Shale Gas Play Elevation Contours
Tight Oil/Shale Gas Plays
Energy/Energy Corridors - Section 368
Sec. 368 Corridor Label
Sec. 368 Corridor Milepost
Sec. 368 Corridor of Concern
Sec. 368 Designated Corridor
Sec. 368 Designated Corridor Centerline
Regional Review Boundary
Energy/Regional Review Assessment - Potential Conflict
Regional Review Assessment (R1) Potential Corridor Conflicts
Regional Review Assessment (R2 & 3) Potential Corridor Conflicts
Energy/ ROW Corridors - Locally Designated
Legacy Locally Designated Corridor Area
Legacy Locally Designated Corridor Centerline

Recently Approved Transmission Projects
Gateway South Preferred Route
TransWest Express Preferred Route
SunZia Preferred Route
Gateway West Preferred Route
BLM LR2000 Linear ROW Records
BLM LR2000 Linear ROW Records - Authorized
BLM LR2000 Linear ROW Records - Pending
BLM LR2000 Linear ROW Records - Expired
Energy/Energy Zones
BLM Solar Energy Zone
BLM Solar Energy Zone Labels
BLM AZ Renewable Energy Dev. Areas
BLM DRECP Development Focus Area (DFA)
BLM DRECP Variance Land
WGA Western Renewable Energy Zone
Boundary
Surface Management Agency
Boundary/Federal
BLM District Boundary
BLM District Boundary Label
BLM Field Office Boundary
BLM Field Office Label
NPS Boundary
USFS Boundary
DoD Boundary
Mixed Management (Colorado)
Boundary/State
State Boundary
State Label
Boundary/County
County Boundary
County Label
Boundary/ Public Land Survey System
Township/Range Grid Label
Section Grid
Section Grid Label
Township/Range Grid

Ecology
Gunnison Sage-grouse Critical Habitat Final Designation
ESA-Listed Species Designated Critical Habitat Areas
ESA-Listed Species Designated Critical Habitat Lines
Crucial Habitat Assessment Tool (CHAT) Data
Coachella Valley MSHCP Conservation Area Boundary
Desert Tortoise Sensitive Habitat
USFWS-identified Desert Tortoise Connectivity Areas
Greater Sage-grouse General Habitat Management Areas
Greater Sage-grouse Priority Habitat Management Area
Sagebrush Focal Area
Mohave Ground Squirrel Habitat
BLM DRECP Wildlife Allocation
Other Designated Areas/Wild and Scenic Rivers
Wild and Scenic Rivers
Wild and Scenic River Areas (USFS Data)
Proposed Wild and Scenic Rivers in Arizona
Eligible Wild and Scenic Rivers in Arizona
Other Designated Areas/Wilderness
Wilderness Study Area
Wilderness Area
Wilderness Area (USFS Data)
Other Designated Areas/National Conservation Areas and Similar Designations
National Conservation Areas and Similar Designations
Other Designated Areas/National Scenic and Historic Trails
National Historic Trails - Preliminary Data
Juan Bautista de Anza NHT Corridor
National Scenic Trails - Preliminary Data
National Study Trails - Preliminary Data
Other Designated Areas/National Monuments
National Monuments
Other Designated Areas/National Register, Landmark, Highway, Site, etc.
National Historic Landmark
National Natural Landmark
National Register of Historic Places
National Historic Site
State Scenic Highway
National Scenic Byways/All-American Roads

Other Designated Areas/Protected Areas Database (USGS GAP Analysis)
USGS Database for Protected Areas (Fed/State/Local)
Other Designated Areas/BLM Plan Allocations
Areas of Critical Environmental Concern
Lands with Wilderness Characteristics
BLM Backcountry Byway
BLM DRECP California Desert National Conservation Land
Other Designated Areas/BLM Plan Allocations - Recreation
SRMAs, except in California
Off-Highway Vehicle Open Areas, Except in DRECP
BLM DRECP Extensive Recreation Management Areas
BLM DRECP Open Off-Highway Vehicle Area
BLM DRECP Special Recreation Management Area
CA Special Recreation Mgmt. Area, not in DRECP
Other Designated Areas/USFS Inventoried Roadless Areas
USFS Inventoried Roadless Areas
Visual Class
Recreation Opportunity Spectrum
Visual Quality Objective
Scenic Integrity Objective
BLM VRM Class I
BLM VRM Class II
BLM VRM Class III
BLM VRM Class IV
BLM DRECP National Scenic Cooperative Management Area
Air and Water
Priority Areas for Air Quality
Air and Water/Hydrology
Lake
Stream
ROW Avoidance or Exclusion Areas
No Surface Occupancy Restriction Areas

Military Uses and Civilian Aviation
Military Training Route: Instrument Route Corridor
Military Training Route: Slow Route Corridor
Military Training Route: Visual Route Corridor
Air Force High Risk of Adverse Impact Zones
Navy High Risk of Adverse Impact Zones
Special Use Airspace
Utah Test and Training Range
DOD-Proposed New Land Acquisition
Airfields

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6. Glossary

A

Adjacent Transmission Circuits. Adjacent Transmission Circuits are two transmission circuits with separation between their centerlines less than 250 feet at the point of separation with no Bulk Electric System circuit between them. Transmission circuits that cross, but are otherwise separated by 250 ft or more between their centerlines, are not Adjacent Transmission Circuits.

Agencies. Collective term for the BLM, USFS, and DOE.

Alternating current (AC). An electric current that reverses its direction at regularly recurring intervals.

Area of Critical Environmental Concern (ACEC). A BLM area within public lands where special management attention is required to protect and prevent irreplaceable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards. The ACECs are part of the DRECP LUPA conservation land allocations. Defined in Section 103(a) of the Federal Land Policy Management Act (FLMPA) of 1976, as amended, and Regulation 43 Code of Federal Regulations (CFR) 1601.0-5(a).

B

Best management practice (BMP). A practice or combination of practices that are determined to provide the most effective, environmentally sound, and economically feasible means of managing an activity and mitigating its impacts.

Big game. Those species of large mammals normally managed as a sport-hunting resource.

Biota. Plants and animals.

BLM Contrast Rating. The contrast rating system is a systematic process used by BLM to analyze the potential visual impacts of proposed projects and activities. It is used as a guide, tempered by common sense, to ensure that every attempt is made to minimize potential visual impacts. The basic philosophy underlying the system is as follows: the degree to which a management activity affects the visual quality of a landscape depends on the visual contrast created between a project and the existing landscape. The contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the project. This assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts.

BLM land (also known as BLM-managed land, BLM-administered land, or public land). Land or interest in land owned by the United States and administered by the U.S. Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, but not including (1) lands on the outer continental shelf and (2) lands held for the benefit of Indians, Aleuts, and Eskimos.

BLM VRM Contrast Rating Handbook 8431. Provides an assessment process to determine visual impacts and to identify measures to mitigate those impacts.

Bureau of Indian Affairs (BIA). The BIA is the primary Federal agency charged with carrying out the United States' trust responsibility to American Indian and Alaska Native people, maintaining the Federal government-to-government relationship with the federally recognized Indian tribes, and promoting and supporting tribal self-determination. The BIA implements Federal laws and policies and administers programs established for American Indians and Alaska Natives under the trust responsibility and the government-to-government relationship.

Bureau of Land Management (BLM). An agency of the U.S. Department of the Interior that is responsible for managing public lands.

C

California Desert Conservation Area (CDCA). As defined in Section 601 of the FLMPA, the CDCA is a 25-million-acre expanse of land in Southern California designated by Congress in 1976 through the FLPMA. The BLM administers about 10 million acres of the CDCA under its CDCA Plan.

Citizen-proposed wilderness (CPW). Areas on public lands that interested citizens think should be considered for wilderness designation. These lands have been inventoried by citizens groups, conservationists, and interested stakeholders and found to have defined "wilderness characteristics."

Class I Areas. Class I areas receive the highest degree of protection, with only a small amount of certain kinds of additional air pollution allowed. Mandatory Class I areas were designated by Congress and include international parks, national wilderness areas or national memorial parks larger than 5,000 acres, or national parks larger than 6,000 acres, that were in existence (or authorized) on August 7, 1977. The 1990 amendments to the Clean Air Act specified that acreage added to these areas after 1977 must also receive Class I designation. Mandatory Class I areas may not be redesignated to any other classification.

***Code of Federal Regulations* (*CFR*).** A compilation of the general and permanent rules published in the *Federal Register* by the executive departments and agencies of the United States. It is divided into 50 titles that represent broad areas subject to Federal regulation. Each volume of the *CFR* is updated once each calendar year and is issued on a quarterly basis.

Colocation. Siting of two or more energy infrastructure systems (e.g., a transmission line and gas pipeline) within a designated energy corridor.

Connectivity flowlines. Linkage zones between core habitats. They tend to be areas that facilitate movement (e.g., areas with lowest resistance to movement).

Conservation easement. A nonpossessory interest of a holder in real property imposing limitations or affirmative obligations for the purposes of retaining or protecting natural, scenic, or open-space values of real property; ensuring its availability for agricultural, forest, recreational, or open-space use; protecting natural resources; maintaining or enhancing air or water quality; or preserving the historical, architectural, archaeological, or cultural aspects of real property.

Conservation and management actions (CMA). The specific set of avoidance, minimization, and compensation measures, and allowable and nonallowable actions for siting, design, preconstruction, construction, maintenance, implementation, operation, and decommissioning activities on BLM lands. CMAs are required for 14 different resources and 7 land allocations.

