

Corridor 144-275

Empire to Hayden

Corridor Rationale

There are no planned transmission or pipeline projects within the corridor and no pending or recently BLM-authorized ROWs within or intersecting the corridor at this time. The corridor follows two natural gas pipelines and several electric transmission lines.

Corridor location:

Colorado (Clear Creek, Grand, and Routt Co.)

BLM: Kremmling and Little Snake Field Offices

USFS: Arapaho and Medicine Bow-Routt National Forests

Regional Review Region(s): Region 3

Corridor width, length:

Width variable from 200 - 3,500 ft

45.2 miles of designated corridor

98.8 mile-posted route, including gaps

Sec 368 energy corridor restrictions: (N)

- corridor is multi-modal in Routt NF and Little Snake FO and electric-only in Arapaho NF

Corridor of concern (Y)

- coal access, wilderness areas, and a National Historic Place

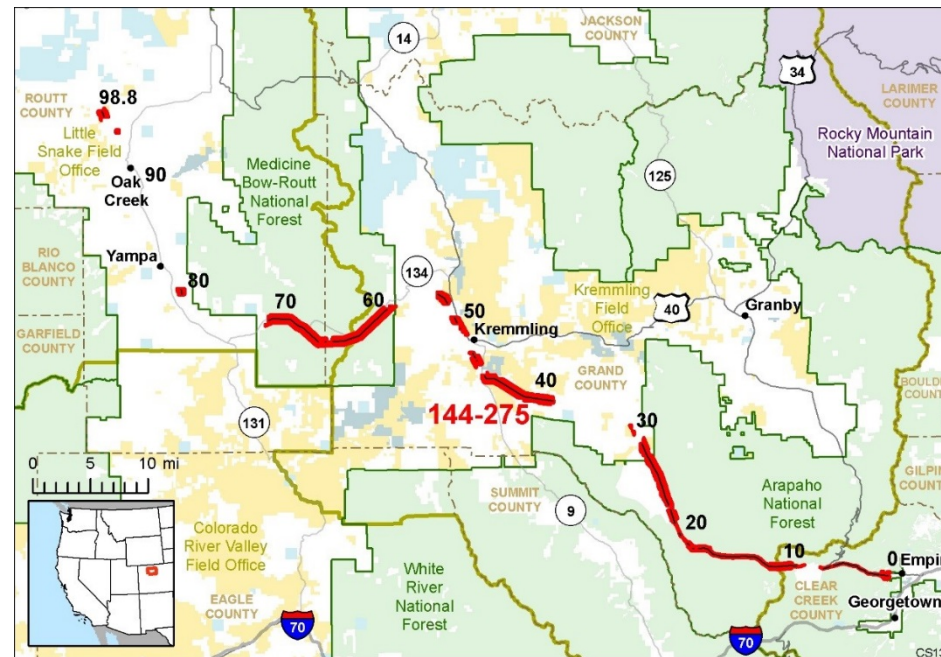


Figure 1. Corridor 144-275

Corridor history:

- Locally designated corridor prior to 2009 (N)
- Existing infrastructure (Y)
 - Electric transmission:
 - 138-kV line (MP 44 to MP 99)
 - 230-kV line (MP 41 to MP 54 and MP 96 to MP 100)
 - 69-kV line (MP 52 to MP 99)
 - Pipelines:
 - natural gas (MP 0 to MP 9 and MP 23 to MP 28)
- Energy potential near the corridor (Y)
 - 2 substations in corridor
 - 2 hydroelectric plants (1.9 MW, MP 0 and 3.5 MW, MP 36) more than 4 mi from corridor
- Corridor changes since 2009 (N)

