

**APPENDIX B**  
**U.S.D.A. FOREST SERVICE**  
**MITIGATION REQUIREMENTS FOR THE**  
**DAKOTA, MINNESOTA & EASTERN RAILROAD**  
**POWER RIVER EXPANSION PROJECT**

The following are mitigation measures that are required by the Forest Service for the construction, operation, and maintenance of the DM&E Railroad and apply solely to the proposed new rail line construction on NFS lands affected in the States of South Dakota and Wyoming.

These mitigation measures are based on laws, regulations and policy as well as best management practices, and are imposed as conditions of the Forest Service Record of Decision. Additionally, changed circumstances or new information that may come to light during any implementation of this project such as a new species listing under the *Endangered Species Act* will cause mitigation measures to be modified, or imposed where they may not have been previously required. Where impacts are known to occur, mitigation practices will be required.

The Forest Service will apply the standards for mitigation to the project as provided in *40 C.F.R. 1508.20*, which states: Mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

**IT IS IMPORTANT TO NOTE** that the original railroad route proposal, (Alternative B, Proposed Action) as submitted by DM&E Railroad Corporation in its Special Use Application, was voluntarily modified by the DM&E Railroad due to certain preliminary concerns by federal and state agencies that potential impacts along the proposed route could preclude the issuance of an easement. The DM&E Railroad reviewed their proposed route, and based on the environmental impacts identified early on, modified portions of their route into what is now known as Alternative C (Modified Proposed Action). In essence, the DM&E Railroad **mitigated** many of the potential environmental effects of their proposal at considerable cost to them by following the purpose stated in *40*

*C.F.R.1508.20(a)* above. This action, taken by DM&E Railroad, is acknowledged by the Forest Service as a part of project mitigation.

To the extent allowed by law, these mitigation requirements also incorporate restrictions and mitigation measures or environmental conditions imposed by other federal or state agencies with jurisdiction or decision-making authority over the DM&E Railroad project to the extent they are applicable to lands managed by the Forest Service.

The Forest Service developed these mitigation measures with help from laws, regulations, policies, manuals, handbooks, Executive Order 13007, the *Nebraska National Forest and Associated Units Land and Resource Management Plan, 2001 Revision*, the *Thunder Basin National Grassland Land and Resource Management Plan, 2001 Revision*, and Forest Service technical reports.

## **I. General Mitigation For Land Ownership Pattern**

The Forest Service will develop a Land Adjustment Plan to identify and propose solutions to the issue of isolated pieces and portions of NFS land, or "widow pieces." These are leftover pieces of land resulting from the location of the rail line that would be difficult to manage, due to their small size. Any land adjustment proposals will be analyzed separately from the current action under the appropriate laws, regulations, and policies that govern land exchanges. However, unless or until any land adjustments or land exchanges transpire, the DM&E Railroad will continue to mitigate all impacts of the railroad route to NFS lands accordingly. DM&E has agreed to enter into good faith negotiations to exchange land if needed to resolve problems identified. Other adjacent landowners would also be considered as partners, if appropriate.

## **II. Required Mitigation Measures By Resource**

### **1. Archaeological, Historical and Prehistoric Resources**

DM&E Railroad Shall (at DM&E Railroad's expense):

Maintain and continue access to the extent practicable to sacred sites by Native American Indians consistent with the terms of Executive Order 13007.

Monitor all construction sites for historic properties to ensure protection of these sites as well as monitor and protect known eligible historic properties impacted by construction, operation or maintenance of the railroad.

Provide safeguards, such as contract stipulations that require all employees or agents of DM&E to prevent "damage" of sites and cultural resources. A Forest Service Cultural Resource Specialist(s) will assist DM&E Railroad in this requirement to prevent looting and damage by monitoring the construction of the railroad. The Forest Service will continue to monitor sites

at any time determined to be necessary during the operation or maintenance of the railroad.

Provide access to allow traditional plant collection to continue where traditional plant sites are identified during the cultural resource survey process to the extent reasonable and practicable.

Monitor erosion at cut and fill areas for cultural resources.

Comply with all terms and conditions of the Programmatic Agreement for archeological resources signed by the affected parties.

## **2. Paleontological Resources**

DM&E Railroad Shall (at DM&E Railroad's expense):

### **Pre-construction Survey and Recovery**

Hire paleontologists approved and directed by the Forest Service, having the requisite expertise to identify and classify scientifically important paleontological resources. Such approved paleontologists will complete a surface survey for scientifically-important fossils on NFS lands with a Probable Fossil Yield Code (PFYC) of 4 and 5 (see GIS coverage for these areas and Forest Plans) that would be materially disturbed by excavation activities.

Certify, prior to the start of construction, that all scientifically-important fossils will be recovered, protected, and properly curated. Such certification shall include a signed verification by the approved paleontologists and Forest Service monitors to the effect that such fossils have been so recovered and protected. DM&E Railroad shall also prepare at its expense, a protection plan which shall cover how the finds will be transported, and determine which federally-approved repository shall be used to house fossils.

### **Construction, Monitoring and Recovery**

In order to detect important buried fossils that might not be ascertainable during the pre-construction survey, provide an on-site paleontologist(s) at all times to monitor excavation activities on NFS lands with a Probable Fossil Yield Code of 4 or 5.

Provide reasonable and accurate self-monitoring of excavation activities on NFS lands with a Probable Fossil Yield Code of 3. DM&E will consult with Forest Service-approved paleontologists when necessary. If scientifically important fossils are found, the Forest Service shall be notified and a determination made as to the significance of the discovery and whether or not excavation of said find should occur.

Where discovery of human influence is determined, or associated human activity with fossils, there will be a qualified archeologist(s) on-site to monitor and determine the significance of the find.

