# Corridor 46-269

*Bill Williams Corridor*

## Corridor Rationale

This energy corridor provides a pathway for additional energy transport including electricity transmission from the Palo Verde Nuclear Generating Station. Input regarding alignment from Arizona Public Service Electric Company; the New Mexico Energy, Minerals, and Natural Resources Department; Trans West; and Western Transmission Protocol during the WWEC PEIS suggested following this route. There are no planned transmission or pipeline projects or pending or recently authorized ROWs for transmission line or pipeline projects within the corridor.

**Corridor location (Region 2 portion; Region 1 was evaluated in Region 1 Review):**
Arizona (Maricopa Co.)
BLM: Hassayampa Field Office
Regional Review Region(s): Region 1 and 2

**Corridor width, length (Region 2 portion):**
Width 3,500 ft
25.7 miles of designated corridor
34.7 mile-posted route, including gaps

**Sec 368 energy corridor restrictions (Region 2 portion):** (N)
- corridor is multi-modal

**Corridor of concern (Region 2 portion):** (Y)
- proposed and designated Wilderness areas.

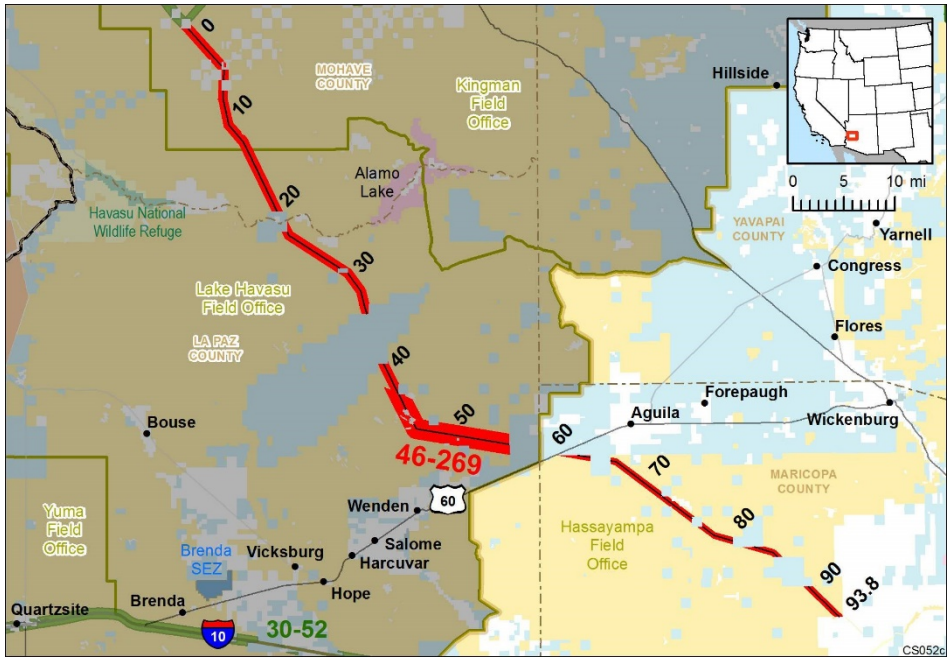
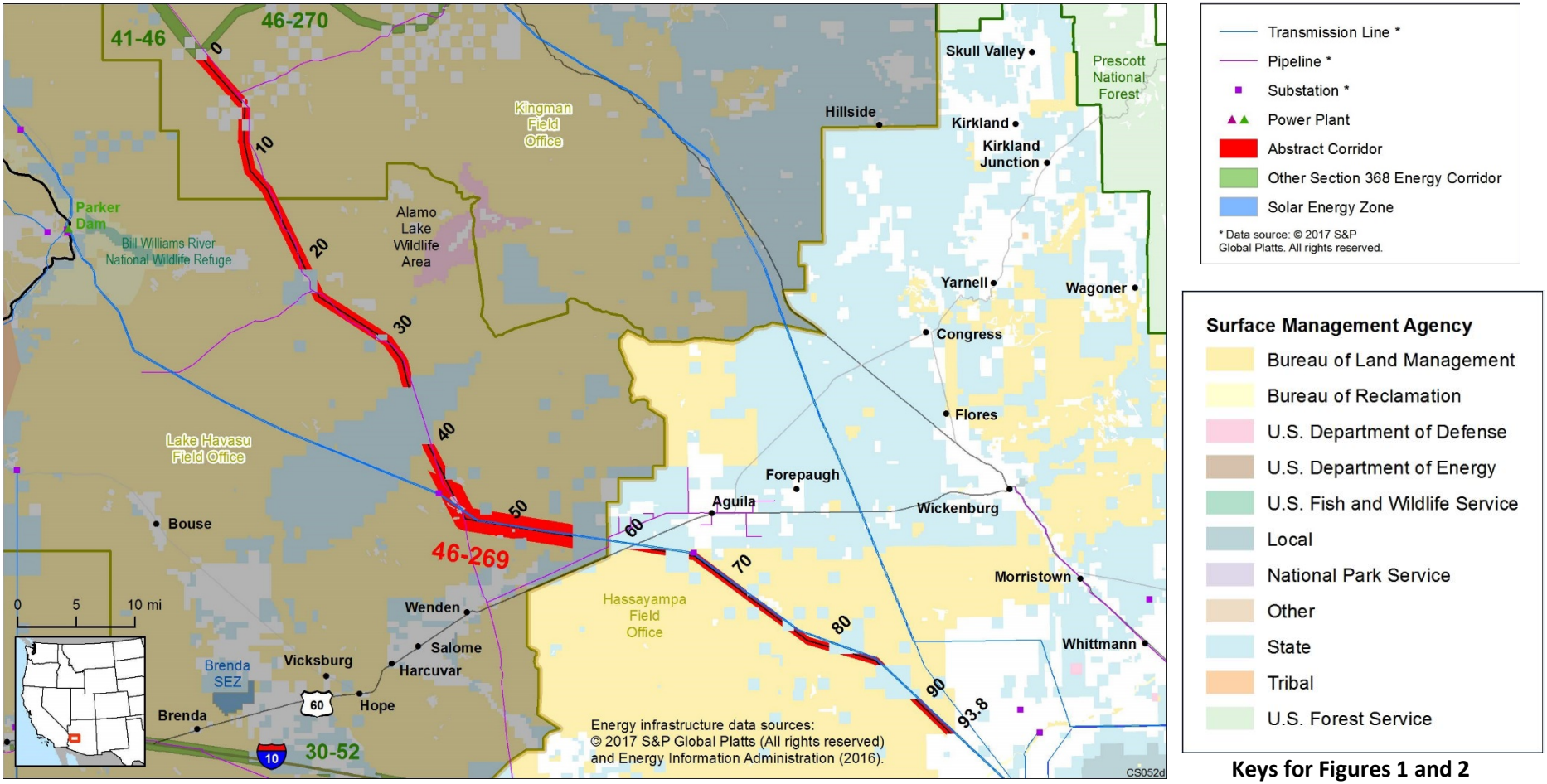



**Figure 1. Corridor 46-269**

**Corridor history (Region 2 portion):**
- Locally designated corridor prior to 2009 (Y)
- Existing infrastructure (Y)
  - Electric transmission:
    - two 230-kV lines (59 to MP 94; entire length of corridor in Region 2)
- Energy potential near the corridor (Y)
  - REDA as close as 0.1 mi between MP 83 and MP 94.
- Corridor changes since 2009 (N)




**Keys for Figures 1 and 2**

**Figure 2. Corridor 46-269 and nearby electric transmission lines and pipelines** (grayed out area outside of Region 2 and 3 Review)