Corridor. A strip of land through which one or more existing or potential facilities may be located**.**

Corridor abstracts. See Section 368 energy corridor abstracts.

Corridor connectivity. The degree to which energy corridors can be connected.

Corridor Study (Argonne 2016). Evaluated how well the Section 368 energy corridors are achieving their purpose of promoting environmentally responsible ROW-siting decisions and reducing the proliferation of dispersed ROWs across Federal lands. It established baseline data for use in evaluating Section 368 energy corridors and identified considerations that should be explored in more detail during future periodic regional reviews.

Corridors of Concern. In the complaint filed against the West-wide Energy Corridor PEIS, Plaintiffs identified 36 of the 119 corridors listed in the PEIS as corridors of concern because of environmental concerns such as special status species habitat, proximity to specially designated areas, potential impacts on water or cultural resources, and proximity of and benefit to coal-fired generating stations.

Critical habitat. Critical habitat is defined in Section 3(5)(A) of the ESA of 1973 as (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species, and which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Designated critical habitat is protected under Section 7(a)(2) of the ESA, which requires Federal agencies to ensure that any action they fund, authorize, or carry out is not likely to result in the destruction or adverse modification of critical habitat.

Crucial Habitat Assessment Tool (CHAT). CHAT was developed to bring greater certainty and predictability to planning efforts by establishing a common starting point for discussing the intersection of development and wildlife. The Western Association of Fish and Wildlife Agencies manages the tool. CHAT is designed to reduce conflicts and surprises while ensuring wildlife values are better incorporated into land use planning, particularly for large-scale linear projects. It is a nonregulatory tool and not intended for project-level approval.

Cultural resources. Archaeological sites, structures, or features; traditional use areas; and Native American sacred site or special use areas that provide evidence of the prehistory and history of a community.

Cumulative impacts. The impacts that could potentially result from incremental impacts of an action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency, private industry, or individual undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

D

Decommissioning. Activities necessary to take out of service and dispose of a facility after its useful lifetime.

Desert National Wildlife Range (DNWR). Encompassing six major mountain ranges and seven distinct life zones, the DNWR showcases the abundance and variety of nature that can be found in Southern Nevada. Created in 1936 to provide habitat and protection for desert bighorn sheep, DNWR is the largest wildlife refuge outside of Alaska, encompassing 1.6 million acres. The DNWR transitions from the Mojave to the Great Basin Desert. Over 1.3 million acres of the refuge is proposed wilderness and has been managed as de facto wilderness since 1974.

Desert Renewable Energy Conservation Plan (DRECP). An interagency planning effort that addresses a biological conservation framework and renewable energy strategy for the California desert. The DRECP consists of the DRECP BLM LUPA (Phase 1) and a Phase II that addresses non-Federal lands. The goal of the DRECP is to provide a streamlined process for the development of utility-scale renewable energy generation and transmission consistent with Federal and state renewable energy targets and policies, while also providing for long-term conservation and management of natural, cultural, scenic, and social resources.

Desert tortoise conservation areas (TCAs). TCAs include desert tortoise habitat within critical habitat, former Desert Wildlife Management Areas, ACECs, Grand Canyon-Parashant National Monument, DNWR, NPS lands, Red Cliffs Desert Reserve, and other conservation areas or easements managed for desert tortoises.

Desert tortoise Priority 1 and 2 connectivity habitat. Least-cost corridor modeling identified potential habitat linkages between existing conservation areas that have the best chance of sustaining connectivity for desert tortoise populations. To identify these linkages, USFWS began with U.S. Geological Survey (USGS) Mojave Desert Tortoise habitat potential model, and developed a cost surface in which higher habitat potential equaled a lower cost to the desert tortoise. The linkages of least cost to the desert tortoise between pairs of conservation areas represent priority areas for conservation of desert tortoise population connectivity and are characterized as Priority 1 connectivity areas. Other blocks of habitat with the greatest potential to support populations of desert tortoises, outside least-cost corridors, may also have important value to recovery. Based on the USGS model, USFWS identified areas of contiguous, high-value desert tortoise habitat as Priority 2 connectivity areas for desert tortoise. These lands were identified by beginning with the highest habitat potential and including all habitat down to 0.6 that could be reached from the highest potential starting habitat (i.e., 0.6–1.0), excluding small, unconnected "islands."

Designated avoidance area. An area designated in a land use plan for which use for a ROW should be avoided if at all possible.

Designated leasing area (DLA). Preferred areas for renewable energy development that include BLM SEZs, DFAs, REDAs, and other areas identified for competitive purposes that are preferred locations for solar or wind energy development. DLAs would be created through the BLM land use planning process and attendant NEPA review.

Development focus area (DFA). A location in which renewable energy generation is an allowable use, is incentivized, and could be streamlined for approval under the DRCEP LUPA. The LUPA will only streamline and provide incentives for renewable energy activities sited in a DFA.

Direct current (DC). A steady current that flows in one direction only.

DoD-administered lands. Lands administered by DoD for military bases, training ranges, and so forth.

E

Ecological Reserves. Areas selected to preserve representative and special natural ecosystems, plant and animal species, and features and phenomena. Scientific research and educational purposes are the principal uses of ecological reserves.

Ecological resources. Biota (fish, wildlife, and plants) and their habitats, which may be land, air, or water.

Endangered species. Any species that is in danger of extinction throughout all or a significant portion of its range.

Endangered Species Act (ESA). The ESA requires consultation with the FWS or National Marine Fisheries Service to determine whether endangered, threatened, or other special status species or their habitats are potentially present that may be affected by a proposed activity and what, if any, mitigation measures are needed to address the impacts.

Energy corridor. Corridors designated for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on Western Federal lands under BLM or USFS management.

Environmental justice. The fair treatment of people of all races, cultures, incomes, and educational levels with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies

Erosion. The wearing away of land surface by wind or water, intensified by land-clearing practice related to farming, residential or industrial development, road building, or logging.

F

Federal Land Policy and Management Act (FLPMA). Act requiring the Secretary of the Interior to issue regulations to manage public lands and the property located on those lands for the long term.

Federal lands. Land owned by the United States, without reference to how the land was acquired or which Federal agency administers the land, including mineral and coal estates underlying private surface.

Field Office Manager. Directs the work of staff for a given BLM field office.

Flowlines. A model used to identify preferred routes across the landscape connecting permeable habitat. A flowline crossing is where a corridor crosses a flowline.

Forest Supervisor. Directs the work of district forest rangers.

Fugitive dust. The dust released from any source other than a definable point source such as stack, chimney, or vent. A source may include construction activities, storage piles, roadways, and so on.

G

Geographic information system (GIS). A computer system for performing geographical analysis. GIS has four interactive components: an input subsystem for converting into digital form (digitizing) maps and other spatial data; a storage and retrieval subsystem; an analysis subsystem; and an output system for producing maps, tables, and answers to geographic queries.

H

Habitat. The place, including physical and biotic conditions, where a plant or animal lives.

Habitat connectivity. The degree to which the landscape facilitates animal movement and other ecological flows.

Hypothetical Study Range (HSR). A purely notional, yet plausible, quantity of future additional renewable generation or imports for the RETI 2.0 Input Groups to consider and respond to.

I

Imperiled species. Those animals and plants that are in decline and may be in danger of extinction. While some imperiled species are federally protected under the ESA, many species are not because of the lack of knowledge regarding their status and the environmental factors that may threaten their future.

Import/export paths. Transmission pathways that increase energy integration and establish a mechanism for renewable energy trading.

Incidental take permit. A permit for the "incidental take" of endangered and threatened wildlife species under Section 10a(1)(B) of the ESA that allows permit holders to proceed with an activity that is legal in all other respects, but that results in the "incidental" taking of a listed species.

Infrastructure: Infrastructure refers to the fundamental facilities and systems (e.g., for the corridors, they include transmission lines and/or pipelines).

Instant Study Area (ISA). A formally designated natural and primitive area that underwent an accelerated wilderness review and, for all intents and purposes, is managed as a Wilderness Study Area.

Instrument route. The Military Training Route Program is a joint venture by the FAA and DoD developed for use by military aircraft to gain and maintain proficiency in tactical low-level flying. Instrument routes are designed to be flown 1,500 ft AGL.

Interagency operating procedure (IOP). A procedure or combination of procedures that are determined to provide the most effective, environmentally sound, and economically feasible means of managing an activity and mitigating its impacts. Agencies are required to utilize the IOPs when processing ROW applications for Section 368 energy corridors.

J

Jurisdictional gaps. Portions of the corridors crossing private or state lands, tribal lands, or undesignated DoD-, BOR-, NPS-, or USFWS-administered lands.

L

Land and Resource Management Plan. A USFS Land and Resource Management Plan finalizes the collaborative efforts between the public and the USFS for guiding future forest planning. A concerted effort of USFS and civilian scientists, biologists, foresters, and other specialists contribute to and support the findings and recommendations in a plan. A Land and Resource Management Plan is developed to guide all natural resource management activities and establish standards/guidelines for a National Forest. The purpose of the plan is to provide for the use and protection of Forest resources, fulfill legislative requirements, and address local, regional, and national issues and concerns.

Land use. A characterization of land surface in terms of its potential utility for various activities.

Land Use Plan Amendment (LUPA). The LUPA is a set of decisions that establishes management direction for BLM-administered land within an administrative area through amendment to existing land use plans.