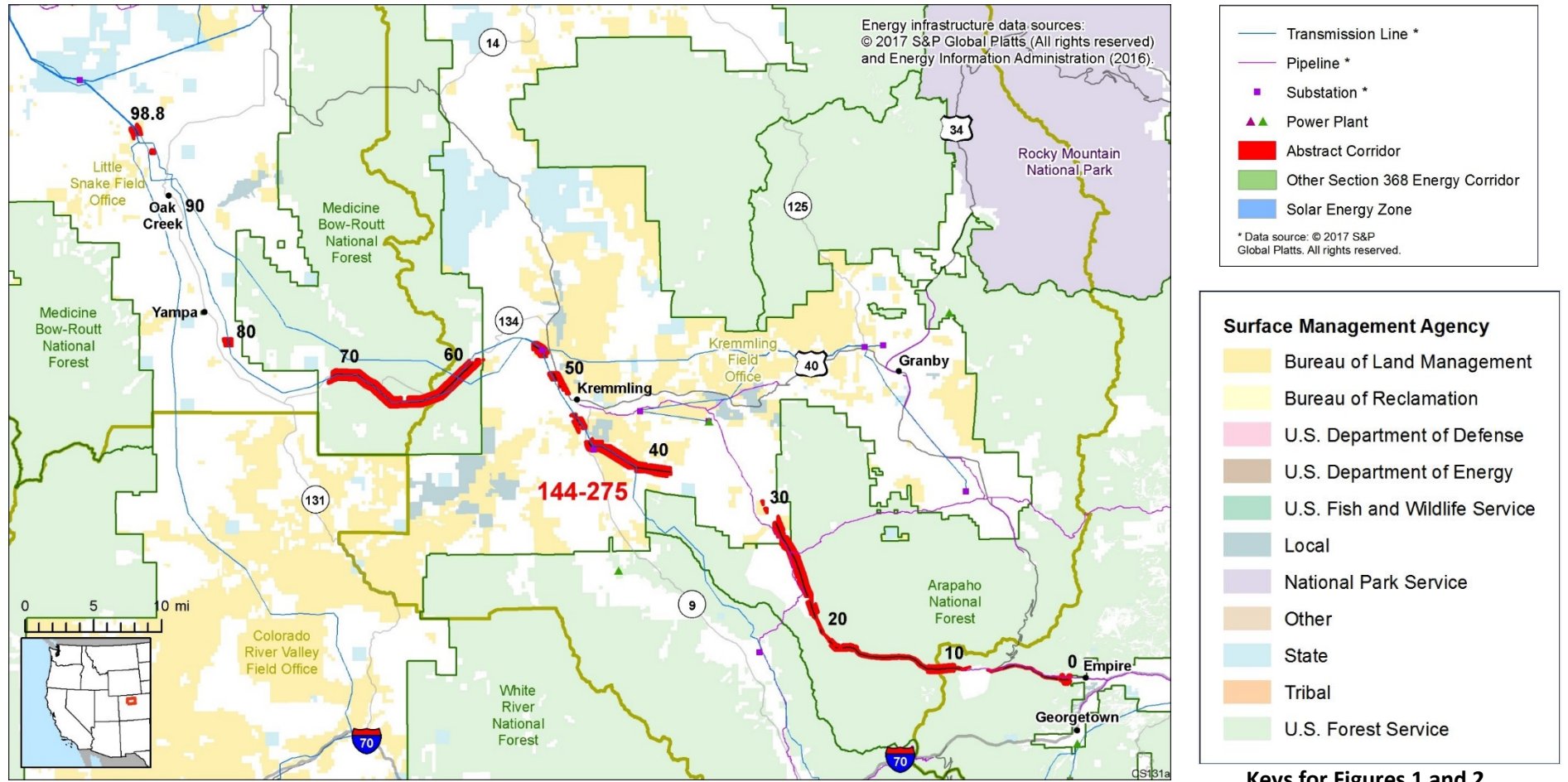


Figure 2. Corridor 144-275 and nearby electric transmission lines and pipelines

Conflict Map Analysis

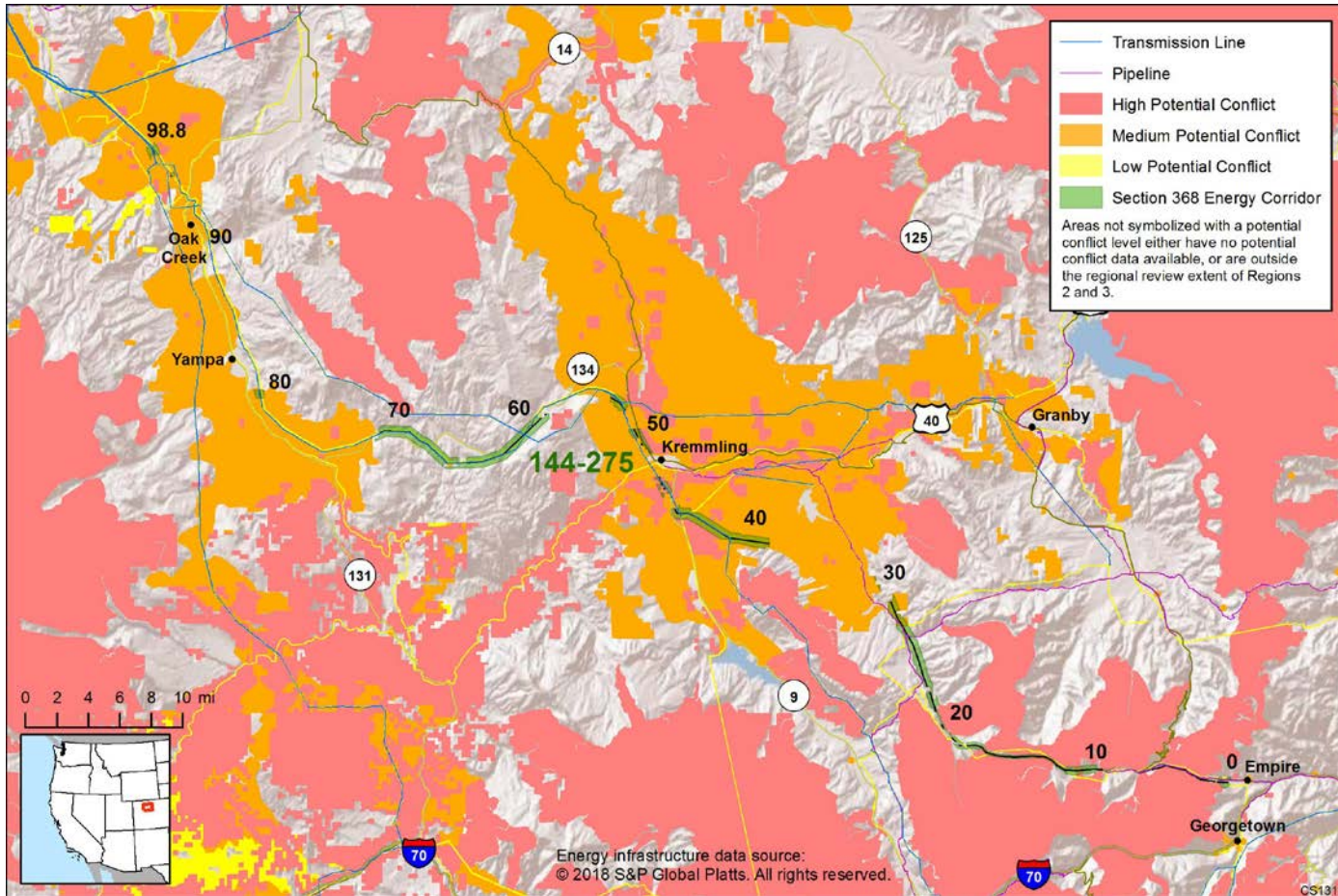


Figure 3. Map of Conflict Areas in Vicinity of Corridor 144-275.

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 WVEC 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/>)