## Conflict Map Analysis

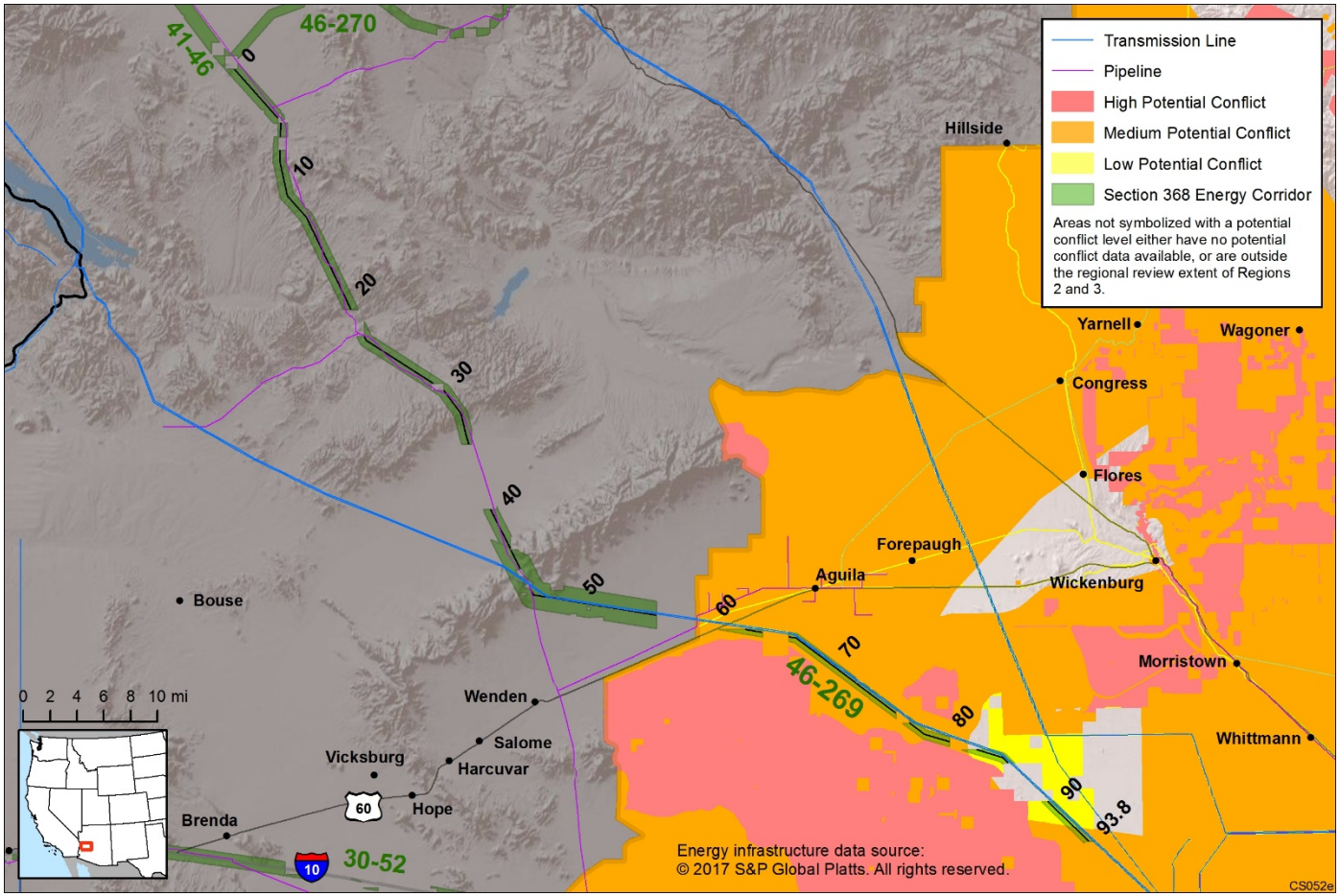



**Figure 3. Map of Conflict Areas in Vicinity of Corridor 46-269**

Figure 3 reflects a comprehensive resource conflict assessment developed to enable the Agencies and stakeholders to visualize a corridor's proximity to environmentally sensitive areas and to evaluate options for routes with lower potential conflict. The potential conflict assessment (low, medium, high) shown in the figure is based on criteria found on the WWEC Information Center at www.corridoreis.anl.gov. To meet the intent of the Energy Policy Act and the Settlement Agreement siting principles, corridors may be located in areas where there is potentially high resource conflict; however, where feasible, opportunity for corridor revisions should be identified in areas with potentially lower conflict.