If a scientifically important fossil is found during excavation, all work that would adversely affect the fossil or reasonable area surrounding the fossil will cease immediately, and no further work that would adversely affect the find or the area surrounding the find will be permitted until the fossil has been properly recovered. DM&E Railroad will be responsible for all costs associated with such recovery and the curation, protection, and storage of such recovery in a federally approved facility and location. Work in the area of the find will re-commence upon the written authorization of the Forest Service paleontologist who, in consultation with DM&E, will also determine the disposition of the find.

At the conclusion of construction, DM&E will prepare and publish a Summary of Findings that will document all significant discoveries found during excavation and construction of the rail line, including fossil finding locations, stratigraphic context, geologic formation and research potential. Said document will be the property of the United States Federal Government.

All discoveries on NFS lands are the property of the United States.

DM&E will protect the confidentiality of all locations and types of findings, and will be responsible for its contractors and subcontractors to practice the same standards of confidentiality.

If future slumping of soils, cuts and fills, or other railroad activity produces a discovery, then the mitigation measures outlined above shall apply.

### **3. Transportation/Public Safety**

#### DM&E Railroad Shall (at DM&E Railroad's expense):

Develop a plan for roads needed during construction, and roads needed for access to the rail line and obtain Forest Service approval prior to ground disturbance. DM&E shall work with the Forest Service to develop a plan to provide road access to public lands that will be maintained during and after construction by DM&E Railroad. DM&E shall not impair easements on all road, wildlife, and livestock crossings through, under and over the right-of-way.

Construct, reconstruct, or decommission rail line crossings at roads identified by the U.S. Forest. Tables 1 and 2 of this Mitigation Plan display options for mitigation of effects to transportation operations. The Forest Service will select the specific option after construction is completed, but before the easement is issued.

DM&E will be required to apply for a Special Use Permit for the use of existing Forest Service roads and/or construction of all new roads by DM&E Railroad employees, contractors and agents. Permits will only be issued to the DM&E Railroad. Any use of new or existing Forest Service roads will require an assessment by the Forest Service as to the level of use, and the Forest Service will determine the standard to which the roads must be maintained by the proponent. DM&E will limit the personal vehicle use of its employees, contractors and subcontractors outside of the right-of-way and provide group transportation or bussing where practicable during construction activities.

Comply with all appropriate and legally required safety standards applicable to any new roads and/or road crossings, such as proper signage, and warning systems. Roads identified by the Forest Service for DM&E Railroad maintenance will be maintained to Forest Service standards.

In cooperation with the Forest Service, develop a list of required cattle guards, gates, and fence requirements. DM&E Railroad will install cattle guards on all railroad right-of-way fences at road crossings, with an associated gate on the side, both of which will be maintained by the proponent. Gates will be installed on fences adjacent to cattle guards. Standards for fences, gates, and cattle guards will be provided by the Forest Service after consultation with other agencies and adjacent landowners. The DM&E Railroad will annually maintain cattle guards and gates.

#### **4. Grazing Resource**

##### DM&E Railroad Shall (at DM&E Railroad's expense):

Where livestock is separated from or loses water sources as a result of construction or operation of the railroad, DM&E will provide water, i.e. by developing a new well, dam, spring, windmill, etc. sufficient to replace the loss of water or access to water as determined by the Forest Service.

Prior to construction, fencing of the rail line area of construction will be completed and done to Forest Service standards for easements and highway rights-of-way.

Mitigate impacts to any permitted grazing allotment with the Forest Service so that the permittee can continue to maintain grazing operations with as little interruption as possible. Until the rail line footprint is completely determined, some impacts to livestock movement/trailing cannot be evaluated for mitigation but will be determined and required to the extent practicable when the measure of the impact is determined. Tables 1 and 2 of this Mitigation Plan display options for mitigation of effects to grazing operations. The Forest Service will select the option after construction is completed, but before the easement is issued.

Prior to issuing a Special Use Construction Permit, DM&E will provide funding or provide contractors to complete the environmental analysis necessary to modify, amend or re-issue grazing permits and/or the amendment of allotment management plans as a result of impacts directly created by the railroad.

## **5. Soils Resource**

### DM&E Railroad Shall (at DM&E Railroad's expense):

Salvage the top 12 inches of topsoil from all excavation sites and prevent the mixing of topsoil with subsoil. Topsoil shall be stockpiled in areas that would minimize the potential for erosion, and appropriate erosion control measures around all stockpiles shall be used to prevent erosion.

Ensure successful revegetation of soils disturbed by project-related activities. DM&E Railroad shall monitor reclaimed areas until successful revegetation is achieved. In most instances, revegetation shall be considered successful if, upon visual survey, the density and cover of non-nuisance vegetation is no less than approximately 80% of the density and cover on adjacent undisturbed lands. However, there may be situations where 80% density cannot be achieved, i.e. cut and fill areas, etc. If vegetative cover and density are less than 80% or there are excessive noxious weeds after two full growing seasons, a professional agronomist will be utilized by DM&E to determine the need for additional restoration measures (such as fertilizing or reseeding). DM&E shall implement the measures recommended by the agronomist.

DM&E will take all reasonable steps to ensure that fill material used in project-related construction and operation activity is free of contaminants.

## **6. Water/Wetland Resources**

Minimize sedimentation into streams and waterways by utilizing best management practices, such as silt screens and weed-free straw bale dikes, to minimize soil erosion, sedimentation, runoff, and surface instability during project-related construction and meet required State standards for water quality. DM&E Railroad shall disturb the smallest area possible around any streams and tributaries, and shall ensure proper revegetation of disturbed areas as soon as possible following construction or reconstruction activities related to this project.

Service and refuel project-related construction equipment a minimum of 100 feet from all wetlands or waterways.

Employ best management practices to control turbidity and disturbance to bottom sediments and culverts during project-related construction of bridges. Comply with all water quality standards, both federal and state.

