# Corridor 110-233

*SWIP South*

## Corridor Rationale

This energy corridor provides north-south connectivity between Idaho and Las Vegas, Nevada. Input regarding alignment from AWEA, Maximus USA, National Grid, RMATS, and the Western Utility Group during the WWEC PEIS suggested following this route. There are three planned electric transmission lines (one 345 kV and 2 500 kV lines) that generally follow all or a portion of the corridor. There also an authorized transmission line crossing of the corridor.

**Corridor location:**
Nevada (Lincoln, Nye, and White Co.)
BLM: Bristlecone and Caliente Field Offices
Regional Review Region(s): Region 3

**Corridor width, length:**
Width 2,640 ft
159 miles of designated corridor
159.3 mile-posted route, including gaps

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

**Corridor of concern** (Y)
- Greater Sage-grouse habitat.

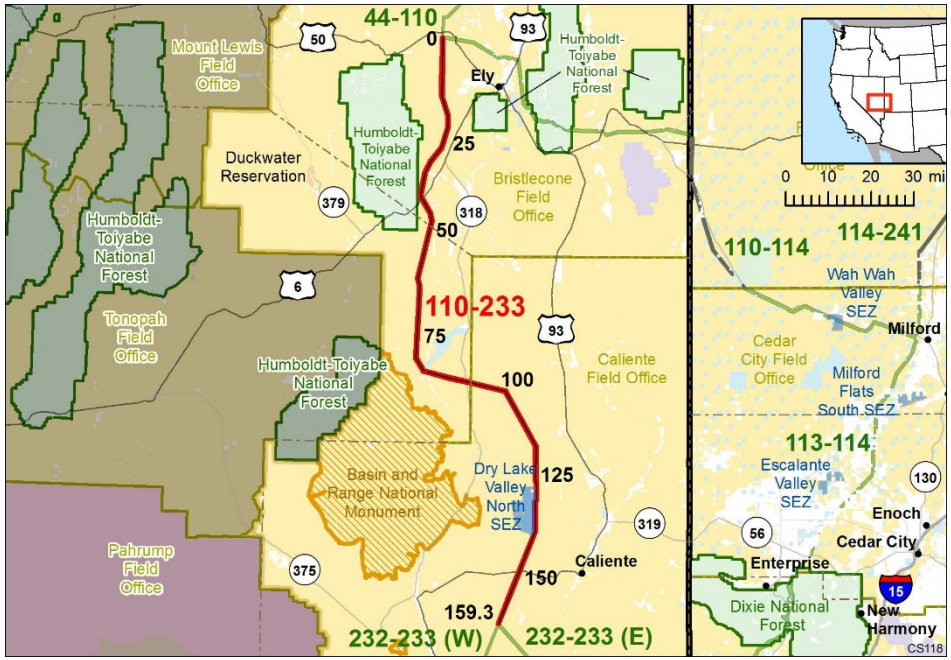
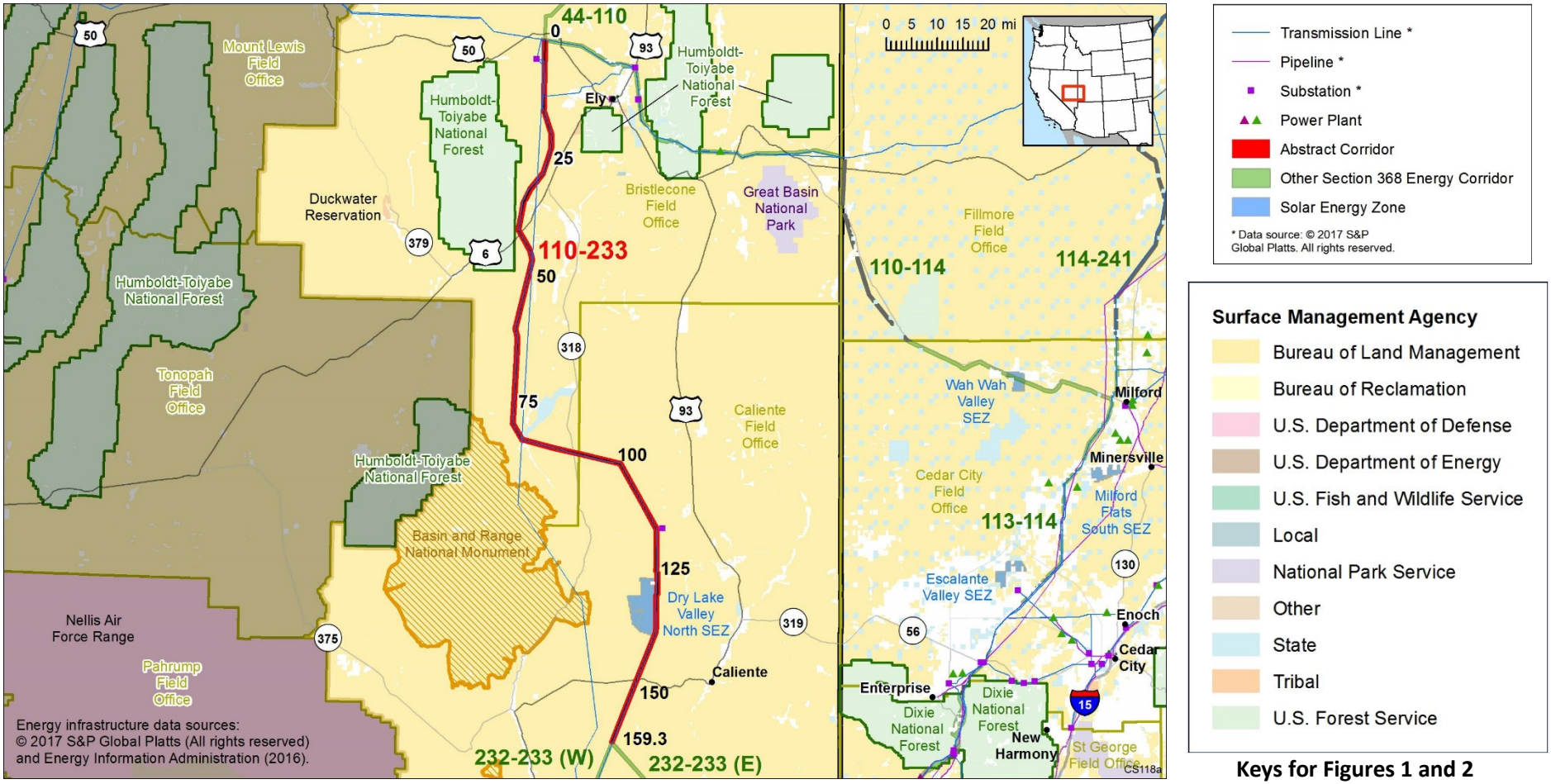