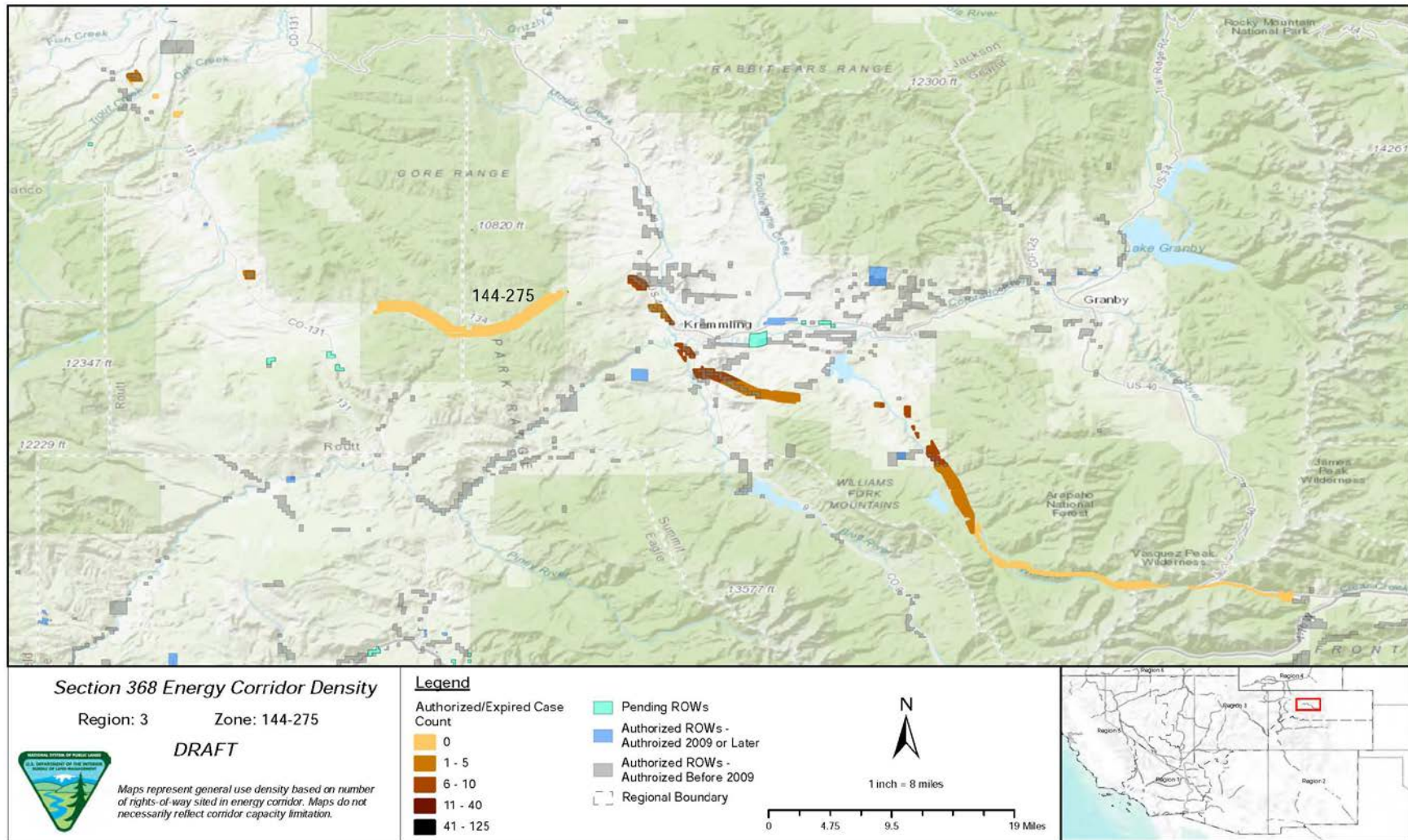


Figure 4. Corridor 144-275, Corridor Density Map

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

One stakeholder questioned the corridor’s placement between MP 9 and MP 22. Considering the corridor is a corridor of concern, it is located within a high potential conflict area, there were no recommendations for a corridor in this area during scoping for the WWEC PEIS, and there are no pending ROW applications within the corridor, the stakeholder questioned why the corridor was not collocated with the 115-kV line.

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 144-275 REVIEW TABLE							
ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
ENVIRONMENTAL RESOURCE ISSUES							
<i>Specialty Designated Areas</i>							
144-275 .001	USFS	Arapaho and Roosevelt National Forests	Grand and Clear, CO	CDNST	MP 10 to MP 11 MP 4 to MP 11	GIS Analysis: NST intersects corridor. GIS Analysis: NST as near as 1,100 ft north of corridor.	There is an opportunity for the Agencies to consider adding an IOP for NSTs and NHTs as well as adding an IOP related to Visual Resources to ensure appropriate consideration occurs with proposed development within the energy corridor. (2)
144-275 .002	BLM	Kremmling FO	Grand, CO	Colorado River Headwaters Byway	MP 46	GIS Analysis: backcountry byway intersects corridor	The Colorado River Headwaters Byway is administered by CDOT, and future development in the corridor would require coordination with this agency. (3)
144-275 .003	USFS	Arapaho and Roosevelt National Forests	Clear Creek, CO	Bard Creek Colorado Roadless Area	MP 1 to MP 7 and MP 9 to MP 10	GIS Analysis: Colorado Roadless Area intersects or is adjacent to corridor on USFS land. Agency Input: Bard Creek Colorado Roadless Area contains Upper Tier Roadless Area. Per 36 CFR 294.44 (a) a linear construction zone is not allowed to construct a power line within Upper Tier. All construction	Minor intersections occur with roadless areas along the margins of this corridor. There is an opportunity to revise the corridor to eliminate those intersections. There is an opportunity to consider the addition of an Agency Coordination IOP related to Roadless Areas. Also, because the Colorado Roadless Area is adjacent to the corridor, the opportunity to expand or shift the