**Water sources necessary for construction will not be developed on NFS lands without additional analysis and issuance of a Special Use Permit.**

Use only approved herbicides during construction, operation and maintenance of the railroad. The Forest Service will set priorities for controlling invasive plant species.

**7. Aesthetics/Visual Quality Resource**

DM&E Railroad Shall (at DM&E Railroad's expense):

Paint all above-ground facilities and equipment with appropriate non-reflective colors specified by the Forest Service to blend with adjacent terrain, except for structures that require safety coloration in accordance with appropriate safety regulations or operational requirements.

To the extent reasonably practicable, and taking into account DM&E Railroad's safety, security and operational requirements, minimize nightlight pollution, particularly at the West Yard location by shading light fixtures and directing lights into focused areas.

Bury all telephone lines and power lines, if they are 33Kv or less, where practicable.

Facilities associated with the railroad be lighted only when occupied or when necessary to meet operational, safety, or security requirements

**8. Wildlife And Aquatic Resource**

The following mitigation measures will be required in addition to the requirements of the Biological Opinion issued by the U.S. Fish and Wildlife Service pursuant to Section 7 of the *Endangered Species Act* and the Forest Service requirements to protect management indicator species and sensitive species, and any other requirements for mitigation as set forth by the standards and guidelines of the Thunder Basin and Buffalo Gap National Grasslands Forest Plans:

DM&E Railroad Shall (at DM&E Railroad's expense):

Replace all sage grouse habitat within 1/2 mile of the railroad track on an acre-for-acre scale. Sage grouse habitat is defined as all habitat within two miles of a lek. This replacement acreage will be approximately 1,640 acres, and will be determined based on the final location or footprint of the rail corridor in the easement.

Survey raptor nests prior to construction activities. All impacted raptor nests removed, abandoned, or destroyed by construction, operation or maintenance of the railroad will require alternative nest replacement or compensation in consultation with the U.S. Fish & Wildlife Service and Forest Service.

The following wildlife timing stipulations as outlined in the Thunder Basin and Buffalo Gap Forest Plans, and as provided in detail below will be implemented during the construction phase. Out-of-vehicle operations under one hour, and limited in scope and scale, may be excluded from these stipulations.

To help reduce disturbances to nesting and wintering raptors, prohibit the construction activities within the minimum distances (line of sight) of active raptor nests and winter roost areas during the dates specified in the table below:

Species and Habitat	Minimum Distance (Miles)
Bald Eagle Nest	1.0 from 2/1 to 7/31
Bald Eagle Winter Roost Area	1.0 from 11/1 to 3/31
Golden Eagle Nest	0.50 from 2/1 to 7/31
Merlin Nest	0.50 from 4/1 to 8/15
Ferruginous Hawk Nest	0.50 from 3/1 to 7/31
Swainson's Hawk Nest	0.50 from 3/1 to 7/31
Burrowing Owl Nest	0.25 from 4/15 to 8/31
Nests of other raptors	0.125 from 2/1 to 7/31*

\*Dates may vary depending on the species.

Bury animal carcasses in or remove them from the rail line right-of-way as part of its normal rail line inspection and maintenance activities, which shall occur no less than twice weekly. Animal carcasses resulting from collision with the train that are not buried shall be distributed in areas designated by the Forest Service.

Replace *Clean Water Act Section 404* non-jurisdictional aquatic habitat where stock ponds are changed to water tanks.

Design and construct all live drainage crossings and culverts so they will not impede fish movement

Replace cottonwood/riparian areas and other woody riparian areas onsite that are removed or damaged during construction, if possible, or when not possible, replace offsite. Replacement of impacted habitat will be accomplished on an acre-for-acre basis. DM&E Railroad shall develop a mitigation plan designed to compensate for the loss of this wildlife habitat. Such plan shall focus on upland riparian areas that are not addressed as part of wetland mitigation. Riparian areas that are included in the wetland mitigation plan shall be excluded from the plan.

Wetland mitigation for Antelope Creek on the Thunder Basin National Grassland in Wyoming shall be developed with the U.S. Army Corps of

Engineers and the Forest Service. Additional analysis will be required to determine how to mitigate impacts.

## **9. Existing Infrastructure**

DM&E Railroad Shall (at DM&E Railroad's expense):

Mitigate any impacts to pre-existing uses under permit. The DM&E Railroad will consult on mitigation with the Forest Service and U.S.D.I. Bureau of Land Management and negotiate with permittee. For example, where the railroad enters into a permitted area for coalmines, all railroad facilities and activities within the mine permit boundary must be consistent with the Mining and Reclamation Plan for each mine.

## **10. Fire Prevention**

DM&E Railroad Shall (at DM&E Railroad's expense):

Consult with the Forest Service with regard to its fire prevention plan and work with local and state agencies relevant to fire prevention, fire control, and costs associated with those activities or events.