Land use plans. A set of decisions that establish management direction for land within an administrative area, as prescribed under the provisions of FLPMA; an assimilation of land-use-plan-level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the state at which the decisions were developed. See also resource management plan.

Lands with Wilderness Characteristics. Wild places largely untouched by development. In order for an area to qualify as lands with wilderness characteristics, the area must possess sufficient size, naturalness, and outstanding opportunities for either solitude or primitive and unconfined recreation.

Legislatively and Legally Protected Areas (LLPAs). Existing protected lands, including: Wilderness Areas, National Monuments, National Parks, National Preserves, National Wildlife Refuges, California State Parks and Recreation Lands, CDFW Conservation Areas (Ecological Reserves and Wildlife Areas), CDFW areas, privately held conservation areas including mitigation/conservation banks approved by the USFWS and CDFW, land trust lands, WSAs, WSRs, and NSTs and NHTs.

Linear right-of-way (ROW). A ROW that extends over a long distance within a relatively narrow corridor such as an electrical transmission line or pipeline.

Locally designated corridors. ROW corridors for linear projects identified by BLM and USFS administrative units. Locally designated corridors function on a smaller scale than Section 368 corridors, and their future use is not limited to energy transport.

Los Angeles Basin. A sedimentary basin located in southern California, in a region known as the Peninsular Ranges. The basin is connected to an anomalous group of east–west trending chain of basins collectively known as the California Transverse Ranges. The Los Angeles Basin is a coastal lowland area, whose floor is marked by elongate low ridges and groups of hills, that is located on the edge of the Pacific plate.

Lower Colorado River Multi-Species Conservation Program (LCRMSCP). Created to balance the use of the Colorado River water resources with the conservation of native species and their habitats. The program works toward the recovery of species currently listed under the ESA. It also reduces the likelihood of additional species listings. Implemented over a 50-year period, the program accommodates current water diversions and power production, and will optimize opportunities for future water and power development by providing ESA compliance through the implementation of a Habitat Conservation Plan.

LUPA Decision Area. The lands within the LUPA area for which the BLM has the authority to make land use and management decisions. This includes all BLM-administered lands within the interagency DRECP Plan Area, as well as BLM-administered lands within the CDCA outside of the interagency DRECP Plan Area. It excludes some LLPAs and all lands within 1 mile of the Colorado River, which are administered by the BLM Arizona State Office.

M

Management prescription. Management instructions for protecting the specific natural or cultural resource for which an ACEC was designated.

Megawatt (MW). A unit of power equal to 1 million watts (equivalent to 1 joule per second). One megawatt serves about 300 homes in the western United States based on national data.

Memorandum of Understanding (MOU). A bilateral or multilateral agreement between two or more parties. It expresses a convergence of will between the parties, indicating an intended common line of action. It is often used in cases in which parties either do not imply a legal commitment or in situations in which the parties cannot create a legally enforceable agreement.

Military training route. A designated corridor of airspace with defined vertical and lateral dimensions established for conducting military flight training at airspeeds in excess of 250 nautical miles per hour.

Mitigation. As defined under NEPA, mitigation includes (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

Mitigation hierarchy. In order of desired ranking, the mitigation hierarchy consists of avoidance, minimization, rectification, reduction, or elimination of impacts over time and/or compensation.

Multimodal. Characteristic of an energy corridor to accommodate both electrical transmission and pipeline projects.

N

National Backcountry Byways. Roads that have been designated by the BLM as scenic byways. Backcountry byways focus on the out-of-the-way sights to be found on gravel, dirt, or paved roads. These routes may not be suitable for all vehicles.

National Conservation Area (NCA). A designation for certain protected areas in the United States. NCAs are managed by the BLM under the National Landscape Conservation System. Restrictions vary between these conservation areas, but generally they are not leased or sold under mining laws and motorized vehicle use is restricted.

National Environmental Policy Act (NEPA). NEPA requires Federal agencies to prepare a detailed statement on the environmental impacts of their proposed major actions significantly affecting the quality of the environment.

National Forest System lands. Largely forest and woodland areas owned collectively by the American people through the Federal Government, and managed by the USFS, a division of the USDA.

National Historic Preservation Act. A Federal law providing that property resources with significant national historic value be placed on the *National Register of Historic Places*. It does not require permits; rather, it mandates consultation with the proper agencies whenever it is determined that a proposed action might have an impact on an historic property.

National Historic Trail (NHT). A trail designated by Congress under the National Trails System Act of 1968 and follows, as closely as possible, on Federal land, the original trails or routes of travel that have national historic significance.

National Landscape Conservation System (NLCS), more recently referred to as National Conservation Lands (NCL). In accordance with and as defined by Public Law 111-11 in the Omnibus Public Land Management Act of 2009 (PL 111-11), Sections 002(a),(b)(1)(A–F) and (b)(2)(D), the NLCS is a BLM land use designation to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations. Areas specially designated as part of the NLCS in PL 111-11 are Wilderness, Wilderness Study Areas, National Monuments, NSTs, NHTs, and National WSRs. These NLCS lands are part of the LLPAs in the DRECP LUPA. PL 111-11 also directed BLM to designate public land within the CDCA administered for conservation purposes as part of the NLCS. These lands are the California Desert National Conservation Lands (CDNCL) and are part of the LUPA conservation designations. The CDNCL designated in the DRECP LUPA are an addition to the other components of the NLCS. The DRECP LUPA CMAs use the terms and acronyms NLCS, CDNCL, and NCL interchangeably.

National Monument. An historic site or geographical area set aside by a national government and maintained for public use. One of several Federal agencies can manage national monuments: the NPS, USFS, USFWS, or BLM. Historically, some national monuments were managed by the War Department. Areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave, or even a living feature such as an ancient grove.

National Park Service (NPS). An agency of the U.S. Department of the Interior that is responsible for managing the natural and cultural resources of the 417 units (as of January 2017) of the National Park System.

National Preserve. A type of NP - protected area designated by the U.S. Congress that has characteristics normally associated with National Parks but where certain natural resource-extractive activities such as fishing, hunting, mining, and oil/gas exploration and extraction are permitted.

National Recreation Area (NRA). An area designated by Congress to ensure the conservation and protection of natural, scenic, historic, pastoral, fish, and wildlife values and to provide for the enhancement of recreational values.

National Scenic Byway. A road recognized by the U.S. Department of Transportation for one or more of six intrinsic qualities: archeological, cultural, historic, natural, recreational, and scenic. Established by Congress in 1991 to preserve and protect the nation's scenic but often less-traveled roads and promote tourism and economic development. The Federal Highway Administration administers the National Scenic Byways Program.

National Wildlife Refuge. A designation for certain protected areas of the United States managed by the USFWS. The National Wildlife Refuge System is the system of public lands and waters set aside to conserve America's fish, wildlife and plants.

Native American. Of, or relating to, a tribe, people, or culture that is indigenous to the United States.

Neotropical migrants. Birds that breed in Canada and the United States during summer and that winter in Mexico, Central America, South America or the Caribbean islands.

Non-Federal land: Lands not owned or administered by Federal land management agencies.

O

Off-highway vehicle (OHV) or off-road vehicle. Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; except that such term excludes (1) any regulated motorboat; (2) any military, fire, emergency, or law enforcement vehicle when used for emergency purposes: and (3) any vehicle whose use is expressly authorized by the respective agency head under a permit, lease, license, or contract.

OHV Area. Designated open-use public land where you can ride OHVs anywhere your skill and machine will take you.

Omnibus Public Land Management Act of 2009. This act protects more than 2 million acres of land as Wilderness in nine states; designates over 1,000 miles of WSRs; and establishes 3 new National Parks, 3 NCAs, 4 National Trails, 10 National Heritage Areas, and a new National Monument. It also creates several water conservation, habitat restoration, and land management programs, and gives formal recognition to the 26-million-acre NLCS established in 2000 to encompass BLM's National Monuments, Conservation Areas, Wilderness and Wilderness Study Areas, WSRs, and Scenic and Historic Trails. The OPLMA also requires the preservation of paleontological resources.

P

Paleontological resources. Fossilized remains, traces, or imprints of organisms, preserved in or on the Earth's crust, that are of paleontological interest and that provide information about the history of life on Earth, except that the term does not include any materials associated with an archaeological resource or any cultural item. (16 U.S.C. 470aaa(4).)

Platts. S&P Global Platts is the leading independent provider of information and benchmark prices for the commodities and energy markets.

Polarized glare. Glare caused when light from the sun reflects off water or a solid surface.

Priority 1 and 2 connectivity habitat. See desert tortoise.

Programmatic Environmental Impact Statement (PEIS). A PEIS evaluates the effects of broad proposals or planning-level decisions that may include any the following: (1) a wide range of individual projects; (2) implementation over a long timeframe; and/or (3) implementation across a large geographic area. The level of detail in a PEIS is sufficient to allow informed choice among planning-level alternatives and to develop broad mitigation strategies. Collaboration among Federal, state, and local agencies and tribes is especially important in a PEIS process. The PEIS does not evaluate project-level issues such as precise project footprints or specific design details that are not yet ready for decision at the planning level. Instead, a PEIS is an excellent means for examining the interaction among proposed projects or plan elements and for assessing cumulative effects.

Public land. See BLM land.

Q

Queued generation. An inventory of pending electricity generation project upgrade or new transmission service requests to obtain power line interconnection with Regional Transmission Organizations.

R

Reclamation-administered land. Land administered by the BOR.

Record of Decision (ROD). A document separate from but associated with an EIS that publicly and officially discloses the responsible agency's decision on the EIS alternative to be implemented.