Visit the 368 Mapper for a full view of the Potential conflict map (https://bogi.evs.anl.gov/section368/portal/)

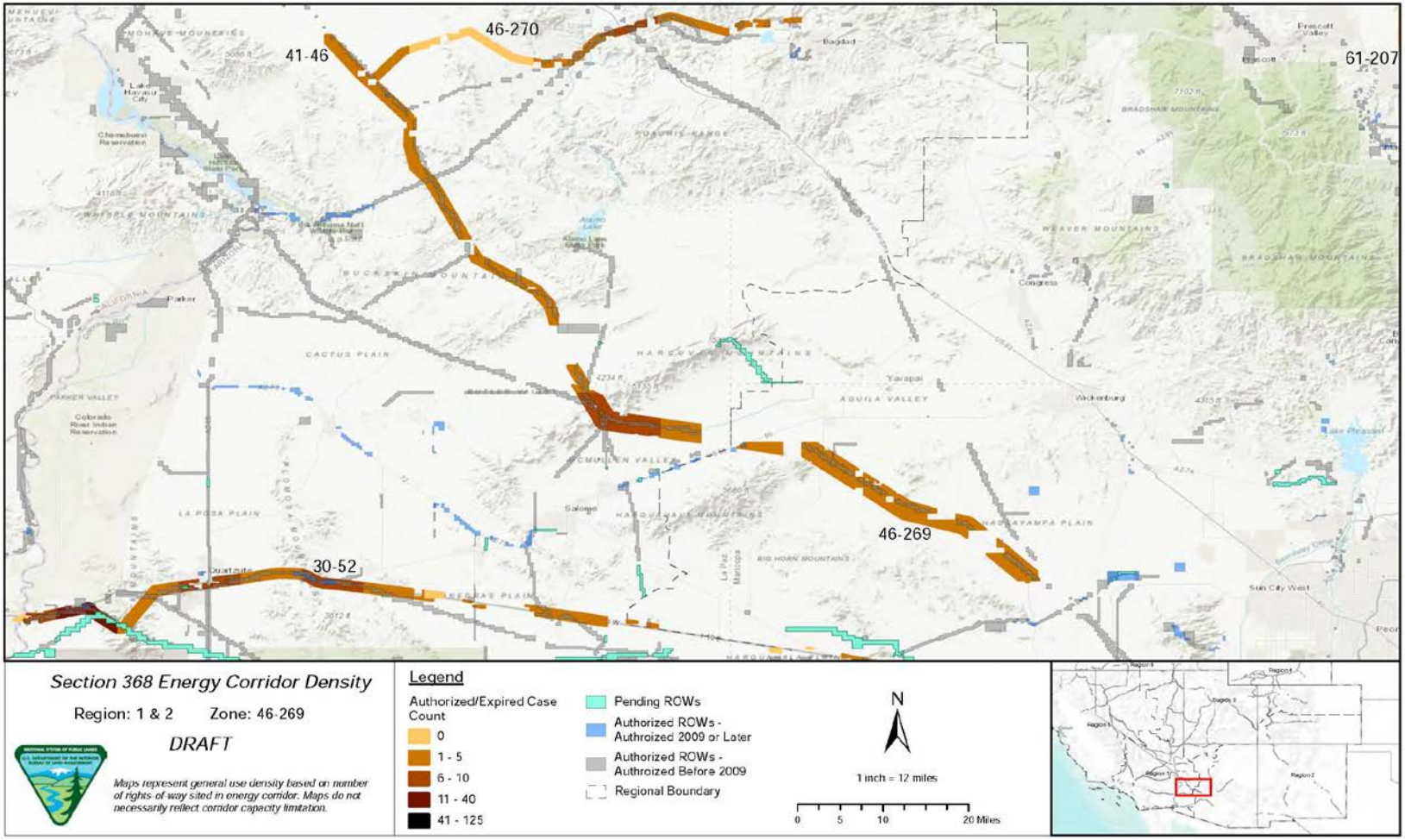



**Figure 4. Corridor 46-269, Corridor Density Map**

Figure 4 shows the density of energy use to assist in evaluating corridor utility. ROWs granted prior to the corridor designation (2009) are shown in grey; ROWs granted after corridor designation are shown in blue; and pending ROWs under current review for approval are shown in turquoise. Note the ROW density shown for the corridor is only a snapshot that does not fully illustrate remaining corridor capacity. Not all ROWs have GIS data at the time this abstract was developed. BLM and USFS are currently improving their ROW GIS databases and anticipate more complete data in the near future.

## General Stakeholder Feedback on Corridor Utility

Stakeholders did not provide specific input on corridor utility.

## Corridor Review Table

The table below captures details of the Agencies' review of the energy corridor. Consideration of the general corridor siting principles of the 2012 Settlement Agreement framed each corridor review, to identify potential improvements to maximize corridor utility and minimize impacts on the environment. Initial Agency analysis is provided to facilitate further discussion during stakeholder workshops.

| CORRIDOR 46-269 REVIEW TABLE | | | | | | | |
|---|---|---|---|---|---|---|---|
| **ID** | **Agency** | **Agency Jurisdiction** | **County** | **Primary Issue** | **Corridor Location (by Milepost [MP])** | **Source** | **Agency Review and Analysis[1, 2]** |