**APPENDIX B TABLES**  
**FOREST SERVICE MITIGATION PLAN,**  
**Including:**

**Table 1, a & b:**  
**Additional Grazing and Transportation Mitigation on Buffalo Gap**  
**National Grassland**

**Table 2, a & b:**  
**Additional Grazing and Transportation Mitigation on Thunder Basin**  
**National Grassland**



**TABLE 1.a**

**BUFFALO GAP NATIONAL GRASSLAND**

**GRAZING MITIGATION**

Allotment	Pasture	GRAZING Proposed Mitigation (Listed By Forest Service Preference)
ND Misc.	FRRD 420	None Required.
Creston	FRRD 41	None Required.
	FRRD 42	
Gilmore	FRRD 63	<p>The proposed generally north-south alignment of the railroad across this Pasture leaves three small remnants isolated to the east of the proposed railroad easement. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, this impact can be mitigated in one of the following ways:</p> <p style="text-align: center;"><b><i>Options to consider:</i></b></p> <p><b>Option #1</b> - Provide livestock movement under the proposed railroad via the proposed Spring Creek Bridge in the SE/4 Sec. 20, T2S, R12E; or</p> <p><b>Option #2</b> - Implement a land adjustment for the Pasture remnants east of proposed railroad in the NE/4 SW/4 and SW/4 SW1/4 Sec. 9, T2S, R12E; in the NE/4 NE1/4 and SW/4 SE/4 Sec. 17, T2S, R12E; and in the W/2 NE/4 Sec. 20, T2S, R12E (approximately 54 acres in total). The resultant configuration would be one where the entire Pasture would lie west of the proposed railroad easement; or</p> <p><b>Option #3</b> - Provide a combination of the above options.</p>
Maude	FRRD 86	None Required.
Red Shirt	FRRD 106	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>An existing water impoundment may potentially lie within the proposed railroad easement in the SE/4 SW/4 Sec. 19, T3E, R11E. If this impoundment is impacted, and to the extent practicable, it could be replaced, in accordance with South Dakota water rights law, with a new one on the north side of the proposed railroad easement having a water storage capacity equal to the original.</p> <p style="text-align: center;"><b><i>Options to consider:</i></b></p> <p><b>Option #1</b> - If practicable from an engineering perspective, construct a livestock underpass of the proposed railroad in the SE/4 Sec. 24, T3S, R10E; or</p>

Allotment	Pasture	GRAZING Proposed Mitigation (Listed By Forest Service Preference)
		<p><b>Option #2</b> - Implement a land adjustment for the portion of this Pasture north of the proposed railroad easement (approximately 673 acres). The resultant configuration would be one where the entire Pasture would lie south of the proposed railroad easement; or</p> <p><b>Option #3</b> - Reconfigure the Pasture into 2 smaller pastures: one entirely south of the proposed railroad easement and one entirely north.</p> <p>The proposed railroad alignment bisects a small, inefficient parcel in the NE/4 NE/4 Sec. 26, T3S, R10E. This parcel should be included in a Land Adjustment with DM&amp;E or other partner. (approximately 40 acres)</p>
Triple Seven	FRRD 25	<p>The proposed alignment of the railroad crosses the very northwest corner of this Pasture, leaving approximately 26 acres in the NW/4 NE/4 Sec. 4, T4S, R9E on the north side of the proposed railroad easement. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad. To the extent practicable, this impact can be mitigated in one of the following ways:</p> <p style="text-align: center;"><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the Pasture remnant north of the proposed railroad easement. The resultant configuration would be one where the entire Pasture would lie south of the proposed railroad easement; or</p>
South Fork	FRRD 114	None Required.
	FRRD 115	
Chalk Hills	FRRD 5	<p>The proposed alignment of the railroad crosses the easterly 40 acres of this Pasture, leaving approximately 20 acres isolated in the NW/4 SE/4 Sec. 19, T5S, R9E east of the proposed railroad easement. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, this impact can be mitigated by:</p> <p style="padding-left: 40px;">An existing water impoundment may potentially lie within the proposed railroad easement near the half section line between the SW/4 SE/4 and the SE/4 SW/4 Sec. 19, T5S, R9E. If this impoundment does lie within the final railroad easement, and to the extent practicable, this impact can be mitigated by replacing the impoundment with one of equal storage capacity, in accordance with South Dakota water rights laws, on the west side of the proposed railroad easement.</p> <p style="text-align: center;"><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the Pasture remnant east of the proposed railroad easement. The resultant configuration would be one where the entire Pasture would lie west of the proposed railroad easement; or</p>
Chalk Hills	FRRD 2	<p>The proposed north-south railroad alignment bisects the westerly quarter of this east-west Pasture. This location will impact grazing operations by limiting the ability to move livestock east-west across the proposed railroad. To the extent practicable, this impact can be mitigated in one of the following ways:</p>

Allotment	Pasture	GRAZING Proposed Mitigation (Listed By Forest Service Preference)
		<p style="text-align: center;"><i>Options to consider:</i></p> <p><b>Option #1</b> - Reconfigure the west boundary line of this Pasture to coincide with the east line of the proposed railroad easement. The remaining portion of the Pasture lying west of the proposed railroad easement could be then incorporated it into another pasture within this Allotment, but entirely on the west side of the proposed railroad easement; or</p> <p><b>Option #2</b> - To the extent practicable from an engineering perspective, construct a livestock underpass of the railroad in the N 3/4 Sec. 31, T5S, R9E.</p>
<p><b>Hartshorn Stumer</b></p>	<p><b>FRRD 69 FRRD 116</b></p>	<p>The proposed north-south alignment of the railroad does not cross either Pasture. The alignment crosses a one-half section of private land lying north-south between the two. Both Pastures are currently held by one landowner. Livestock movement between the two Pastures will require crossing the proposed railroad on the tract of private property. To the extent practicable, this impact can be mitigated by:</p> <p style="padding-left: 40px;">Providing a livestock underpass of the proposed railroad, where practicable from an engineering perspective, on private land in Sec. 6, T6S, R9E.</p>