Recreation retracement route. A designated recreational trail consisting of existing trails that are linked along a historic route.

Region 1. One of six priority regions for Section 368 energy corridors. Region 1 includes parts of southern California, southern Nevada, and western Arizona. Region 1 includes 24 designated Section 368 energy corridors. Most contain existing energy transport infrastructure, and several have pending or active ROW applications.

Regional Periodic Reviews. They examine new relevant information and stakeholder input of Section 368 energy corridors and, based on this information, develop proposed revisions, deletions, or additions to the corridors and the IOPs. The regional reviews are not a NEPA process and therefore do not encompass the level of analysis required under NEPA.

Renewable Energy Development Area (REDA). Lands with low known resource sensitivity and the nominated sites on BLM-administered lands in Arizona for development of renewable energy established in the ROD for the RDEP (see Restoration Design Energy Project).

Renewable Energy Transmission Initiative (RETI) 2.0. The California Energy Commission, California Public Utilities Commission, and the California Independent System Operator initiated the Renewable Energy Transmission Initiative (RETI) 2.0. RETI 2.0 evaluated where potential new utility-scale renewable energy generation could be developed and assessed what transmission may be needed to deliver this energy to California's load centers. The project concluded with the posting of the final plenary report to http://www.energy.ca.gov/reti/reti2/documents/.

Renewable Portfolio Standard (RPS). A regulatory mandate to increase production of energy from renewable sources such as wind, solar, biomass, and other alternatives to fossil and nuclear electric generation. It's also known as a renewable electricity standard.

Renewable resources. A resource that can be used repeatedly because it is replaced naturally. Examples are wind, solar, geothermal, and biomass.

Request for Information (RFI). Published by the Agencies in 2014, in order to solicit information from interested stakeholders that would assist the Agencies in developing the Corridor Study and provide the foundation for the initial regional periodic review (see Corridor Study).

Resource Management Plan (RMP). A land use plan that establishes land use allocations, multiple use guideline, and management objectives for a given BLM planning area.

Restoration Design Energy Project (RDEP). A BLM Arizona initiative to identify lands across the state that may be suitable for the development of renewable energy.

Right-of-way (ROW). Public land authorized to be used or occupied pursuant to a ROW grant. A ROW grant authorizes the use of a ROW over, under, or through public lands for construction, operation, or maintenance and termination of a project.

Roadless Area. Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration under the Wilderness Act and that were inventoried during the USFS Roadless Area Review and Evaluation process, subsequent assessments, or forest planning.

S

Scenery management system (SMS). The SMS provides a systematic approach for determining the relative value and importance of scenery in National Forest lands. Ecosystems provide the environmental context for the SMS. Ecosystems as recreational settings greatly affect the quality and effectiveness of the recreation experience. A key attribute of recreation settings is the quality of aesthetics. The SMS is to be used in the context of ecosystem management to inventory and analyze scenery on National Forest lands, to assist in establishment of overall resource goals and objectives, to monitor scenic resources, and to ensure high-quality scenery for future generations.

Scenic Class Inventory. The identification of the visual resources of an area and the assignment of them to inventory classes using BLM's visual resource inventory process. The process involves rating the visual appeal of a tract of land, measuring public concern for scenic quality, and determining whether the tract of land is visible from travel routes or observation points. The results of the visual resource inventory become an important component of BLM's RMP for the area.

Scenic integrity objectives (SIOs). Scenic integrity objectives establish limits of acceptable human alterations as the landscape moves toward a landscape character goal in terms of scenic diversity and overall positive elements, described as form, line, color, and texture.

Section 7 of the ESA. Section 7 of the ESA, called "Interagency Cooperation," is the mechanism by which Federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species.

Section 10 of the ESA. Section 10 of the ESA is designed to regulate a wide range of activities affecting plants and animals designated as endangered or threatened, and the habitats upon which they depend. With some exceptions, the ESA prohibits activities affecting these protected species and their habitats unless authorized by a permit from the USFWS or the National Oceanic and Atmospheric Administration–Fisheries. Permitted activities are designed to be consistent with the conservation of the species.

Section 368 energy corridor abstracts. The abstracts describe the current status and characteristics of the Section 368 energy corridors, document known concerns, and assist the Agencies and the public in identifying additional opportunities and concerns and in analyzing whether the corridors effectively meet current and projected energy needs or, if not, whether they are inadequate due to limited remaining capacity, site-specific conflicts, or other considerations.

Section 368 Energy Corridor Mapping Tool. An interactive GIS tool, available for public access, that includes much of the geospatial data (including those for existing and planned infrastructure) supporting the analysis of whether a Section 368 energy corridor may require revision, deletion, or addition to accommodate changing conditions. The data content will change over time as additional data are collected.

Section 368 energy corridors. Preferred locations for energy transport projects on lands managed by BLM and USFS, but do not require future projects to use the designated corridors. The Section 368 energy corridors, also referred to as West-wide energy corridors, are intended to facilitate long-distance transport of oil, gas, or hydrogen via pipelines and high-voltage electricity via transmission lines.

Section 368 of the EPAct of 2005. The EPAct of 2005 directed the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate, under their respective authorities, corridors on Federal land in the 11 Western States for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities. In addition, EPAct directed the Agencies to establish procedures that ensure additional corridors are identified and designated, as necessary.

Section 368 Guidebook. A synthesis/analysis of existing or emerging West-wide transmission, pipeline and energy future studies of importance to the Section 368 Energy Corridor Regional Reviews being prepared by the National Renewable Energy Laboratory (NREL).

Sensitive species. BLM special status species are: (1) species listed or proposed for listing under the Endangered Species Act (ESA), and (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the ESA, which are designated as Bureau sensitive by the State Director(s). All Federal candidate species, proposed species, and delisted species in the 5 years following delisting will be conserved as Bureau sensitive species. On National Forests and Grasslands, sensitive species are species within USFS-administered lands that need special management to maintain and improve their status and prevent a need for their listing under the ESA.

Settlement Agreement (July 2012). Specified certain actions the Agencies must take to ensure that revisions, deletions, and additions to Section 368 energy corridors are thoughtfully sited to provide maximum utility and minimum impacts; to promote efficient use of the landscape; to define appropriate and acceptable uses for specific corridors; and to ensure the corridors provide connectivity to renewable energy generation to the maximum extent possible while also considering other sources of generation.

Site-type ROW. An areal ROW such as a communication site or power substation. It is in contrast to a linear ROW.

Sky Islands. Isolated mountains surrounded by radically different lowland environments.

Solar Energy Development Programmatic Environmental Impact Statement (Solar PEIS). Prepared by the Office of Energy Efficiency and Renewable Energy, DOE, and BLM to evaluate utility-scale solar energy development, to develop and implement Agency-specific programs or guidance that would establish environmental policies and mitigation strategies for solar energy projects, and to amend relevant BLM land use plans with the consideration of establishing a new BLM Solar Energy Program.

Solar Energy Zones (SEZs). Seventeen areas identified in the Solar PEIS (BLM and DOE 2012) and two areas subsequent to the PEIS that are well-suited for utility-scale production of solar energy and are priority areas for utility-scale solar energy transmission ROWs. SEZs were established to facilitate near-term utility-scale solar energy development on BLM-administered lands, minimize potential negative environmental impacts, and optimize existing transmission infrastructure and corridors.

Southern California Wildlands Linkage. Areas where maintenance or restoration of ecological connectivity is essential for conserving the unique biological diversity of Southern California's deserts. Identification of these key areas of connectivity will help inform land management and conservation decisions, infrastructure improvements, and mitigation options in the face of future land-use pressures as well as climate change. Another goal of the project was to produce implementable linkage designs and provide the necessary data and information to inform land management, land acquisition, restoration (e.g., habitat restoration and restoration of permeability across transportation barriers), and stewardship in connectivity zones.

Special Recreation Management Area (SRMA). Designation on BLM-administered lands that are recognized and managed for their recreation opportunities, unique value, and importance. SRMAs are high-priority areas for outdoor recreation as defined in the *BLM Land Use Planning Handbook H-1601-1* (2005). It is a public lands unit identified in land use plans to direct recreation funding and personnel to manage for a specific set of recreation activities, experiences, opportunities, and benefits. Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market—destination, community, or undeveloped areas.

Special status species (threatened, endangered, sensitive, rare). Plant and animal species that are officially listed as threatened or endangered or are proposed or are candidates for listing as threatened or endangered under provisions of the ESA; also, those species listed by a state in a category such as threatened or endangered, and those designated as sensitive by individual BLM state directors.

Special Use Airspace. Airspace of defined dimensions identified by an area on the surface of the Earth wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities.

Specially designated areas. Includes a variety of areas that have received recognition or designation because they possess unique or important resource values. While these areas would not be available for development of solar energy resources, they could be located near solar development areas and could be affected by solar development. Examples of BLM-administered specially designated areas include components of the BLM NLCS, ACECs, SRMAs, and areas with wilderness values. These areas may have been designated by Congress or by the BLM. The majority of specially designated areas discussed in this PEIS are located on BLM-administered public lands; however, some specially designated areas managed by the USFS, USFWS, NPS, and states also are included in the analysis when they could be affected by solar development on public lands.

Stakeholders. Persons or groups with interests or concerns in the Section 368 energy corridors. They help identify concerns and opportunities and, ultimately, potential revisions, deletions or additions to corridors. Stakeholders include, but are not limited to Federal, state, and local agencies, governors, county commissioners, Tribes, BLM resource advisory councils, Settlement plaintiffs and NGOs, industry, and the public.