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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
						would have to be completed by aircraft. Per Roadless Characteristics, 36 CFR 294.41, a power line would be in conflict with characteristic (7), Natural appearing landscapes with high scenic quality.	corridor in these other areas is limited. (2)
144-275 .004	USFS	Medicine Bow-Routt National Forest	Routt, CO	Bushy Creek Colorado Roadless Area	MP 68 to MP 70	GIS Analysis: Colorado Roadless Area as close as 1 mi north of corridor.	The corridor is not located in the Colorado Roadless Area and development and management inside of the corridor would not be affected. (1)
144-275 .005	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Byers Peak Colorado Roadless Area	MP 11 to MP 17 and MP 19 to MP 22	GIS Analysis: Colorado Roadless Area intersects or is adjacent to corridor. Agency Input: The Byers Peak Colorado Roadless Area contains Upper Tier Roadless Area. Per 36 CFR 294.44 (a) a linear construction zone is not allowed to construct a power line. All construction would have to be completed by aircraft. Per Roadless Characteristics, 36 CFR 294.41, a power line would be in conflict with characteristic (7), Natural appearing landscapes with high scenic quality.	Minor intersections occur with roadless areas along the margins of this corridor. There is an opportunity to consider the addition of an Agency Coordination IOP related to Roadless Areas. Because the Colorado Roadless Area is adjacent to the corridor, the opportunity to expand or shift the corridor is limited. (2)
144-275 .006	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Copper Mountain Colorado Roadless Area	MP 37 to MP 40	GIS Analysis: Colorado Roadless Area more than 1 mi south of corridor.	The corridor is not located in the Colorado Roadless Area and development and management inside of the corridor would not be affected. (1)
144-275 .007	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Williams Fork Ptarmigan Adjacent Colorado Roadless Area	MP 12 to MP 17 and MP 19 to MP 21	GIS Analysis: Colorado Roadless Area adjacent to corridor.	The corridor is not located in the Colorado Roadless Area and development and management inside of the corridor would not be affected. Where the Colorado

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							Roadless Area is adjacent to the corridor, the opportunity to expand or shift the corridor is more limited. (1)
144-275 .008	USFS	Arapaho and Roosevelt National Forests	Clear Creek, CO	Vasquez Adjacent Area Colorado Roadless Area	MP 7 to MP 9	GIS Analysis: Colorado Roadless Area adjacent to corridor	The corridor is not located in the Colorado Roadless Area and development and management inside of the corridor would not be affected. Because the Colorado Roadless Area is adjacent to the corridor, the opportunity to expand or shift the corridor is limited. (1)
144-275 .009	USFS	Arapaho and Roosevelt National Forests	Clear Creek, CO	James Peak Colorado Roadless Area	MP 2 to MP 5	GIS Analysis: Colorado Roadless Area adjacent to corridor.	There is an opportunity to consider the addition of an Agency Coordination IOP related to Roadless Areas. The corridor is not located in the Colorado Roadless Area and development and management inside of the corridor would not be affected. Because the Colorado Roadless Area is adjacent to the corridor, the opportunity to expand or shift the corridor is limited. (2)
144-275 .010	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Byers Peak Wilderness	MP 15 to MP 22 MP 11 to MP 12 and MP 15 to MP 21	Settlement Agreement. RFI: re-route to avoid Wilderness GIS Analysis: NWA is over 1 mi north of corridor segments. GIS Analysis: NWA as close as 2,100 ft north of corridor segments.	The corridor's current location does not intersect the wilderness areas and best meets the siting principles. (1)
144-275 .011	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Vasquez Peak Wilderness	MP 6 to MP 13	Settlement Agreement. RFI: re-route to avoid Wilderness GIS Analysis: NWA as close as 2,100 ft north of corridor.	