**TABLE 1.b**

**BUFFALO GAP NATIONAL GRASSLAND**

**TRANSPORTATION / GRAZING**

Allotment	Pasture	Grazing / Current Access	Proposed Mitigation (Listed by Forest Service Preference)
ND Misc.	FRRD 420	Off Creston Road along the west side of the Pasture and east of the proposed railroad in Sec. 9 and 10, T2S, R12E.	None Required. Access remains as is.
Creston	FRRD 41 FRRD 42	Off Creston Road east of the Pasture and east of the proposed railroad in NE/4 Sec. 9, T2S, R12E.	The proposed northeast-southwest alignment of the railroad bisects this Pasture. This will impact access to the Pasture west of the proposed railroad. To the extent practicable, this impact can be mitigated in one of the following ways:
			<b>Option #1</b> - Provide public access off State Highway 44 west of proposed railroad in SW/4 NE/4 Sec. 4, T2S, R12E. This option will also require establishing approximately 0.8 miles of new two-tracked trail to connect the new access point with the existing trail; or
			<b>Option #2</b> - Provide public access off Creston Road at the existing location southeast of the proposed railroad in the NE/4 Sec. 9, T2S, R12E. A new at-grade crossing of the proposed railroad would be provided north of the existing two-tracked road, along with relocation of approximately 0.2 miles of two-tracked road to connect the existing two-tracked road with the proposed crossing.
Gilmore	FRRD 63	Off Creston Road along the easterly portion of the Pasture.	None Required. Access remains as is.
Maude	FRRD 86	Off Creston Road along the northwesterly portion of the Pasture and east of the proposed railroad in NW/4 Sec. 8, T3S, R12E.	None Required. Access remains as is.
Red Shirt	FRRD 106	Off Creston Road and across private land from the east and south.	The proposed east-west alignment of the railroad bisects this Pasture. This will impact access by limiting the ability to move north-south across the railroad. To the extent practicable, this impact can be mitigated in one of the following ways:
			<b>Options to consider:</b>
			<b>Option #1</b> - If practicable from an engineering perspective, construct a small vehicle underpass of the proposed railroad in the SE/4 Sec. 24, T3S, R10E; or
			<b>Option #2</b> - If practicable from an engineering perspective, construct an at-grade crossing of the proposed railroad in the SW/4 Sec. 24, T3S, R10E; or

Allotment	Pasture	Grazing / Current Access	Proposed Mitigation (Listed by Forest Service Preference)
			<p><b>Option #3</b> - Implement a land adjustment for the portion of this Pasture north of the proposed railroad easement (approximately 673 acres). The resultant configuration would be one where the entire Pasture would lie south of the proposed railroad easement.</p>
Triple Seven	FRRD 25	From adjacent private and USFS lands.	<p>Access to this Pasture would not be generally impacted by the proposed railroad. However, the alignment crosses the very northwest corner, leaving approximately 26 acres in the NW/4 NE/4 Sec. 4, T4S, R9E on the north side of the proposed railroad easement isolated from public access . To the extent practicable, this impact can be mitigated in one of the following ways:</p> <p style="text-align: center;"><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the remnant acres north of the proposed railroad easement. The resultant configuration would be one where the entire Pasture would lie south of the proposed railroad easement; or</p> <p><b>Option #2</b> - Design the proposed railroad easement to incorporate the remnant acres north of the proposed railroad. The resultant configuration would be one where the entire Pasture would lie south of the proposed railroad easement. This approach is deemed a reasonable and prudent approach to maintaining a whistle free environment in this area.</p>
South Fork	FRRD 114 FRRD 115	From adjacent private and USFS lands.	None Required. Access remains as is.
Chalk Hills	FRRD 5	From adjacent private and USFS lands.	<p>Access to this Pasture would not be generally impacted by the proposed railroad. However, it crosses the easterly 40 acres, leaving approximately 20 acres in the NW/4 SE/4 Sec. 19, T5S, R9E east of the proposed railroad easement isolated from public access . To the extent practicable, this impact can be mitigated in one of the following ways:</p> <p style="text-align: center;"><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for remnant acres east of the proposed railroad easement. The resultant configuration would be one where the entire Pasture would lie west of the proposed railroad; or</p> <p><b>Option #2</b> - Design the proposed railroad easement to incorporate the remnant acres east of the proposed railroad alignment. The resultant configuration would be one where the entire Pasture would lie west of the proposed railroad. This approach is deemed a reasonable and prudent approach to maintaining a whistle free environment in this area.</p>

Allotment	Pasture	Grazing / Current Access	Proposed Mitigation (Listed by Forest Service Preference)
Chalk Hills	FRRD 2		The proposed north-south railroad alignment bisects the westerly quarter of this east-west Pasture. This location will impact access the Pasture area east of the proposed railroad. To the extent practicable, this impact can be mitigated by:
			Providing an at-grade crossing of the proposed railroad, where practicable from an engineering perspective, along the section line between Sec. 31, T5S, R9E and Sec. 6, T6S, R9E.
Hartshorn Stumer	FRRD 69 FRRD 116		None Required. Access remains as is.