Surface. Class E airspace, surface area (flight floor is ground surface, or 0 ft AGL).

Surface disturbance caps. Limit on ground-disturbing activities within BLM ACECs and/or National Conservation Lands as called for in the DRECP LUPA alternatives. Expressed as a percentage of total ACEC and/or National Conservation Land unit acreage and cumulatively considers past, present, and future disturbance. Baseline (past and present) disturbance would be determined by the most current imagery and knowledge at the time of an individual project proposal.

T

Threatened species. Any species that is likely to become endangered within the foreseeable future throughout all or a significant part of its range.

Tortoise Conservation Areas (TCAs). See desert tortoise.

Translocation area. An area for relocating desert tortoises to nearby protected critical habitats or lands identified as TCAs.

Transmission Assessment Focus Area (TAFA). A TAFA is a potential renewable resource area within California, import–export paths, and areas outside California identified for further assessment by environmental, land use, and transmission experts. The TAFAs are a geographic grouping of renewable energy resource potential used during RETI 2.0 to explore potential transmission, environmental, and land use implications of large-scale development.

Transmission lines. Linear facilities that move electricity from generating sites to electrical substations and then on to the electrical distribution network. Transmission lines generally consist of (1) *collector lines, or generator interconnection lines (gen-tie lines)* that connect generation projects to collector substations; (2) *connector lines* that connect lower voltage substations with higher voltage substations; and (3) *delivery lines* that support the long-distance, bulk power transfer of electricity between generation centers and load centers, generally at high voltage.

Tribal land. Includes all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities.

Tribe. Term used to designate a federally recognized group of American Indians and their governing body.

U

Unofficial Off-Highway Vehicle (OHV) recreation trail: User-made routes with little or no management. These routes generally developed without environmental analysis or public involvement. They do not have the same status as roads and trails included in the National Forest transportation system. Often, unauthorized routes are poorly located and can result in severe land, stream and habitat impacts. An unauthorized route can be designated for OHV use only after it has been added to the forest transportation system.

U.S. Department of Energy (DOE): The mission of the DOE is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.

U.S. Fish and Wildlife Service (USFWS): Agency whose mission is conserving, protecting, and enhancing fish, wildlife, and plants and their habitats for the continuing benefit of the American people.

U.S. Forest Service (USFS): The Federal agency that manages and protects 154 National Forests and 20 Grasslands in 43 states and Puerto Rico. The agency's mission is to sustain the health, diversity, and productivity of the nation's Forests and Grasslands to meet the needs of present and future generations.

V

Variance Process Lands. Represent portions of the BLM Solar PEIS Variance Lands and other BLM lands identified through the DRECP LUPA. These lands are potentially available for renewable energy development, but projects would not be streamlined, nor incentivized, and have a specific set of CMAs.

Vehicular Recreation Area. OHV parks that are operated by the Off-Highway Motor Vehicle Recreation Division of California State Parks. Each Vehicular Recreation Area has an operational program that provides (in most locations) the following services: trails, tracks, and other OHV recreation opportunities; restrooms, camping, shade ramadas, water; and OHV parts store; public safety, including law enforcement, first aid, and search and rescue; maintenance including repair and maintenance of OHV trails, buildings, equipment, and public use facilities; interpretive and educational activities and publications promoting safe and responsible OHV recreation; and resource management designed to sustain OHV opportunities and protect and enhance wildlife habitat, erosion control, revegetation, and so forth.

Visual Resource Management (VRM) Classes. BLM categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four VRM classes (I–IV). Each class has an objective that prescribes the amount of change allowed in the characteristic landscape as follows:

- *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.

Visual Resources: Refers to all objects (man-made and natural, moving and stationary) and features such as landforms and water bodies that are visible on a landscape.

Visual Route. The Military Training Route Program is a joint venture by the FAA and the DoD developed for use by military aircraft to gain and maintain proficiency in tactical low-level flying. Visual routes are designed to be flown at 1,500 ft AGL and below.

W

Western Electricity Coordinating Council (WECC). WECC promotes bulk electric system reliability in the Western Interconnection. It is the regional entity responsible for compliance monitoring and enforcement. In addition, WECC provides an environment for the development of reliability standards and the coordination of the operating and planning activities of its members as set forth in the WECC Bylaws. The WECC Region extends from Canada to Mexico and includes the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and all or portions of the 14 western states between.

West-wide Energy Corridor. See Section 368 energy corridors.

Wild and Scenic River (WSR). The National Wild and Scenic Rivers System was created by Congress in 1968 (Public Law 90-542; 16 USC 1271 et seq.) to preserve certain rivers (or river segments) with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. Rivers may be designated by Congress or, if certain requirements are met, by the Secretary of the Interior. Each river (or river segment) is administered by either a Federal or state agency.

Wilderness Area: An area of Federal land designated by an act of Congress to be protected in its natural condition according to the requirements of the Wilderness Act of 1964.

Wilderness characteristics. Wilderness characteristics include (1) naturalness, the area generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) outstanding opportunities, the area has either outstanding opportunities for solitude or outstanding opportunities for primitive and unconfined types of recreation; (3) size, the area is at least 5,000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) values, the area may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Wilderness Study Area (WSA). Area designated by a Federal land management agency as having wilderness characteristics, which makes them worthy of consideration by Congress for wilderness designation.

Wildlife corridors. Linear spaces that connect various areas of an animal's habitat (i.e., links between feeding, watering, resting, breeding, or seasonal habitats).

Wind and Solar Leasing Rule. The Wind and Solar Leasing Rule creates a competitive system for solar and wind energy development on Federal lands. It also establishes fees based on megawatt capacity for wind and solar energy projects in order to capture a fair market value and a fair return for taxpayers.

West-Wide Energy Corridor PEIS. Considered 11 contiguous western states for the possible construction, operation, maintenance, and decommissioning and dismantling of energy infrastructure such as oil and gas pipelines and electric transmission lines. The states considered were Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. The West-wide Energy Corridor PEIS identified potential corridors; evaluated effects of potential future development within designated corridors; identified mitigation measures for potential impacts of future projects; and developed IOPs applicable to planning, construction, operation, and decommissioning of future projects within the corridors.

West-Wide Energy Corridor Information Center. An online source for public information for the designated Section 368 energy corridors.

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Appendix A: Contemplation of Siting Principles for Potential Revisions, Deletions, or Additions to Region 1 Section 368 Energy Corridors

Appendix A: Contemplation of Siting Principles in Developing Potential Revisions, Deletions, or Additions to Region 1 Section 368 Energy Corridors				
Section 368 Energy Corridor No.	***Corridor Siting Principle 1: Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment***	***Corridor Siting Principle 2: Corridors promote efficient use of the landscape for necessary development***	***Corridor Siting Principle 3: Appropriate and acceptable uses are defined for specific corridors***	***Corridor Siting Principle 4: Corridors provide connectivity to renewable energy generation while considering other sources of generation, to balance renewable sources and ensure safety and reliability of electricity transmission***
23-25 **Potential revision**	Corridor of concern for critical habitat, National Conservation Area, Area of Critical Environmental Concern. While specially designated areas, desert tortoise habitat and priority habitat for the Mohave Ground Squirrel, exist in or near the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas and provide a pathway for additional energy transport. This corridor contains infrastructure. The Agencies' consideration to revise the corridor from MP 0 to MP 18 would reduce the length of undesignated gaps in the corridor and improve north-south continuity for energy transport.	This corridor, which was sited consistent with a locally designated California Desert District energy corridor, follows U.S. Route 395 throughout most of its length and includes transmission lines and pipelines within the corridor. This corridor connects to Corridor 23-106, which provides a northern route to Corridor 18-23. The Agencies suggest that BLM analyze additional BLM-administered lands south of MP 83 for corridor designation in a future land use plan amendment.	Multimodal (designated for electrical transmission and pipeline projects).	Potential exists for future utility-scale solar energy development in the Indian Wells Valley. This corridor is adjacent to a DFA, which allows the corridor to accommodate transmission tied to renewable energy development. This corridor is located within the Victorville/Barstow RETI 2.0 TAFA.
23-106 **Potential revision**	Corridor of concern for National Conservation Area, Area of Critical Environmental Concern. This corridor overlaps special status species habitat and specially designated areas throughout its length. However, the	This corridor was sited consistent with a locally designated California Desert District energy corridor, includes multiple transmission lines, and is aligned with State Highway 14 and U.S. Highway 395.	Multimodal (designated for electrical transmission and pipeline projects).	Many wind energy power plants exist near Mojave at the southern end of the corridor and west of the corridor. There is potential for future utility-scale solar energy development in the Indian Wells Valley. There is a DFA

Appendix A: Contemplation of Siting Principles in Developing Potential Revisions, Deletions, or Additions to Region 1 Section 368 Energy Corridors				
Section 368 Energy Corridor No.	***Corridor Siting Principle 1: Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment***	***Corridor Siting Principle 2: Corridors promote efficient use of the landscape for necessary development***	***Corridor Siting Principle 3: Appropriate and acceptable uses are defined for specific corridors***	***Corridor Siting Principle 4: Corridors provide connectivity to renewable energy generation while considering other sources of generation, to balance renewable sources and ensure safety and reliability of electricity transmission***
	mapping of conflict areas indicates there is no nearby alternative route that would avoid these areas in a previously disturbed setting with significant infrastructure, like the setting for this corridor. Potential corridor revision includes re-aligning the corridor to the west or braiding around the Red Rock Canyon State Park. This corridor revision would preserve width and capacity within the corridor.			located at the northern end of the corridor; the southern portion is adjacent to small blocks of DFAs, as well as a larger block designated as VPL.
27-41 **Potential addition**	While desert tortoise habitat and areas of habitat connectivity are present in the corridor, the mapping of conflict areas indicates there is no previously disturbed alternative route in the vicinity of this corridor that would avoid these areas. The corridor contains infrastructure.	This corridor was sited consistent with a locally designated California Desert District energy corridor, follows natural gas pipelines for most of its length, and includes transmission lines for approximately 35 miles. Interstate 40 is located within the corridor for approximately 35 miles. An addition to this corridor originating in California to link to corridors in Arizona would facilitate connectivity with Corridors 41-46 and 41-47 near Laughlin, NV, providing a contiguous corridor between states, and could help the Agencies achieve the purpose of Section 368 energy corridors designation to serve the national	Multimodal (designated for electrical transmission and pipeline projects). A portion of the corridor is within and/or adjacent to a DFA. The Agencies suggest coordination by the BLM and USFS to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within the corridor.	Two solar energy power plants are near the western end of the corridor, a segment of the corridor is within and/or adjacent to a DFA, and another segment is about 1.5 miles or more north of a large portion of a DFA. A segment of the corridor is near the RETI 2.0 Victorville/Barstow TAFA.