**Figure 1. Corridor 110-233**

**Corridor history:**
- Locally designated corridor prior to 2009 (Y)
- Existing infrastructure (Y)
  - Electric transmission:
    - 500 kV (MP 4 to MP 159)
    - 69 kV (MP 136 to MP 159)
- Energy potential near the corridor (Y)
  - 2 substations in corridor (MP 141 and MP 153)
  - Dry Lake Valley North SEZ overlaps the corridor (MP 125 to MP 137)
- Corridor changes since 2009 (Y)
  - 2015 NVCA ARMPA for GRSG narrowed corridors within PHMAs and GHMAs to no more than 3,500 ft on BLM-administered lands. In the PEIS, the corridor was designated with a 2,640 ft width, so the ARMPA did not change corridor width.




**Keys for Figures 1 and 2**

**Figure 2. Corridor 110-233 and nearby electric transmission lines and pipelines**

## Conflict Map Analysis

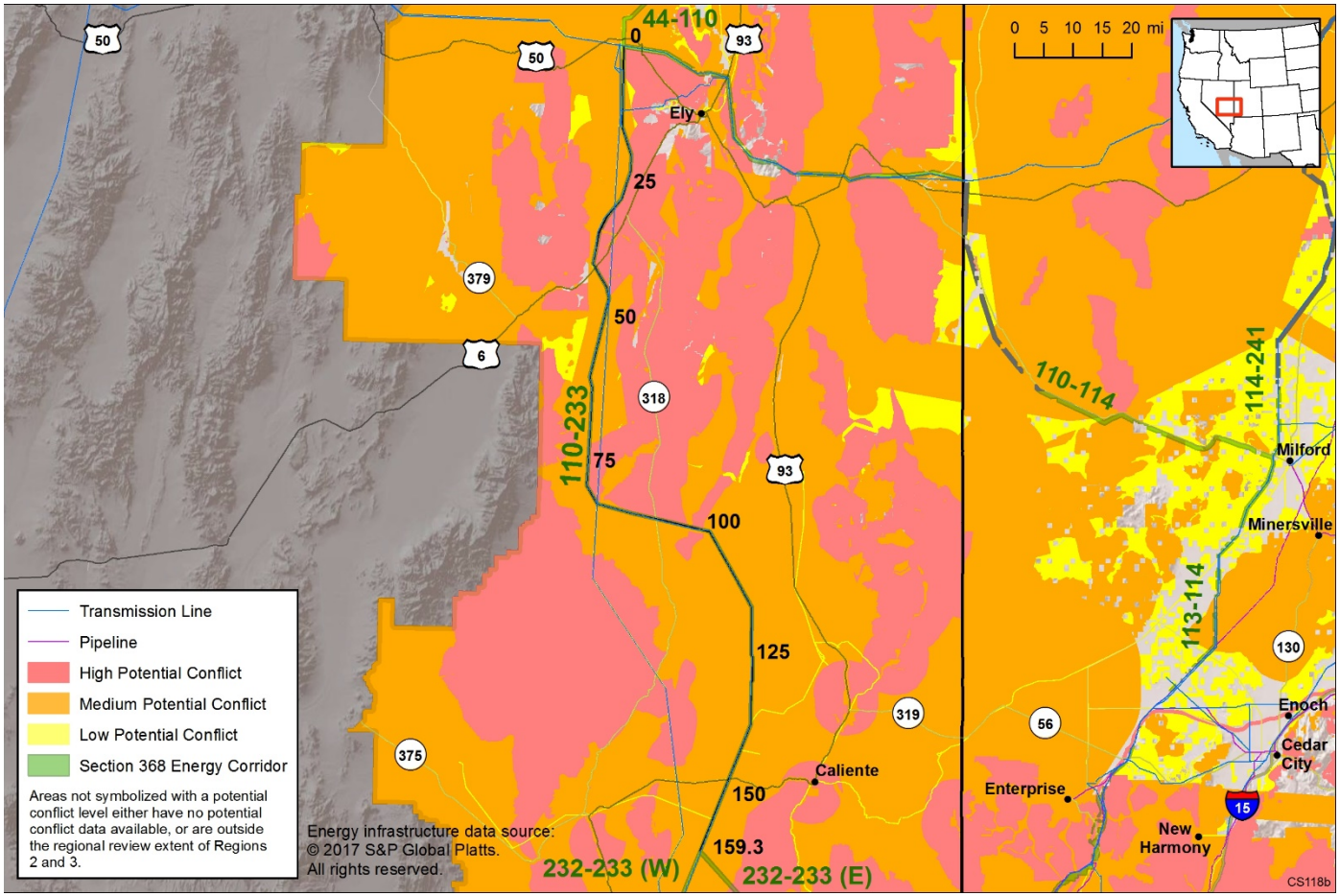



**Figure 3. Map of Conflict Areas in Vicinity of Corridor 110-233**

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/)