**TABLE 2.a**

**THUNDER BASIN NATIONAL GRASSLAND**

**GRAZING MITIGATION**

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
Shaw 395	Summer	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact the grazing operations by limiting the ability to move livestock north-south across the railroad to access water sources. To the extent practicable, these impacts can be mitigated in the following ways:</p>
		<p>The proposed railroad easement potentially impacts a water impoundment in the SW/4 Sec. 9, T41N, R63W. If this impoundment is impacted, and to the extent practicable, this impact could be mitigated in the following manner:</p>
		<p>A new impoundment of equal water storage capacity could be constructed, subject to applicable Wyoming water rights law, on the same drainage way north of the proposed railroad easement. A large drainage structure is anticipated for the railroad near this impoundment. If desirable, it could serve a dual use and provide access for livestock from the south side of the proposed railroad.</p>
		<p><b>Options to consider:</b></p>
		<p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected portions with the bisected portions of the Shaw/North Pasture to create two new Pastures. One pasture (Summer North) would be completely on the north side of the proposed railroad and one (Summer South) would be completely on the south side.</p>
		<p><b>Option #2</b> - Reconfigure this Pasture into two new pastures. One would be completely on the north side of the proposed railroad and one would be completely on the south.</p>
		<p><b>Option #3</b> - Leave the Pasture configuration the way it is and mitigate livestock and water source issues as follows:</p>
		<p>Livestock movement could be mitigated by the potential dual use of the larger drainage structures as livestock underpasses of the railroad. These larger structures are anticipated to be required in the following general locations within this Pasture: NE/4 Sec. 16, T41N, R63W; SW/4 Sec. 9, T41N, R63W; SE/4 Sec. 8, T41N, R63W; NE/4 Sec. 17, T41N, R63W; and NW/4 Sec. 17, T41N, R63W; and</p>
		<p>Water sources in Sec. 16, T41N, R63W could be accessed by livestock via the potential dual use structures in Sections 9 and 16. The permittee could access them via the proposed at-grade crossing of the railroad in Section 9; and</p>
<p>Water sources in Sec. 17, T41N, R63W could be accessed by livestock via the potential dual use structures in Sections 8 and 17.</p>		
Shaw 395	North	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact the grazing operations by limiting the ability to move livestock north-south across the railroad to access water sources. To the extent practicable, these impacts can be mitigated in the following ways:</p>
		<p><b>Options to consider:</b></p>
		<p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions with the bisected portions of the Shaw/Summer Pasture to create two new Pastures. One pasture (Summer North) would be completely on the north side of the proposed railroad and one (Summer South) would be completely on the south side.</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p><b>Option #2</b> - Reconfigure the portion of this Pasture south of the proposed railroad easement to incorporate it into an adjacent pasture within this Allotment.</p> <p><b>Option #3</b> - Leave the Pasture configuration the way it is and mitigate livestock and water source issues as follows:</p> <p>Livestock movement could be mitigated by the potential dual use of a larger drainage structure as a livestock underpass of the railroad. This structure is anticipated to be required in the NW/4 Sec. 18, T41N, R63W; and</p> <p>Water sources in Sec. 18, T41N, R63W could be accessed by livestock via the potential dual use of the structure in NW/4 Sec. 18.</p>
AU7	Stud	<p>The proposed southeast-northwest alignment of the railroad across this Pasture leaves two smaller portions bisected by the proposed railroad. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in one of the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other pastures within the AU7 Allotment.</p> <p><b>Option #2</b> - Leave the Pasture configuration the way it is and mitigate livestock movement and access to water by the dual use of larger drainage structures anticipated in the N/2 of this Sec. 10, T41N, R64W as livestock underpasses of the railroad.</p>
AU7	Lodgepole	<p>The proposed southeast-northwest alignment of the railroad across this Pasture leaves two smaller portions bisected by the proposed railroad. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in one of the following ways:</p>
		<p>Livestock movement could be mitigated by the dual use of the bridge for Lodgepole Creek in the S/2 Sec. 32, T42N, R64W as a livestock underpass of the railroad; and</p> <p>Livestock movement could also be mitigated by the potential dual use of the larger drainage structures as livestock underpasses of the railroad. These are anticipated the following areas: SE/4 Sec. 4, T41N, R64W; NW/4 Sec. 4, T41N, R64W; SW/4 Sec. 33, T42N, R64W; SE/4 Sec. 31, T42N, R64W; and SW/4 Sec. 31, T42N, R64W.</p> <p>Other livestock and water requirements will be coordinated with private landowner.</p>
Grieves	Wildcat	<p>The proposed southeast-northwest alignment of the railroad across this Pasture leaves two smaller portions bisected by the proposed railroad. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in one of the following ways:</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Livestock movement can be mitigated by the potential dual use of the larger drainage structures as livestock underpasses of the railroad. These are anticipated the following areas: NE/4 Sec. 36, T42N, R65W; NW/4 Sec. 36, T42N, R65W; NE/4 Sec. 35, T42N, R65W; SE/4 Sec. 26, T42N, R65W; SW/4 Sec. 26, T42N, R65W and the NE/4 Sec. 27, T42N, R65W.</p> <p>The proposed railroad easement potentially impacts a water impoundment near the section line between SE/4 Sec. 26 and NE/4 Sec. 35, T42N, R65W within this Pasture. If the impoundment is impacted, and to the extent practicable, the impact can be mitigated by replacing it with a new impoundment on the south side of the proposed railroad easement, subject to applicable Wyoming water rights law. The large structure under the railroad at this drainage could give livestock access from the north side of the proposed railroad to this new impoundment.</p> <p><i>An option to consider</i></p> <p>Reconfigure the remnant portion of this Pasture south of the proposed railroad easement in the NE/4 Sec. 27, T42N, R65W to incorporate it into the adjacent pasture (Wildcat Creek / Shook).</p>