Appendix A: Contemplation of Siting Principles in Developing Potential Revisions, Deletions, or Additions to Region 1 Section 368 Energy Corridors				
Section 368 Energy Corridor No.	***Corridor Siting Principle 1: Corridors are thoughtfully sited to provide maximum utility and minimum impact on the environment***	***Corridor Siting Principle 2: Corridors promote efficient use of the landscape for necessary development***	***Corridor Siting Principle 3: Appropriate and acceptable uses are defined for specific corridors***	***Corridor Siting Principle 4: Corridors provide connectivity to renewable energy generation while considering other sources of generation, to balance renewable sources and ensure safety and reliability of electricity transmission***
		energy transmission and pipeline system. This corridor connects to Corridors 27-266 and 27-225.		
27-225 **Potential revision**	Desert tortoise habitat, bighorn sheep connectivity, and specially designated areas exist along the corridor. However, the mapping of conflict areas indicates there are no nearby previously disturbed alternative routes that would avoid these areas and still provide an important energy transport pathway extending from Wyoming to southern California. This corridor also contains infrastructure. The Agencies have identified a potential corridor revision to widen the corridor while avoiding undeveloped areas to minimize impact on the environment. An additional braided channel using a locally designated corridor would add physical capacity to the corridor.	This corridor was sited consistent with a locally designated California Desert District energy corridor throughout its length, has multiple transmission lines throughout most of its length, and follows Interstate 15 within and along the corridor. Potential revisions include widening a corridor that is already crowded with transmission infrastructure, pipelines, a natural gas power plant, and significant solar development, or following an existing locally designated corridor. This corridor connects to Corridors 27-266 and 27-41 at the west end and to Corridors 224-225 and 225-231 at the east end.	Multimodal (designated for electrical transmission and pipeline projects).	The southwestern portion of the corridor is located near a DFA. Three solar energy power plants are in or near the corridor at the southwestern end, and four power plants (three solar and one natural gas) are in or near the northeastern end from MP 94.5 to MP 102.5. Portions of the corridor are within the RETI 2.0 Victorville/Barstow TAFA. The corridor is located within the RETI 2.0 HSR to support 3,000 MW of renewable energy transmission to and from Nevada or adjacent states.
27-266 **no change**	While habitat for special status species and specially designated areas exists along portions of the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid	This corridor was sited consistent with a locally designated California Desert District energy corridor and has transmission lines throughout its length. Two highways cross the	Multimodal (designated for electrical transmission and pipeline projects).	There are 29 power plants and 26 solar energy plants near the corridor. The corridor is located within the Victorville/Barstow RETI 2.0 TAFA.

Appendix A: Contemplation of Siting Principles in Developing Potential Revisions, Deletions, or Additions to Region 1 Section 368 Energy Corridors				
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	these areas. This corridor has no gaps and contains infrastructure.	corridor, but none parallel the corridor. This corridor connects to Corridors 27-225 and 27-41.		
30-52 **Potential revision**	The corridor overlaps special status species habitat and specially designated areas throughout its length. However, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas. This corridor contains significant infrastructure. Corridor revisions have been identified near Blythe, California, Copper Bottom Pass, Arizona, and near Quartzsite, Arizona, to avoid local communities and challenging terrain.	In California, the corridor and corridor width were sited consistent with a locally designated California Desert District energy corridor and is occupied by five major transmission lines and several major natural gas pipelines. The corridor follows Interstate 10 throughout its length in California and Arizona.	Multimodal (designated for electrical transmission and pipeline projects). The Riverside East SEZ overlaps the corridor in California, and REDAs overlap the corridor in Arizona. The Agencies suggest coordination by the BLM and USFS to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within the corridor.	The Riverside East SEZ overlaps the corridor in CA; the Brenda SEZ is located 3 miles from the corridor in Arizona, and REDAs overlap the corridor in Arizona. The corridor is also located within the RETI 2.0 Riverside East TAFA and the RETI 2.0 HSR to support 3,000 MW of renewable energy transmission to and from Arizona (or adjacent states).
37-39 **no change**	While desert tortoise connectivity habitat exists throughout the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid desert tortoise habitat and also provide linkage to other Section 368 energy corridors. This short corridor was sited to connect two long-distance energy transmission corridors across an area	A natural gas pipeline follows the northwestern portion of the corridor, and there is an existing ROW issued for the development of a 230-kV transmission line along the corridor. The corridor links to Corridors 39-113, 39-231, and 37-232.	Multimodal (designated for electrical transmission and pipeline projects).	The Dry Lake SEZ is 3.2 miles north of the corridor.

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	with energy development infrastructure that is situated on a narrow strip of BLM-administered lands previously allocated for this purpose.			
37-223 (N&S) **Potential deletion (N) and revision (S)**	The Agencies have identified a potential corridor deletion (N) and revision (S) of these corridors because of impacts on the Tule Springs Fossil Beds National Monument and because the undesignated gaps across DoD- and USFWS-administered lands prevent connectivity with other Section 368 energy corridors.	There are two natural gas pipelines and six transmission lines within the (S) corridors. While these two corridors were initially identified for connectivity with other Section 368 energy corridors, they were not designated across DoD- and USFWS-administered lands and therefore are no longer compatible with nearby Section 368 energy corridor designations.	Corridor 37-223(N) is multimodal (designated for electrical transmission and pipeline projects). Corridor 37-223(S) is designated only for underground projects.	The Dry Lake SEZ is 3.8 miles northeast of the corridor.
37-232 **no change**	While desert tortoise critical habitat and connectivity habitat exist throughout the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid desert tortoise habitat and still provide a north-south route in the area. This corridor contains infrastructure. The corridor was sited to provide a route for the Southwest Intertie Project (SWIP) corridor from southern Idaho to Las Vegas.	Most of the corridor was sited consistent with a locally designated corridor and follows two 500-kV transmission lines. Two natural gas pipelines occupy a small portion of the corridor. This corridor connects to Corridors 37-223(N) and 37-223(S) in Region 1 and Corridors 232-233(E) and 232-233(W) in Region 3.	Multimodal (designated for electrical transmission and pipeline projects). The Dry Lake SEZ is adjacent to and partially overlaps the corridor. The Agencies suggest coordination by the BLM and USFS to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within the corridors.	The Dry Lake SEZ is adjacent to and partially overlaps the corridor.

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39-113 **Potential revision**	While desert tortoise habitat and connectivity habitat exist throughout the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid desert tortoise habitat and still provide a route from southern Idaho to Las Vegas. This corridor contains infrastructure. A corridor revision has been identified to connect with the designated Moapa Corridor, build on existing infrastructure, and avoid currently undeveloped areas and impacts on specially designated areas, including Valley of Fire State Park.	The corridor is partially occupied by two natural gas pipelines and five transmission lines and generally follows Interstate 15. The corridor was sited to connect routes from the north through Utah to the Las Vegas area. This corridor connects to Corridor 39-231 in Region 1 and Corridors 113-114 and 113-116 in Region 3.	Multimodal (designated for electrical transmission and pipeline projects).	The 250-MW Moapa Southern Paiute Solar Project and the Dry Lake SEZ are located 3.5 miles west of the corridor.
39-231 **Potential revision**	Corridor of concern for Pahranagat National Wildlife Refuge, Rainbow Gardens ACEC, near proposed Gold Butte National Conservation Area, Black Mountain tortoise habitat. While special status species and specially designated areas exist throughout corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid these areas and still preserve the route for the critical transmission pathway around the eastern side of	Three transmission lines traverse the entire length of the corridor. The Lava Butte area is limited by the terrain and the positioning of existing transmission lines within this narrow valley. It will be challenging to site more than one new line adjacent to the existing lines without affecting the fragile geologic features nearby. This corridor connects to Corridor 39-113 and 37-39.	Multimodal (designated for electrical transmission and pipeline projects).	Proposed additional transmission projects in this corridor would deliver renewable energy to the Las Vegas metropolitan area.