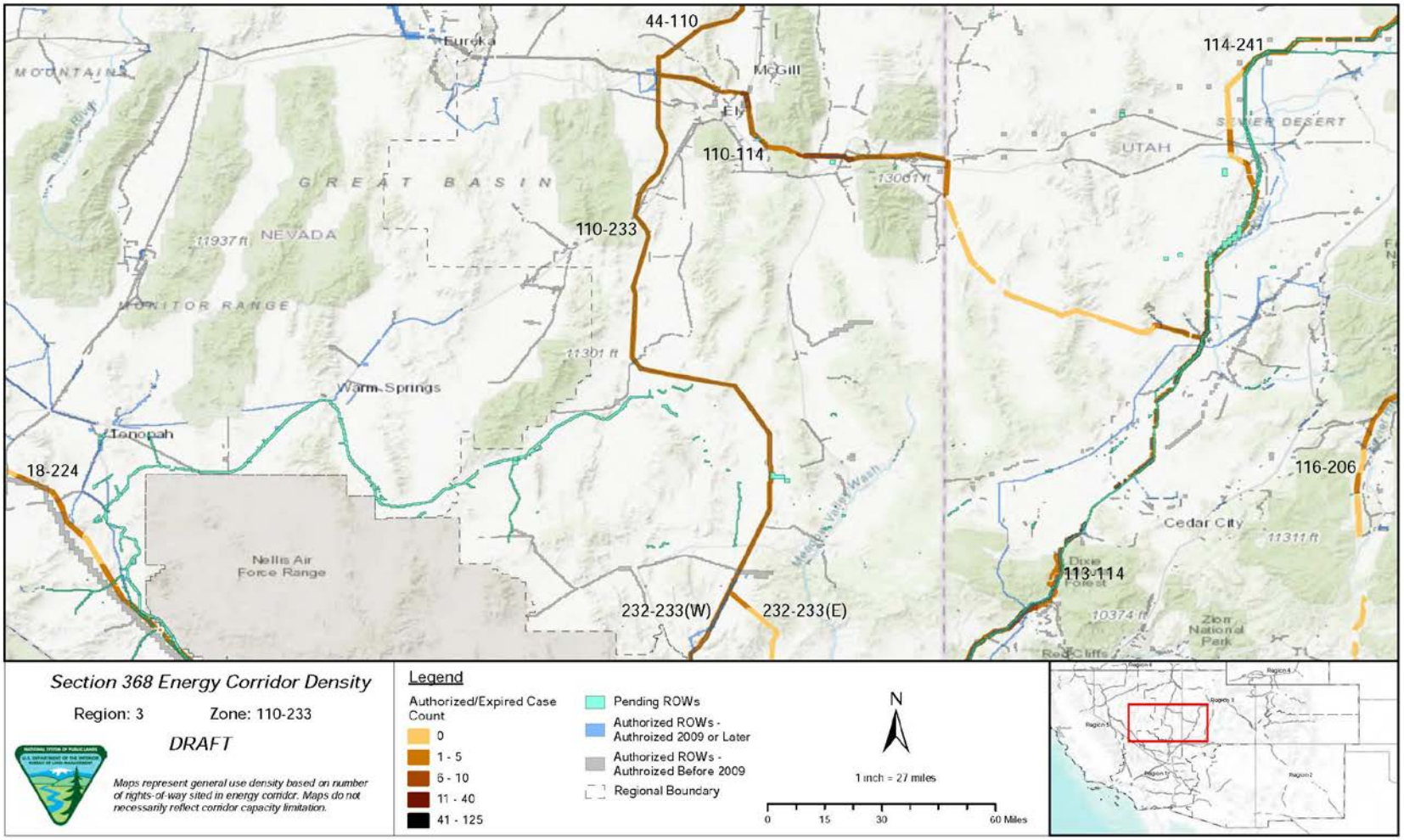



**Figure 4. Corridor110-233, Corridor Density Map**

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 agencies 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 110-233 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*** | | | | | | | |
| 110-233 .001 | USFS | Humboldt-Toiyabe National Forest | White Pine, NV | Cottonwood IRA | MP 34 to MP 36 | GIS Analysis: IRA as close as 1 mi west of corridor. | IRAs are important resources that are considered carefully during corridor planning. The corridor's current location does not intersect the IRA and best meets the siting principles. (1)<br><br>Consider the addition of an Agency Coordination IOP related to IRAs. (2) |
| 110-233 .002 | USFS | Humboldt-Toiyabe National Forest | White Pine, NV | Red Mountain IRA | MP 36 to MP 39 | GIS Analysis: IRA as close as 1 mi west of corridor. | |
| 110-233 .003 | BLM | Bristlecone FO | White Pine, NV | Honeymoon Hill/City Of Rocks ACEC | MP 18 to MP 21 | GIS Analysis: ACEC as close as 2,100 ft west of corridor. | ACECs are an important resource that are considered carefully during corridor planning. The corridor's current location does not intersect the ACEC and best meets the siting principles. (1) |
| 110-233 .004 | BLM | Bristlecone FO FO | Nye, NV | White River Valley ACEC | MP 77 to MP 82 | GIS Analysis: ACEC as close as 1,600 ft mi east of corridor. | ACECs are an important resource that are considered carefully during corridor planning. The corridor's current location does not intersect the ACEC and best meets the siting principles. (1) |
| ***Ecology*** | | | | | | | |
| 110-233 .005 | BLM | Bristlecone FO | White Pine and Nye, NV | GRSG (BLM and USFS Sensitive Species) | Not specified. | Settlement Agreement.<br>RFI: re-route to avoid GRSG. Re-route or exclude new infrastructure ROWs and avoid all new energy infrastructure | Per BLM land use plan prescription, the current alignment avoids PHMA to the greatest extent possible while maintaining a preferred route for potential future energy development |