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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
					MP 7 to MP 12	GIS Analysis: NWA as close as 1 mi north of corridor.	
144-275 .012	USFS	Arapaho and Roosevelt National Forests	Clear Creek, CO	James Peak Wilderness	MP 0 to MP 4	Settlement Agreement. RFI: re-route to avoid Wilderness GIS Analysis: NWA as close as 2,100 ft north of corridor.	
144-275 .013	BLM	Kremmling FO	Grand, CO	Kremmling ACEC	MP 52 to MP 53	GIS Analysis: ACEC as close as 0.2 mi northeast 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).
144-275 .014	BLM	Kremmling FO	Grand, CO	Upper Colorado River-Gore Canyon to Pumphouse, Upper Colorado River-Reeder Creek to Blue River, and Wolford Mountain SRMAs	MP 46 to MP 47, MP 49 to 51, and MP 52 to MP 53	GIS Analysis: SRMAs intersect and are adjacent to corridor.	According to the Kremmling RMP, SRMAs are avoidance areas And therefore there is a conflict between the corridor designation and the existing RMP that must be resolved. There is an opportunity to revise the corridor or revise the SRMA boundary or management prescriptions. Because the SRMA extends well beyond the corridor, the opportunity to expand or shift the corridor is limited. (2)
Ecology							
144-275 .015	BLM	Kremmling FO and Little Snake FO	Grand and Routt, CO	GRSG (BLM and USFS sensitive species)		RFI: re-route or exclude new infrastructure ROWs and avoid all new energy infrastructure development within GRSG PACs (21% overlap). Use full mitigation hierarchy to address potential impacts within 4 mi of important GRSG breeding areas. Re-route to avoid "Very High" risk to the number and magnitude of flowline crossings by WWEC segments. Where flowlines must unavoidably be crossed,	The Kremmling and Little Snake RMPs both prohibit surface occupancy or use within 0.6 mi of leks and have timing limitations for habitat disturbance during nesting and winter periods. The NWCO GRSG RMP states that areas within PHMA are managed as avoidance areas for BLM ROW permits and areas within GHMA are managed as avoidance areas for major transmission lines greater than 100 kV and pipelines greater than 24 in. and minor BLM

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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
				PHMA	MP 32 to MP 51, MP 54 to MP 55, MP 71 to MP 81, and MP 84 to MP 88	<p>minimize impacts to connectivity.</p> <p>GIS Analysis: GRSG PHMA intersects corridor.</p> <p>Comment on abstract: Re-route to avoid GRSG PHMAs.</p>	<p>ROW permits. PHMA and GHMA are designated as avoidance areas for high-voltage transmission line ROWs, except: ROWs may be issued after documenting that the ROWs would not adversely affect GRSG populations; any new projects within PHMA would be subject to the 3% disturbance cap. Within existing designated utility corridors, the 3% disturbance cap may be exceeded at the project scale if the site -specific NEPA analysis indicates that species plan objectives will be achieved. (3) There is an opportunity to revise the corridor location between MP 70 and MP 90 following an existing electric transmission line. However, corridor locations within the current designation of GRSG PHMA and GHMA between MP 32 and MP 56 are not easily resolved or avoided by corridor-level planning because alternate routes would still require siting through the current designated areas. Recommend that projects within this corridor are evaluated for impacts to GRSG and habitats, and measures are included to avoid, minimize, and mitigate impacts.</p> <p>Connectivity flowline is not a BLM-recognized term, but impacts on habitat connectivity would be addressed at the project level and through management prescriptions in the RMP. There is an opportunity to consider the addition of an Agency</p>
				GHMA	MP 38 to MP 56, MP 71 to MP 72, and MP 85 to MP 99	<p>GIS Analysis: GRSG GHMA intersects corridor segments and is adjacent to corridor.</p> <p>Comment on abstract: support existing designations of PHMAs and GHMAs. Recommend that corridor be re-routed to avoid PHMA and GHMA. In areas where existing transmission lines are present, recommend the disturbance be within the existing infrastructure footprint. If avoidance or co-location is not possible, recommend burying the transmission line and instituting compensatory mitigation.</p>	