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	the Las Vegas area. The corridor contains infrastructure. The corridor was sited to preserve the route for the extremely critical pathway for electrical transmission around the eastern side of the Las Vegas area. Widening the corridor could improve spatial capacity of the corridor in this location.			
41-46 **no change**	Corridor of concern for impacts to Black Mountain population for desert tortoises. While desert tortoise habitat exists throughout the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid desert tortoise habitat and still provide continuity with other Section 368 energy corridors and avoid crossing the Havasu NWR. The corridor contains infrastructure.	Most of this corridor was locally designated, there are transmission lines and pipelines located throughout the corridor, and the predominantly east-west corridor segment follows Interstate 40. The corridor provides continuity with other Section 368 energy corridors near Laughlin, Nevada.	Most of the corridor is multimodal (designated for electrical transmission and pipeline projects). This corridor is designated for only underground projects from MP 36.9 to MP 40.5 and MP 45.5 to MP 58.6.	There is no renewable energy development close to the corridor.

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41-47 **no change**	Corridor of concern for impacts to Black Mountain population for desert tortoises. While desert tortoise habitat exists in or near the corridor, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid desert tortoise habitat. The corridor contains infrastructure.	This corridor was sited consistent with a locally designated corridor and has a 600-kV transmission line. The corridor provides continuity with other Section 368 energy corridors near Laughlin, Nevada.	Multimodal (designated for electrical transmission and pipeline projects).	There is no renewable energy development close to the corridor.
46-269 **no change**	Corridor of concern for proposed and designated Wilderness areas, Wild and Scenic Rivers, Three Rivers Area of Critical Environmental Concern. While desert tortoise habitat exists throughout the corridor and the corridor crosses specially designated areas, the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid this habitat and these areas. The corridor was sited to provide a pathway for additional energy transport, including electricity transmission from the Palo Verde Nuclear Generating Station.	Transmission lines and pipelines are located within the corridor. This corridor connects to Corridor 46-270.	Most of the corridor is multimodal (designated for electrical transmission and pipeline projects). The corridor is designated for only underground projects from MP 0 to MP 13.8. A REDA overlaps the corridor from MP 40 to MP 42 and MP 55 to MP 56. The Agencies suggest coordination by the BLM and USFS to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within the corridor.	The corridor is adjacent to a REDA.
46-270 **no change**	Corridor of concern for Wild & Scenic river, Southwestern willow flycatcher critical habitat. The mapping of conflict areas indicates there is no nearby previously disturbed alternative route	This corridor was sited consistent with a locally designated corridor. A low-voltage transmission line follows a portion of the corridor, and a natural	Multimodal (designated for electrical transmission and pipeline projects).	A REDA is adjacent to the corridor.

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	that would avoid critical habitat and connectivity habitat and still provide a link with other Section 368 energy corridors. The corridor contains infrastructure. The corridor was sited to ensure future electric transmission access to the community of Bagdad, Arizona.	gas pipeline runs through about one-third of the corridor. This corridor connects to Corridor 46-269.		
47-231 **no change**	Corridor of concern for desert tortoise and bonytail critical habitat, Area of Critical Environmental Concern, Lake Mead National Recreation Area. While the corridor crosses special status species habitat and there is a potential for impacts on habitat connectivity, there is infrastructure in the corridor where it crosses critical habitat. The mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid critical habitat and connectivity habitat and still provide an opportunity for future projects on each side of the NRA.	This corridor was sited consistent with a locally designated corridor. There are two transmission lines within the corridor, one of which traverses its entire length. Although not designated as a Section 368 energy corridor across the Lake Mead NRA, the 500-kV transmission lines within the corridor cross the NRA in an NPS-designated utility corridor with space for additional infrastructure. This additional capacity was viewed as an opportunity for future energy projects and led to the Section 368 energy corridor designation of corridor segments on BLM-administered lands on each side of the NRA.	Designated for only electrical transmission projects east of the Lake Mead NRA. Multimodal (designated for electrical transmission and pipeline projects) west of the Lake Mead NRA.	A REDA is adjacent to the corridor.
107-268	Corridor of concern for National Forest, citizen-proposed Wilderness. The corridor crosses special status	This corridor was sited consistent with a locally designated corridor. There is one transmission line throughout the	Designated for only electrical transmission projects.	There is no renewable energy development close to the corridor.

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no change	species habitat, however, the mapping of conflict areas indicates there is no alternative corridor located along existing infrastructure that would further avoid California Red-Legged Frog critical habitat.	length of the corridor, and another transmission line traverses a segment of the corridor.		The corridor is within the RETI 2.0 Tehachapi TAFA.
108-267 **no change**	The mapping of conflict areas indicates there is no previously disturbed alternative route that would avoid special status species habitat. The corridor contains existing infrastructure. In general, the corridor was sited to provide a key pathway for energy transport as well as a variety of other infrastructure through the San Gabriel Mountains and into the Los Angeles Basin.	There are multiple transmission lines and natural gas pipelines, two railroads, and Interstate 15 within this corridor.	Multimodal (designated for electrical transmission and pipeline projects).	The Dry Lake SEZ is 3.2 miles north of the corridor. The corridor is also located within the Victorville/Barstow RETI 2.0 TAFA.
115-238 **Potential revision**	While the corridor crosses critical habitat for the Peirson's Milk-Vetch and Arroyo Toad, proposed critical habitat for the Yellow-Billed Cuckoo, Sonoran Desert Tortoise Category I and II Habitat, and bighorn sheep habitat, the mapping of conflict areas indicates there is no previously disturbed alternative route that would avoid these habitats and provide connectivity to renewable energy generation.	In California, part of the corridor was sited consistent with a locally designated California Desert District energy corridor. There are transmission lines throughout the corridor.	Designated for only electrical transmission projects at the western end through the Cleveland National Forest. Otherwise multimodal (designated for electrical transmission and pipeline projects). The Imperial East SEZ overlaps the corridor in California. The Agencies suggest coordination by	The Imperial East SEZ overlaps the corridor in California, and the Agua Caliente SEZ is located within 1 mile of the corridor in Arizona. The corridor is also located within the Imperial East RETI 2.0 TAFA and the RETI 2.0 HSR to support 3,000 MW of renewable energy transmission to and from Arizona.

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	Proposed corridor revisions in several locations would avoid jurisdictional concerns to allow for additional development in the corridor.		the BLM and USFS to avoid or restrict siting of nonlinear features such as geothermal and solar energy development within the corridor.	
223-224 **Potential revision**	Corridor of concern for Areas of Critical Environmental Concern, Desert National Wildlife Refuge. The corridor contains important contiguous desert tortoise habitat. However, the mapping of conflict areas indicates there are no previously disturbed alternative routes that would avoid TCAs and Priority 1 and 2 connectivity habitat. The corridor contains transmission lines. The Agencies have identified a potential corridor revision from MP 0 to MP 17 along a locally designated corridor that contains infrastructure. The corridor revision would avoid the Tule Springs Fossil Beds National Monument and proximity to the Nellis Testing and Training Range. As revised, the corridor would still provide a viable route for energy transmission northwest of the Las Vegas valley.	There is a transmission line along part of the corridor. The corridor is occupied by U.S. Highway 95. This corridor connects to Corridors 18-224 and 224-225.	Multimodal (designated for electrical transmission and pipeline projects).	There is no renewable energy development close to the corridor.
224-225	The Agencies have identified a potential corridor revision between MP 33.5 and MP 61 to align with a	The Agencies have identified a potential corridor revision between MP 33.5 and MP 61 to align with a	Multimodal (designated for electrical transmission and pipeline projects).	There are a natural gas plant and a solar energy power plant near the southern end of the corridor, and

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Potential revision	locally designated corridor and state highway to avoid impacts on sensitive resources and potential impacts on the OSNHT and Stump Springs ACEC. The corridor was sited to avoid encroachment on DoD activities in California and to meet demand for more energy in southern California.	locally designated corridor and state highway. This corridor connects to Corridors 18-224, 223-224, and 225-231.		there are pending solar projects near the corridor.
225-231 **no change**	The corridor overlaps with TCAs, desert tortoise critical habitat, and desert tortoise connectivity habitat. However, the mapping of conflict areas indicates there is no previously disturbed alternative route that could carry power east-west across southern Nevada and avoid desert tortoise habitat. The corridor was sited to provide continuity to the north and east from the southern portion of the Las Vegas metropolitan area and constitutes part of a large east-west pathway that includes Corridors 223-224 and 47-231.	The corridor is occupied by eight transmission lines along its entire length.	Multimodal (designated for electrical transmission and pipeline projects).	There is no renewable energy development close to the corridor.
236-237 **no change**	Crucial habitat is pervasive near the corridor, and the mapping of conflict areas indicates there is no nearby previously designated alternative route that would avoid crucial habitat and provide continuity across the Cleveland	This corridor was sited consistent with a locally designated corridor. There are three transmission lines, one substation, and one planned transmission line within the corridor.	Designated for only electrical transmission projects.	The corridor is located within a RETI 2.0 TAFA.

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	National Forest from Arizona into the Los Angeles metropolitan area. The corridor contains infrastructure. The corridor was sited to provide continuity across the Cleveland National Forest for an existing 500-kV transmission line from Arizona to the Los Angeles metropolitan area.			
264-265 **no change**	Corridor of concern for critical habitat, National Conservation Area, citizen-proposed Wilderness, USFS Inventoried Roadless Area. The corridor contains infrastructure. Critical habitat for the California Red-Legged Frog is adjacent to the corridor, but the mapping of conflict areas indicates there is no nearby previously disturbed alternative route that would avoid critical habitat. The corridor contains infrastructure.	This corridor was sited consistent with a locally designated corridor. There are four transmission lines within the corridor. San Francisquito Canyon Road runs parallel to and within 1 mile of the corridor.	Designated for only electrical transmission projects.	Two hydroelectric power plants and substations are within 1 mile of the corridor centerline. The corridor is located within a RETI 2.0 TAFA.