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| **ID** | **Agency** | **Agency Jurisdiction** | **County** | **Primary Issue** | **Corridor Location (by Milepost [MP])** | **Source** | **Agency Review and Analysis[1, 2]** |
| | | | | | | development within GRSG PACs (14% overlap). Re-route to avoid "Very High" risk to permeability, and work closely with state and Federal wildlife and science agencies to ensure that connectivity is maintained.<br><br>Comment on abstract: apply a 4-mi buffer around corridor. This corridor contains 58,164 acres of GRSG PHMA and 72,887 acres of GRSG GHMA. These categories of habitat are essential for the GRSG life cycle. | to be collocated with existing infrastructure (per BLM regulation).<br><br>The 2015 NVCA ARMPA for the GRSG retains Corridor 110-233 in PHMAs and GHMAs available to new uses, subject to a maximum corridor width of 3,500 ft on BLM-administered lands. In the PEIS, the corridor was designated with a 2,640 ft width, so the ARMPA did not change corridor width. (3) |
| | | | | NVCA GRSG PHMA | MP 27 to MP 39 | GIS Analysis: GRSG PHMA intersects corridor. | |
| | | | | NVCA GRSG GHMA | MP 14 to MP 17, MP 26 to MP 27, MP 37 to MP 47, MP 61 to MP 63, MP 73 to MP 77, MP 85 to MP 86 | GIS Analysis: GRSG GHMA intersects corridor. | |
| | | | | GRSG leks | | GIS Analysis: 3.1 mi buffer from the center of the corridor-this is from the 2015 NVCA ARMPA and the Ely RMP (2008) has a 2,640 ft buffer. | |
| | | | | | MP 17 | Comment on abstract: 1 active status lek within 4 mi of these corridor areas. | |
| | | | | | MP 31 to MP 36 | | |

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| | | | | | | 2 active status leks within 4 mi of these corridor areas.<br><br>Active status lek sites are crucial for breeding season and should be avoided. If avoidance is not possible extra planning and/or measures should be incorporated to reduce or minimize impacts to this habitat.<br><br>Comment on abstract: Re-route to avoid GRSG PHMA. | |
| 110-233 .006 | BLM | Bristlecone FO | White Pine and Nye, NV | Pygmy Rabbit Habitat (BLM and USFS sensitive species) | Not specified. | Agency Input: survey, avoidance and mitigation would be required prior to construction of a new ROW to minimize impacts. | The corridor location within the current range where the Pygmy Rabbit may occur is not easily resolved or avoided by corridor-level planning. Further analysis to determine the presence of the Pygmy Rabbit occurring within the area will be considered outside of corridor-level planning. (3) |
| 110-233 .007 | BLM | Bristlecone FO | White Pine and Nye, NV | Golden Eagles (BLM sensitive species) | Not specified. | Agency Input: survey, avoidance and mitigation would be required prior to construction of a new ROW to minimize impacts. | The corridor location within the current range where the Golden Eagle may occur is not easily resolved or avoided by corridor-level planning because alternate route might still require siting through the current range of the species. Further analysis to determine the presence of the Golden Eagle occurring within the area will be considered outside of corridor-level planning. (3) |
| 110-233 .008 | BLM | Bristlecone FO | White Pine, NV | Crucial Big Game Habitat | Entire corridor | Agency Input: potential impacts to critical big game habitat. | Crucial big game habitat is an important consideration but further analysis is not a consideration for corridor-level planning. (3+) |
| 110-233 009 | BLM | Bristlecone FO | White Pine, NV | Mule Deer | MP 101 to MP 103, MP 107 to MP 116 | Comment on abstract: these areas have been identified as crucial winter habitat for Mule | Ungulate winter habitat and migration corridors are an important consideration but further analysis of |