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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
Coordination IOP related to wildlife connectivity corridors. (3)							
Lands with Wilderness Characteristics							
144-275 .016	BLM	Kremmling FO	Grand, CO	Citizen-identified potential lands with wilderness characteristics	Not specified.	<p>RFI: Barger Gulch/McQueary Gulch, Wolford Mountain.</p> <p>Comment on abstract: the corridor abstracts dismiss all intersections with citizens' proposed wilderness. This approach is wholly inappropriate and inadequate; the Agencies must address conflicts with proposed wilderness.</p>	<p>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 citizen 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 citizen's 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.</p>
144-275 .017				BLM wilderness-quality lands	<p>MP 3 to MP 4</p> <p>MP 12 to MP 14</p>	<p>Comment on abstract: corridor intersects with BLM wilderness-quality lands. 4 acres overlap (USFS Roadless Areas and USFS potential wilderness areas).</p> <p>11 acres overlap (USFS Roadless Areas and USFS potential wilderness areas).</p> <p>USFS should exclude energy corridors from all wilderness-quality lands.</p>	<p>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</p>

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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
							Interagency Operating Procedure to 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. There is also an opportunity to consider the addition of an Agency Coordination IOP related to Roadless Areas. (2)
Visual Resources							
144-275 .018	BLM	Kremmling FO	Grand, CO	VRM Class II	MP 41 to MP 51	GIS Analysis: VRM Class II areas and corridor intersect.	Future development within the corridor could be limited as VRM Class II allows for low level of change to the characteristic landscape. Management activities may be seen, but should not attract the attention of the casual observer. (3)
144-275 .019	BLM	Kremmling FO and Little Snake FO	Grand and Routt, CO	VRM Class III	MP 27 to MP 31, MP 38 to MP 53, MP 80	GIS Analysis: VRM Class III areas and the 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 the casual observer, but shall not dominate the view. (1)
144-275 .020	BLM	Little Snake FO	Routt, CO	VRM Class IV	MP 96, MP 98 to MP 99	GIS Analysis: VRM Class IV areas and the corridor intersect.	The existing corridor location best meets the siting principles. (1)
Cultural Resources							
144-275 .021	NA	Private land	Clear Creek, CO	Peck House and Mint Saloon	MP 0	Settlement Agreement; RFI: re-route to avoid National Historic Places GIS Analysis: properties listed on the NRHP are over 1 mi east of the beginning of the corridor.	The properties are not within the corridor and are not a consideration for corridor-level planning. Section 106 process would be followed to identify possible impact of development. (1)

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144-275 .022	NA	Private land	Grand, CO	E.C. Yust Homestead	MP 45	<p>Settlement Agreement; RFI: re-route to avoid National Historic Places.</p> <p>GIS Analysis: property listed on the NRHP is over 1 mi southwest of the corridor.</p>	
144-275 .023	State - CPW	Rock Creek State Wildlife Area	Routt, CO	Rock Creek Stage Station	MP 65	<p>Settlement Agreement; RFI: re-route to avoid National Historic Places.</p> <p>GIS Analysis: NRHP property intersects corridor.</p> <p>Comment on abstract: the Rock Creek Stage Station was built in 1880 and recently underwent stabilization efforts through funding from the Colorado State Historical Fund. Support the opportunity to consider adjusting the corridor to avoid the resource rather than relying on the Section 106 process at a later stage.</p>	<p>This is likely the property referred to in Exhibit A of the Settlement Agreement. There is an opportunity to consider adjusting the corridor to avoid the resource by following Highway 134 to the north. However, the current corridor position follows existing electric transmission lines. Section 106 process would be followed to identify any possible impact of development. (2)</p>