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Appendix B: Existing Energy Infrastructure, Planned or Future Energy Development Potential, and Additional Energy Capacity in Region 1 Section 368 Energy Corridors

Corridor and Location	Existing Energy Infrastructure	Planned or Future Energy Development Potential	Potential Additional Energy Capacity
23-25 California	Multiple transmission lines occupying parts of corridor ranging from 115 to 500 kV. Pipelines also existing withing the corridor.	No planned projects. Future development potential could possibly support 17 miles of the northernmost portion of the California RETI 2.0-identified Kramer-Llano Conceptual [a] Transmission Project.[a]	Likely to be used because of numerous generation interconnection requests and queued generation.
23-106 California	Commercial utility corridor that supports two electric transmission lines (1,000 kV direct current (DC) and 230 kV). 500-kV transmission line occupies parts of the corridor. Corridor is aligned with State Highway 14 and U.S. Highway 395.	Two pending ROW applications.[b]	Likely to be used because of historically queued generation in the area.
27-41 California	Multiple transmission lines, ranging from 69 to 230 kV. Multiple natural gas pipelines. Corridor follows Interstate 40 for 36 miles.	No planned projects, but this corridor could support additional interstate energy transmission projects as well as in-state renewable energy transmission.	Likely to be used because of historically queued generation in the area.
27-225 California, Nevada	Multiple transmission lines ranging from 69 to 500 kV for most of the corridor length. Multiple pipelines cross the corridor. Corridor follows Interstate 15 for approximately 40 miles. Nonlinear features include multiple solar power facilities and one natural gas facility in or near corridor.	Two conceptual routes. Future development potential could possibly support the California RETI 2.0-identified Eldorado-Lugo Conceptual Transmission Project.	East side of corridor more likely to be used because of capacity provided by existing Southern California Edison (SCE) Eldorado-Ivanpah Transmission Project (EITP). West side of corridor limited by an existing low-capacity conductor.
27-266 California	Four transmission lines ranging from 287 to 1,000 kV run throughout corridor. Two pipelines partially overlap the corridor.	Two planned projects with conceptual routes within corridor.	Likely to be used in the future, although upgrades may be needed.

Corridor and Location	Existing Energy Infrastructure	Planned or Future Energy Development Potential	Potential Additional Energy Capacity
223-224 Nevada	Several authorized ROWs that partially traverse the corridor and include multiple transmission lines ranging from 4 to 138 kV. Corridor follows U.S. Highway 95 for 14 miles. Telephone and other communications lines.	Several pending ROW applications. Future development potential for a 33-mile upgraded line segment of the California RETI 2.0-identified Coolwater-Lugo Conceptual Transmission Project.	Limited future development options.
224-225 Nevada	Unoccupied except for small segment crossings of transmission lines ranging from 138 to 500 kV.	Eight pending ROW applications. One planned 500-kV transmission line.	Likely to be used in the future to supplement parallel north-to-south corridors in California.
225-231 Nevada	Eight transmission lines ranging from 115 to 1,000 kV occupy parts of the corridor.	One pending ROW application. Two planned transmission lines (500 kV and 1,000 kV DC). Future development potential could possibly support the California RETI 2.0-identified Eldorado-Lugo Conceptual Transmission Project.	Likely to be used for connectivity with corridor 47-231 to the east and with corridor 39-231 to the north.
236-237 California USFS	Three existing transmission lines ranging from 69 to 500 kV. One nonlinear feature (substation).	One planned 500-kV project.[b]	The corridor could accommodate new development.
264-265 California USFS	Multiple transmission lines ranging from 115 to 500 kV.	One planned upgrade of an existing 230-kV transmission line.[b]	Upgrades will be necessary to meet required renewable generation.
30-52 Arizona, California	Multiple transmission lines ranging from 115 to 500 kV. Natural gas pipelines. Corridor follows Interstate 10.	Currently being evaluated as the preferred alternative for Ten West Link Project. Future development potential for the California RETI 2.0-identified Conceptual Transmission Projects, including: • Red Bluff-Mira Loma desert segment upgraded line; • Midway-Devers 500-kV alternating current (AC) line (12–14 miles of the westernmost portion); • Desert Southwest Project (full length); and the • North Gila-Midway-Devers line (12–14 miles of the westernmost portion).	Likely to be used in the future, although upgrades may be needed.

Corridor and Location	Existing Energy Infrastructure	Planned or Future Energy Development Potential	Potential Additional Energy Capacity
37-39 Nevada	Six transmission lines ranging from 69 to 500 kV cross the corridor. Natural gas pipeline occupies part of corridor. Natural gas pipeline, petroleum product pipeline, railroad, and Interstate 15 cross corridor.	One pending ROW application.[b] Conceptual routes for four projects crossing the corridor.	Likely to be used because of its connectivity with several other corridors as well as its energy generation capacity.
37-223 (N and S) Nevada	Six existing transmission lines ranging from 138 to 500 kV are within Corridor 37-223(S); five traverse the corridor and one crosses it. One natural gas pipeline traverses Corridor 37-223(S) and a second pipeline crosses it. No pipelines or transmission lines are within 37-223(N)	Ten pending use applications.[b]	Limited future development options because of non-BLM and non-USFS jurisdiction.
37-232 Nevada	Two 500-kV transmission lines traverse most of the corridor. Multiple transmission lines occupy parts of the corridor. Natural gas pipeline occupies corridor for a short distance.	Planned 100-kV DC line traversing most of the corridor. Conceptual 500-kV line.	Likely to be used because of its capacity for additional electric energy transmission from the north.
39-113 Nevada	Corridor is partially occupied: • Five transmission lines ranging from 345 to 500 kV are within corridor. • Two natural gas pipelines are within corridor. • Interstate 15 and State Highway 169 cross corridor. • Railroad crosses corridor.	Five pending ROW applications.[b] Three planned transmission lines.[b]	There is capacity for new transmission projects.
39-231 Nevada	Multiple 500-kV transmission lines and a 230-kV transmission line traverse the full length of the corridor. Some pipelines cross corridor.	One pending application for a 600-kV[b] transmission line. Interest for a 1,000-kV DC line.	Likely to be used in the future, although upgrades may be needed.
41-46 Arizona	Three 230-kV transmission lines and six natural gas pipelines occupy parts of the corridor.	Conceptual route overlaps a small section of the corridor.	Corridor has long-term capacity and potential for additional use, particularly if connectivity to the north and west is improved.

Corridor and Location	Existing Energy Infrastructure	Planned or Future Energy Development Potential	Potential Additional Energy Capacity
41-47 Arizona	Multiple transmission lines ranging from 69 to 230 kV occupy the corridor. Seven natural gas pipelines traverse corridor for 5 miles.	Possible potential transmission lines.	Corridor has long-term capacity and potential for additional use, particularly if connectivity to the east and west is improved.
46-269 Arizona	Three 230-kV transmission lines and two natural gas pipelines occupy parts of the corridor.	No planned projects.	There is capacity for new transmission in the corridor.
46-270 Arizona	Low-voltage transmission line traverses part of the corridor. 345- and 500-kV transmission lines and a substation intersect corridor. One natural gas pipeline runs along one-third of corridor. Two natural gas pipelines intersect the corridor.	No planned projects.	Potential for local development, as well as long-term potential for connectivity for electric transmission to the east.
47-231 Arizona, Nevada	500-kV transmission line runs throughout the corridor. Several transmission lines cross the corridor. Several ROWs intersect the corridor.	Several pending ROW applications.[b] Two planned 500-kV projects.[b]	There is capacity for new transmission in the corridor.
107-268 California USFS	One 500-kV transmission line runs throughout the corridor. Multiple transmission lines ranging from 220 to 500 kV occupy parts of the corridor.	One planned 500-kV transmission line.[b]	There is capacity for new transmission projects, and new projects are likely because of the connectivity and high energy demand to the west.
108-267 California USFS, BLM	Five 230-kV transmission lines run throughout the corridor. Two 36-inch natural gas pipelines run throughout the corridor. Corridor follows Interstate 15 and Union Pacific and Burlington Northern Santa Fe (BNSF) Railroads.	One planned 500-kV transmission line.[b]	Additional analysis needed to determine whether corridor can accommodate additional development.

Corridor and Location	Existing Energy Infrastructure	Planned or Future Energy Development Potential	Potential Additional Energy Capacity
115-238[c] Arizona, California USFS, BLM	Various transmission lines ranging from 69 to 500 kV run throughout the corridor. Natural gas pipelines run throughout the corridor. Corridor follows Interstate 8 for 20 miles.	Multiple planned transmission lines.[b] Future development potential for California RETI 2.0 Conceptual Transmission Projects, including: • North Gila-Midway-Devers (50 miles of the easternmost portion). • Comision Federal de Electricidad (from Baja Mexico; may provide a pathway for a portion of the conceptual project, depending on the alternative selected).	There is capacity for new transmission projects.

[a] See Section 2.1.1; Source: CNRA 2017a, b.
[b] For further information, see Corridor Rationale Section in the corridor abstract.
[c] Since the majority of Corridors 18-23 and 18-224 is located in Region 5, those corridors will be addressed in their entirety in the Region 5 Review.

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