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| | | | | | | Deer and should be avoided if at all possible. If avoidance is not possible, extra planning and/or measures should be incorporated to reduce or minimize impacts to this habitat.<br><br>These areas have been identified as Mule Deer migration corridors and should be avoided if at all possible. Unimpaired migration is crucial to Mule Deer life cycles. | this species is not a consideration for corridor-level planning. The Agencies are exploring an Agency Coordination IOP related to wildlife migration corridors and habitat to ensure appropriate consideration occurs with proposed infrastructure development within the energy corridors. (2) |
| 110-233 .010 | BLM | Bristlecone FO, Caliente FO | White Pine, Nye, and Lincoln, NV | Intermittent Streams: Jakes Wash, Unknown (5), Big Spring Wash, White River, Coyote Wash, Cottonwood Wash<br><br>Salmon River Creek, Cottonwood Creek, White Creek, and Steptoe Creek | MP 22, MP 33, MP 36, MP 42 to MP 43, MP 57, MP 75, MP 78 to MP 82, MP 91, MP 104 to MP 105, MP 151<br><br>MP 36 to MP 37 | GIS Analysis: intermittent streams intersect corridor.<br><br>Comment on abstract: these areas cross Salmon River Creek, Cottonwood Creek, White Creek, and Steptoe Creek, all fishable waterways, and should be avoided if possible. If avoidance is not possible, extra planning and/or measures should be incorporated to reduce or minimize impacts to these waterways. | Infrastructure can readily span or be located underneath intermittent streams. There are no opportunities to improve corridor placement, as the intermittent streams tend to run perpendicular to the corridor. The corridor's current location best meets the siting principles. (1) |
| ***Paleontological Resources*** | | | | | | | |
| 110-233 .011 | BLM | Bristlecone FO | White Pine, NV | Paleontological resources | MP 0 to MP 14 | GIS Analysis: Jakes Valley is located along the western edge of the corridor.<br><br>Agency Input: according to the SWIP South Paleontology | The identified potential of paleontological resources is a concern for the Agencies, which cannot be resolved during corridor-level planning. Assessments will occur as part of the ROW application process. (3) |

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| | | | | | | Report, there is a concentration of paleontological resources in Jakes Valley along the existing corridor. | |
| ***Lands with Wilderness Characteristics*** | | | | | | | |
| 110-233 .012 | BLM | | | Citizens' Proposed Wilderness | Not specified. | RFI: Perish Peak | The BLM's current inventory findings will be used in land use planning analyses related to the revision, 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) 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. |
| 110-233 0.13 | BLM | Bristlecone FO, Caliente FO | Nye and Lincoln, NV | Lands with wilderness characteristics | MP 61 to MP 68<br><br>MP 125 to MP 126<br><br>MP 148 to MP 152 | Comment on abstract: corridor intersects with BLM wilderness-quality lands. 1,043 acres overlap (BLM).<br><br>Corridor intersects with BLM wilderness-quality lands. 916 acres overlap (BLM).<br><br>Corridor intersects with BLM wilderness-quality lands. 957 acres overlap (BLM). | Wilderness character is a valuable natural resource and updated wilderness characteristics inventories are needed for certain segments of the corridor. The BLM is currently conducting updates for this valuable resource and an inventory will be completed in accordance with BLM Manual 6310 prior to any authorization of impacts to such characteristics; however, the preparation and maintenance of the inventory shall not, of itself, change or prevent change of the management or use of public lands. As such, the Agencies have identified an opportunity to develop an IOP to |

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| | | | | | | | provide guidance on the review process for applications within corridors with incomplete inventories. The potential IOP would assist with avoiding, minimizing, and/or mitigating impacts to lands with wilderness characteristics. (2) |
| ***Visual Resources*** | | | | | | | |
| 110-233 .014 | BLM | Bristlecone FO | White Pine, NV | VRM Class II | MP 0 to MP 6 | GIS Analysis: VRM Class II area adjacent to corridor. | The corridor's current location within Bristlecone FO does not intersect VRM Class II areas and best meets siting principles. (1) |
| 110-233 .015 | BLM | Bristlecone FO | White Pine, NV | VRM Class III | MP 13 to MP 15 | GIS Analysis: VRM Class III areas adjacent to corridor . | The corridor's current location within Bristlecone FO does not intersect VRM Class III areas and best meets the siting principles. (1) |
| 110-233 016 | BLM | Bristlecone FO, Caliente FO | White Pine, Nye, and Lincoln, NV | VRM Class IV | MP 0 to MP 159 | GIS Analysis: VRM Class IV areas and the corridor intersect. | The existing corridor location is entirely within VRM Class IV and best meets the siting principles. (1) |
| ***Cultural Resources*** | | | | | | | |
| 110-233 .017 | BLM | Bristlecone FO | White Pine, NV | Midland Trail | MP 40 | Agency Input: according to Ely District Cultural Data, the Midland Trail is adjacent to Highway 6. | Not a consideration for corridor-level planning, but would be addressed during ROW application process. Section 106 process would be followed to identify any possible impact of development. (3) |
| ***Tribal Concerns*** | | | | | | | |
| 110-233 .018 | BLM | Bristlecone FO, Caliente FO | White Pine, NV | Traditional Use Areas | Scattered throughout | Agency Input: refer to the Ethnographic Study for SWIP South. | The Agencies are aware of the existence of traditional use areas; but they will defer to the tribes for locations and concerns regarding the corridor. This may not be easily resolved during corridor-level planning. The Agencies would consult with the tribes, as required, for any proposed project in the corridor. (3) |