| **ENVIRONMENTAL RESOURCE ISSUES** | | | | | | | |
| ***Specially Designated Areas*** | | | | | | | |
| 46-269 .001 | BLM | Hassayampa FO | Maricopa, AZ | Harquahala Mountains Wilderness | MP 64 to MP 67 (near) | Settlement Agreement RFI: re-route to avoid proposed and designated Wilderness.<br><br>GIS Analysis: Wilderness Area as close as 1.5 mi south of corridor. | Existing infrastructure and corridor was present on margin of the Wilderness Area at time of Congressional designation. Wilderness is an important resource that is considered carefully during corridor planning. The corridor's current location does not intersect the Wilderness Area and best meets the siting principles. (1) |
| 46-269 .002 | BLM | Hassayampa FO | Maricopa, AZ | Harquahala ACEC | MP 62 to MP 69 | GIS Analysis: ACEC and corridor intersect. | Development in the corridor can occur within the ACEC. In the RMP, BLM encourages new ROWs to be located within designated corridors. The Agencies could also consider shifting the corridor outside of the ACEC, aligning with the existing 230-kV transmission line as the southern border of the corridor rather than the centerline (2) |
| 46-269 .003 | BLM | Hassayampa FO | Maricopa, AZ | Black Butte ACEC | MP 77 to MP 78 | GIS Analysis. ACEC and corridor intersect. | Development in the corridor can occur within the ACEC. In the RMP BLM encourages new ROWs to be located within designated corridors. The Agencies could also consider shifting the corridor outside of the ACEC, aligning with the existing 230-kV |