Land Use Concerns

Corridor pinched by BLM or USFS authorized use

144-275 .024	USFS	Arapaho and Roosevelt National Forests	Grand, CO	Existing ROW grant	MP 8 to MP 17	<p>Comment on abstract: overlaps a small (920 square feet) portion of Denver Water’s property on the eastern side of Jones Pass and comes into close proximity to Denver Water property or ROW in the Williams Fork River Basin.</p> <p>The Williams Fork Diversion Project was constructed pursuant to a ROW granted by</p>	<p>Existing IOPs ensure appropriate consideration of water quality occurs with proposed development within the energy corridor. An opportunity may exist to adjust the corridor by aligning with the existing electric transmission line that crosses the corridor in several locations within this segment. (2)</p>
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ID	Agency	Agency Jurisdiction	County	Primary Issue	Corridor Location (by Milepost [MP])	Source	Agency Review and Analysis ^{1, 2}
						the United States Land Office, DOI. Denver Water also hold a special use permit from the Arapaho and Roosevelt National Forests to operate and maintain the Jones Pass Road, which provides access to this remote area. The Williams Fork Diversion Project is a critical component of Denver Water’s collection system. They also own conditional water rights to tributary streams in further reaches of the Upper Williams Fork River Basin that will be developed in the future. Any future project proposals that could potentially include road construction, ground disturbing activities, and long-term maintenance access could jeopardize Denver Water’s existing and future operations within our ROW, as well as the water quality within this pristine, headwaters basin.	
Military and Civilian Aviation							
144-275 .025	NA	Private land	Clear creek, CO	Henderson Mine Heliport and Henderson Heliport	MP 8 to MP 9	GIS Analysis: heliports are adjacent to corridor.	The Agencies can only authorize projects on BLM- and USFS-administered lands. Development in corridor gaps would require coordination outside of the Agencies. Future development in the corridor would require coordination with the private heliport owner. (3)
144-275 .026	NA	Private land	Grand, CO	Amax Mill Heliport	MP 22	GIS Analysis: heliport is adjacent to corridor.	
Other noted land use concerns							
144-275 .027	USFS	Arapaho and Roosevelt	Clear Creek, CO	ROW holders- Recreation residential permits	Not specified.	Agency Input: the Empire Summer Group Home and the Hoop Creek Summer Home	Any future energy development in the corridor must minimize conflicts with the Summer Home Group

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		National Forests		and SNOTEL Research sites		Group (Recreation Residences permits) and SNOTEL Research sites (no cutting within the research site).	permit sites and the SNOTEL site. This could be addressed by shifting the corridor out of the area of the improvements, or through terms and conditions of the new energy corridor authorizations to minimize conflicts. (2)
144-275 .028	NA	Private land	Grand, CO	Existing structures	MP 32 and MP 47	GIS Analysis: parts of Kremmling, CO in line within corridor gap, and McElroy Airfield has runway perpendicular to corridor direction within 1 mi, center-pivot agriculture in corridor gap.	Existing transmission lines occur within the corridor gaps in the vicinity of Kremmling and McElroy Airfield. USFS can only authorize activities on USFS-administered lands. Future development in the corridor would require coordination with private landowners. (3)
144-275 .029	BLM	Kremmling FO and Little Snake FO	Grand and Routt, CO	NSO	MP 43 to MP 47, MP 52, MP 96, and MP 98	GIS Analysis: NSO areas intersect corridor.	NSO designated areas within (and adjacent to) the corridor currently include electric transmission lines and/or roadways. As such, the corridor's current location best meets the siting principles. (1)

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; CDNST = Continental Divide National Scenic Trail; CDOT = Colorado Department of Transportation; CPW = Colorado Parks and Wildlife; DOI = U.S. Department of the Interior; FO = Field Office; GHMA = General Habitat Management Area; GIS = geographic information system; GRSG = Greater Sage-grouse; IOP = interagency operating procedure; LRMP = Land and Resource Management Plan; MP = milepost; NA = not applicable; NHT = National Historic Trail; NRHP = National Register of Historic Places; NSO = No Surface Occupancy; NST = National Scenic Trail; NWA = National Wilderness Area; PAC = Priority Areas of Conservation; PEIS = Programmatic Environmental Impact Statement; PHMA = Priority Habitat Management Area; RMP = Resource Management Plan; ROW = right-of-way; SNOTEL = Snow Telemetry; SRMA = Special Recreation Management Area; USFS = U.S. Forest Service; VRM = Visual Resource Management; WWEC = West-wide Energy Corridor.