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| ***Land Use Concerns*** | | | | | | | |
| ***Military and Civilian Aviation*** | | | | | | | |
| 110-233 .019 | BLM | Bristlecone FO, Caliente FO | White Pine, Nye, and Lincoln, NV | MTR – VR | MP 2 to MP 30, MP 40 to MP 83, MP 109 to MP 123, MP 137 to MP 146 | GIS Analysis: VR intersects corridor. | The concern related to MTRs is noted and the adherence to 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. (2)<br><br>DoD requests the height of any proposed transmission structures not exceed height of any existing infrastructure in the ROW. Taller structure will require further analysis for operational impact. |
| | | | | MP 4 to MP 30 | MP 4 to MP 30 | Comment on abstract: MTR VR-1253, Floor of 200-ft AGL. | |
| | | | | | MP 19 to MP 24 | Comment on abstract: MTR VR-209, Floor of 200-ft AGL. | |
| | | | | | MP 40 to MP 83 | Comment on abstract: MTR VR-1253, Floor of 200-ft AGL. | |
| | | | | | MP 109 to MP 123 | Comment on abstract: MTR VR-1259, Floor of 200-ft AGL. | |
| | | | | | MP 137 to MP 146 | Comment on abstract: MTR VR-209, Floor of 200-ft AGL. | |
| 110-233 .020 | BLM | Bristlecone FO, Caliente FO | White Pine and Lincoln, NV | MTR – IR | MP 25 to MP 34, MP 147 to MP 156 | GIS Analysis: IR intersects corridor. | |
| 110-233 .021 | BLM | Bristlecone FO, Caliente FO | Lincoln, NV | DoD SUA - MOA | MP 104 to MP 159 | GIS Analysis: MOA intersects corridor.<br><br>Comment on abstract: corridor is adjacent to the Nevada Test and Training Range Operations. All Restricted Airspace needs to be avoided due to hazardous operations and access to any sites. Height should be no higher than existing structures if outside the Restricted Airspace. | |
| ***Public Access and Recreation*** | | | | | | | |
| 110-233 .022 | BLM | Caliente FO | Lincoln, NV | Highway 93 | MP 146 | GIS Analysis: State scenic highway intersects corridor. | The Ely RMP has no ROW exclusion or avoidance prescriptions for utility |

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| | | | | | | | corridors intersecting scenic highways. (3)<br><br>Coordination with NDOT would be required to identify any management prescriptions related to the scenic highway. (3) |
| ***Other land use concerns*** | | | | | | | |
| 110-233 .023 | BLM | Bristlecone FO | White Pine, NV | Existing infrastructure | Entire corridor | Agency Input: reduced space within corridor due to existing transmission that is not properly spaced within the corridor to accommodate other uses. | Existing infrastructure may limit further use of the corridor. This issue needs to be considered for future authorizations and potential corridor revisions. (3) |

[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; AGL = above ground level; ARMPA = Approved Resource Management Plan Amendment; AWEA = American Wind Energy Association; BLM = Bureau of Land Management; DoD = Department of Defense; FO = Field Office; GHMA = General Habitat Management Area; GIS = geographic information system; GRSG = Greater Sage-grouse; IOP = interagency operating procedure; IR = Instrument Route; IRA = Inventoried Roadless Area; MOA = Military Operations Area; MP = milepost; MTR = Military Training Route; NDOT = Nevada Department of Transportation; NVCA = Nevada and Northeastern California; PAC = Priority Area for Conservation; PEIS = Programmatic Environmental Impact Statement; PHMA = Priority Habitat Management Area; RFI = request for information; RMP = Resource Management Plan; ROW = right-of-way; SEZ = Solar Energy Zone; SUA = special use airspace; SWIP = Southwest Intertie Project; USFS = U.S. Forest Service; VR = Visual Route; VRM = Visual Resource Management; WWEC = West-wide Energy Corridor.