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| | | | | | | | transmission line as the northern border of the corridor (2) |
| 46-269 .004 | BLM | Hassayampa FO | Maricopa, AZ | Proposed Belmont-Harquahala Mountains NCA | Not specified. | RFI: proposed Harquahala NCA. | The proposed NCA has not been designated and is therefore not a consideration at the time of this review. (1) |
| ***Ecology*** | | | | | | | |
| 46-269 .005 | BLM | Hassayampa FO | Maricopa, AZ | Sonoran Desert Tortoise Category I and II management habitat (BLM sensitive species, not listed under ESA) | MP 62 to MP 69 and MP 76 to MP 82<br><br>MP 61 to MP 83<br><br>Not specified. | RFI: re-route to avoid siting new facilities in Sonoran Desert Tortoise Category I and II management habitat. Minimize impacts from new energy infrastructure development to the maximum extent practicable, and where impacts are unavoidable, utilize compensatory mitigation pursuant to BLM policy. Use full mitigation hierarchy to avoid, minimize, and compensate for impacts within four miles of Category I and II habitat.<br><br>Comment on abstract: impacts to sensitive desert tortoise habitat has the potential to adversely impact use of MCAGCC Twentynine Palms and Barry M. Goldwater Range for ground-to-ground, air-to-ground, and maneuver training, as well as use of transit routes near, around, or between DoD ranges.<br><br>Comment on abstract: re-route to avoid siting new facilities in Sonoran Desert Tortoise | The Bradshaw-Harquahala RMP states that no net loss will occur in the quality or quantity of Category I and II Desert Tortoise habitat to the extent practicable. BLM would address and include mitigation measures in decision documents to offset the loss of quality or quantity of Category I, II, and III tortoise habitats. Future ROWs in the corridor would be mitigated in accordance with the Desert Tortoise Range-wide Plan and other applicable policy guidance. (3)<br><br>A corridor revision would not be a likely solution to resolve this issue because there is already existing infrastructure within the corridor. Also, the corridor location within the current range of the tortoise is not easily resolved or avoided by corridor-level planning because alternate routes would still require siting through tortoise management habitat. Further analysis to determine the presence of the species and its habitat occurring within the area will be considered outside of corridor-level planning. (3) |

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| | | | | | | Category I and II management habitat. | |
| 46-269 .006 | BLM | Hassayampa FO | Maricopa, AZ | Connectivity flowlines | Not specified. | RFI: re-route to avoid "Very High" risk to the number and magnitude of flowline crossings by WWEC segments. Where flowlines must unavoidably be crossed, minimize impacts to connectivity. | Connectivity flowlines is not a BLM-recognized term. The Agencies are exploring an opportunity for adding an IOP related to wildlife migration corridors and habitat to ensure appropriate consideration occurs with proposed development within the energy corridor. (2) |
| ***Lands with Wilderness Characteristics*** | | | | | | | |
| 46-269 .007 | BLM | Hassayampa FO | Maricopa, AZ | Lands with wilderness characteristics | MP 91 to MP 94 | RFI: BLM-inventoried lands with wilderness characteristics not managed for protection - Harquahala Mountains.<br><br>GIS Analysis: lands with wilderness characteristics over 1 mi southwest of corridor. | Management decisions for lands with wilderness characteristics are made through a land use planning effort. The BLM retains broad discretion regarding the multiple use management of lands possessing wilderness characteristics without Wilderness or WSA designations. As such, land possessing the characteristics of wilderness are not subject to the legal thresholds or other statutory obligations specified for congressionally designated Wilderness and WSAs. In locations where the BLM is not managing lands with wilderness characteristics with protective allocations, project-level planning will still consider ways to minimize or avoid impacts while meeting the purpose and need of various types of land use including energy projects. At this time, given the information available, the corridor is determined as best meeting the siting principles of the settlement agreement. (1) |
| 46-269 .008 | BLM | Hassayampa FO | Maricopa, AZ | Citizens' proposed wilderness | Not specified. | RFI: Citizens' proposed wilderness - Harquahala | The BLM's current inventory findings will be used in land use planning analyses related to the revision, |

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| | | | | | | Wilderness Area Addition, West Belmont Mountains<br><br>Comment on abstract: corridor intersects with BLM wilderness-quality lands:<br><br>MP 61 to MP 64<br><br>1,162 acres overlap (Harquahala WA Addition-citizens' wilderness proposal).<br><br>MP 77 to MP 80<br><br>1,103 acres overlap (Black Butte West-citizens' wilderness proposal).<br><br>MP 81<br><br>223 acres overlap (Black Butte East-citizens' wilderness proposal).<br><br>MP 81 to MP 85<br><br>2,150 acres overlap (West Belmont Mountains-citizens' wilderness proposal).<br><br>MP 91 to MP 93<br><br>1,117 acres overlap (East Belmont Mountains-citizens' wilderness proposal).<br><br>Exclude energy corridors from all wilderness-quality lands. | deletion, or addition to the energy corridors. Consideration of citizens' wilderness proposals is beyond the Agencies scope and authority. As such, the corridor's current location best meets the siting principles. (1)<br><br>At such time that citizens' inventory information is formally submitted, the BLM will compare its official Agency inventory information with the submitted materials, determine if the conclusion reached in previous BLM inventories remains valid, and update findings regarding the lands ability to qualify as wilderness in character. |
| ***Visual Resources*** | | | | | | | |
| 46-269 .009 | BLM | Hassayampa FO | Maricopa, AZ | VRM Class I | MP 64 to MP 67 | GIS Analysis: VRM Class I as close as 1.5 mi south of corridor. | The corridor does not cross VRM Class I areas. (1) |
| 46-269 .010 | BLM | Hassayampa FO | Maricopa, AZ | VRM Class II | MP 79 to MP 81 | GIS Analysis: VRM Class II areas are adjacent to corridor. | The corridor does not cross VRM Class II areas. (1) |
| 46-269 .011 | BLM | Hassayampa FO | Maricopa, AZ | VRM Class III | MP 60 to MP 69 | GIS Analysis: VRM Class III areas and corridor intersect. | VRM Class III allows for moderate change to the characteristic landscape, although minimizing visual contrast remains a requirement. Management activities may attract the attention of |

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| | | | | | | | the casual observer, but shall not dominate the view. (1) |
| 46-269 .012 | BLM | Hassayampa FO | Maricopa, AZ | VRM Class IV | MP 60 to MP 62 and MP 69 to MP 94 | GIS Analysis: VRM Class IV areas and corridor intersect. | The existing corridor location best meets the siting principles. (1) |
| ***Land Use Concerns*** | | | | | | | |
| ***Military and Civilian Aviation*** | | | | | | | |
| 46-269 .013 | BLM | Hassayampa FO | Maricopa, AZ | MTR SUA - MOA | MP 59 to MP 75 | GIS Analysis: MOA and corridor intersect | The concern related to MTRs is noted and the adherence to an existing IOP regarding coordination with DoD would be required to ensure this potential conflict is considered at the appropriate time. In addition, there is an opportunity to consider a revision to the existing IOP to include height restrictions for corridors in the vicinity of DoD training routes.<br><br>DoD recommends structures remain below 200' AGL. Taller structures will require further analysis for operational and safety impacts. (2) |
| 46-269 .014 | BLM | Hassayampa FO | Maricopa, AZ | MTR – IR | MP 59 to MP 63 | GIS Analysis: IR and corridor intersect.<br><br>Comment on abstract: MTR (IR-250) with floor of "SURFACE". Potential for an obstruction in airspace used for high speed, low altitude military aircraft operations, which presents a potential safety risk. | |
| 46-269 .015 | BLM | Hassayampa FO | Maricopa, AZ | MTR – VR | MP 92 to MP 94 | GIS Analysis: VR and corridor intersect. | |

[1] Projects proposed in the corridor would be reviewed during their ROW application review process and would adhere to Federal laws, regulations, and policy.

[2] (1) = confirm existing corridor best meets siting principles; (2) = identify opportunities to improve corridor placement or IOPs; (3) = acknowledge concern not easily resolved or avoided by corridor-level planning.

## Abstract Acronyms and Abbreviations

ACEC = Area of Critical Environmental Concern; BLM = Bureau of Land Management; DoD = Department of Defense; ESA = Endangered Species Act; FO = Field Office; GIS = geographic information system; IOP = interagency operating procedure; IR = Instrument Route; MCAGCC = Marine Corps Air Ground Combat Center; MOA = Military Operations Area; MP = milepost; MTR = Military Training Route; NCA = National Conservation Area; PEIS = Programmatic Environmental Impact Statement; REDA = renewable energy development area; RFI = request for information; RMP = Resource Management Plan; ROW = right-of-way; SUA = Special Use Airspace; USFS = U.S. Forest Service; VR = Visual Route; VRM = Visual Resource Management; WWEC = West-wide Energy Corridor.