Wildcat Creek	Shook	<p>The proposed southeast-northwest alignment of the railroad across this Pasture leaves two smaller portions bisected by the proposed railroad. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in one of the following ways:</p> <p>If the proposed railroad easement impacts water impoundments or other water resources within this Pasture, this impacts will be addressed with the private landowner.</p> <p><i>Options to consider</i></p> <p><b>Option #1</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures. Also implement a land adjustment for the two portions of USFS land remaining south of the proposed railroad easement in the SW/4 Sec. 22 and the NW/4 Sec. 27, both in T42N, R65W.</p> <p><b>Option #2</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures.</p> <p><b>Option #3</b> - Generally leave the Pasture configuration unchanged, except to avoid leaving a remnant portion northeast of the proposed railroad easement in the E/2 Sec. 27, T42N, R65W. This could be accomplished by reconfiguring a segment of the north and east Pasture boundary line in the SE/4 Sec. 27 to coincide with the proposed southwest railroad easement line in that area. Livestock movement impacted could be mitigated by the potential dual use of a large drainage structure anticipated in the SE/4 Sec. 21, T42N, R65W.</p>
Wildcat Creek	Fisher	Livestock and water requirements with be coordinated with private landowner.
Bruce	Calf	The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Livestock movement can be mitigated by the potential dual use of a larger drainage structure as a livestock underpass of the railroad. A large structure is anticipated in the NW/4 Sec. 19, T42N, R65W.</p> <p>Other livestock and water requirements will be coordinated with private landowner.</p>
Sewell	Winter	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Livestock movement can be mitigated by the potential dual use of larger drainage structures as livestock underpasses of the railroad. Larger structures are anticipated to be required in the following areas: one in the NE/4 Sec. 24, T42N, R66W; one near the section line between the NW/4 Sec. 24 and NE/4 Sec, 23, T42N, R66W; and one in the NW/4 NE/4 Sec. 23, T42N, R66W.</p> <p><b>An option to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the USFS land south of the proposed railroad in Sec. 23, T42N, R66W.</p>
Keeline	Piney Creek	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement issues by the potential dual use of the larger drainage structures as livestock underpasses of the railroad. Larger structures are anticipated to be required in the SE/4 Sec. 1, T42N, R68W; SE/4 Sec. 2, T42N, R68W; SW/4 Sec. 2, T42N, R68W; and SW/4 Sec. 3, T42N, R68W. Livestock movement could potentially also be mitigated by the dual use of the large drainage structure on adjacent private property to the east of this Pasture in the SW/4 Sec. 6, T42N, R67W, west of Piney Canyon Road.</p>
Keeline	Bull	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the USFS land in the SE/4 Sec. 4, T42N, R68W; or</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p><b>Option #2</b> - Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p>
Keeline	South Burdwick	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p>
Small	Little Thunder	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement; or</p> <p><b>Option #2</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures within the Small Allotment.</p>
School Creek	Little Thunder	<p>The proposed east-west alignment of the railroad bisects this Pasture. Multiple approach tracks to the west end of the Staging Yard will be constructed in this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Reconfigure the north boundary of this Pasture to be the south easement line of the proposed railroad. Reconfigure the portion of this Pasture north of the proposed railroad to incorporate it into a newly created pasture between WY 450 and the proposed railroad. The new pasture could either be a new separate pasture by itself or it could be part of a new pasture that combines several of the adjacent bisected portions of other pastures remaining north of the proposed railroad but south of WY 450.</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement issues in the following ways:</p> <p>Livestock movement could be mitigated by the potential dual use of two bridge structures as livestock underpasses of the proposed railroad. These bridges are anticipated to be at: Little Thunder Creek in the SW/4 Sec. 29, T43N, R69W; and School Creek in the NW/4 Sec. 32, T43N, R69W.</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
School Creek	Lovin	The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad and access water sources on both sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:
		<b>Options to consider:</b>
		<b>Option #1</b> - Reconfigure the portion of this Pasture remaining east of the proposed railroad easement to incorporate it into other pastures within the School Creek Allotment.
		<b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement and water access issues in the following ways:
		Livestock movement could be mitigated by the dual use of the bridge anticipated over School Creek in the SW/4 Sec. 6, T42N, R69W; and
		Livestock movement could be mitigated by the dual use of several large drainage structures as livestock underpasses of the proposed railroad. These structures are anticipated in the following areas: SE/4 Sec. 31, T43N, R69W; NE/4 Sec. 6, T42N, R69W; and the NW/4 Sec. 6, T42N, R69W; and
		Access to the water source on the east side of the proposed railroad in the W/2 Sec. 6, T42N, R69W can be mitigated by the dual use of the proposed bridge over School Creek near the water source as a livestock underpass.
School Creek	Meadow	The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations. To the extent practicable, this impact can be mitigated in the following ways:
		Livestock movement requirements will be coordinated with the private landowner.
School Creek	Rock	The proposed north-south alignment of the railroad lies along the west side of this Pasture. Impacts to the grazing operation can be mitigated in the following ways, to the extent practicable:
		Reconfigure the east boundary of this Pasture to coincide with the west easement line of the proposed railroad. Design the west railroad easement line so there are no isolated portions of this Pasture remaining on the west side of the proposed railroad easement.
School Creek	Buck	The proposed north-south alignment of the railroad lies along the west side of this Pasture. Grazing impacts can be mitigated in the following ways, to the extent practicable:
		Reconfigure the west boundary of this Pasture to coincide with the east easement line of the proposed railroad. Any isolated portion of the existing Pasture remaining on the west side of the proposed railroad easement would be reconfigured to incorporate it into the adjacent School Creek/Rock Pasture.
School Creek	Thornburg	The proposed northwest-southeast alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad and to access water sources on opposite sides of the railroad. To the extent practicable, these impacts can be mitigated in the following ways:

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p data-bbox="394 277 657 310"><b>Options to consider:</b></p> <p data-bbox="394 318 1919 380"><b>Option #1</b> - Reconfigure the portion of this Pasture lying east of the proposed railroad easement to incorporate it into the adjacent Thornburg II Pasture; or</p> <p data-bbox="394 388 1864 449"><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement by the dual use of a large drainage structure anticipated in the NW/4 Sec. 18, T42N, R69W as a livestock underpass.</p>
School Creek	Thornburg II	<p data-bbox="394 503 1934 591">The proposed northwest-southeast alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p data-bbox="394 602 657 634"><b>Options to consider:</b></p> <p data-bbox="394 643 1919 704"><b>Option #1</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture; or</p> <p data-bbox="394 712 1864 774"><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement by the dual use of a large drainage structure anticipated in the NW/4 Sec. 19, T42N, R69W as a livestock underpass.</p>
School Creek	Calf	<p data-bbox="394 828 1934 915">The proposed northwest-southeast alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p data-bbox="394 948 1919 1040">The proposed railroad easement potentially impacts a water impoundment in the SE/4 Sec. 19, T42N, R69W. If this impoundment is impacted, and to the extent practicable, this impact could be mitigated by constructing a new impoundment of equal water storage capacity, subject to applicable Wyoming water rights law, on the east side of the proposed railroad easement.</p> <p data-bbox="394 1068 657 1101"><b>Options to consider:</b></p> <p data-bbox="394 1109 1919 1201"><b>Option #1</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture. Also implement a land adjustment for the portions of USFS land remaining east of the proposed railroad easement in Sec. 19, T42N, R69W; or</p> <p data-bbox="394 1209 1919 1271"><b>Option #2</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture; or</p> <p data-bbox="394 1279 1885 1341"><b>Option #3</b> - Leave the Pasture configuration unchanged and mitigate livestock movement by the dual use of the large drainage structure anticipated in the SE/4 Sec. 19, T42N, R69W as a livestock underpass.</p>
Teckla	North	<p data-bbox="394 1396 1934 1453">The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>The proposed railroad easement potentially impacts a well in the NW/4 Sec. 29, T42N, R69W. If this well is impacted, and to the extent practicable, the impact could be mitigated by constructing a new well on the west of the proposed railroad easement in accordance with Wyoming water rights law.</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Combine the bisected portions of this Pasture with the bisected portions of the pasture to the south, Teckla/South. The portion of Teckla/North lying east of the proposed railroad easement could be combined with the portion of Teckla/South lying east of the railroad easement to form a new pasture (Teckla/East). Likewise the bisected portions of these two pastures lying west of the proposed railroad easement could be combined to form a new Teckla/West Pasture; or</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement and access to water sources by the dual use of large drainage structures anticipated in the NW/4 Sec. 29, T42N, R69W; and the SW/4 Sec. 29, T42N, R69W as livestock underpasses.</p>
Teckla	South	<p>The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>The proposed railroad easement potentially impacts a water source in the SE/4 Sec. 5, T41N, R69W. If this water source is impacted, and to the extent practicable, it could be mitigated by constructing a new well with livestock tank east of the proposed railroad easement, subject to Wyoming water rights law.</p> <p>The proposed railroad easement potentially impacts the West Beckwith Enclosure in the SE/4 Sec. 5, T41N, R69W. If this Enclosure is impacted, and to the extent practicable, this impact could be mitigated by recreating a new enclosure outside of the proposed railroad easement, subject to applicable Wyoming regulations.</p>
Teckla (Cont.)	South (Cont.)	<p><b>Options to consider:</b></p> <p><b>Option #1</b> - Combine the bisected portions of this Pasture with the bisected portions of the pasture to the north, Teckla/North. The portion of Teckla/South lying east of the proposed railroad easement could be combined with the portion of Teckla/North lying east of the railroad easement to form a new pasture (Teckla/East). Likewise the bisected portions of these two pastures lying west of the proposed railroad easement could be combined to form a new Teckla/West Pasture; or</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate livestock movement and access to water sources by the dual use of large drainage structures anticipated in the SE/4 Sec. 32, T42N, R69W; NE/4 Sec. 5, T41N, R69W; and the SE/4 Sec. 5, T41N, R69W as livestock underpasses.</p>
North Antelope	Reno	<p>The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Livestock movement could be mitigated in the following ways:</p> <p>Dual use of large drainage structures as a livestock underpasses of the proposed railroad. These structures are anticipated in the NE/4 Sec. 8, T41N, R69W; SE/4 Sec. 8, T41N, R69W; NE/4 Sec. 17, T41N, R69W; and SE/4 Sec. 17, T41N, R69W; and</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Dual use the large drainage structure just across the south pasture boundary in an adjacent pasture. This structure is anticipated in the NE/4 Sec. 20, T41N, R69W, near the section line between Section 17 and 20.</p> <p><b>Option #2</b> - Reconfigure a portion, or all of this Pasture lying east of the proposed railroad easement in the Sec. 5, 8 and 17, T41N, R69W to incorporate that portion into the adjacent Red Spring/Beckwith Pasture.</p>
Irwin	Winter	<p>The proposed north-south alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock east-west across the railroad and access water sources. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Livestock movement and water access can be mitigated by the dual use of large drainage structures as a livestock underpasses of the proposed railroad. These structures are anticipated in the NE/4 Sec. 20, T41N, R69W; SE/4 Sec. 20, T41N, R69W; NE/4 Sec. 29, T41N, R69W; SW/4 Sec. 29, T41N, R69W; and SE/4 Sec. 30, T41N, R69W; and</p> <p>Livestock movement and water access can also be mitigated by the dual use of large drainage structures in the adjacent pasture south of this Pasture. These structures are anticipated in the NE/4 Sec. 36, T41N, R70W on the south Pasture boundary; and in the NW/4 Sec. 36, T41N, R70W.</p>
Irwin	House	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>The proposed railroad easement potentially impacts a windmill and tank near the Section corner of Sec. 30 and 31, T41N, R69W and Sec. 25 and 36, T41N, R70W. If they are impacted by the final easement, and to the extent practicable, this impact could be mitigated by constructing a new windmill and tank north of the proposed railroad easement in accordance with applicable Wyoming water rights law.</p> <p>Livestock movement and water access can be mitigated by the dual use of large drainage structures as a livestock underpasses of the proposed railroad. These structures are anticipated in the NE/4 Sec. 36, T41N, R70W; and NW/4 Sec. 36, T41N, R70W.</p> <p><b>Options to consider</b></p> <p><b>Option #1</b> - Design a the segment of the final north railroad easement line in the NW/4 NW/4 Sec. 31, T41N, R69W to be located on the boundary line between the Winter and House Pastures. This will avoid leaving any isolated grazing acres of this Pasture on the north side of the proposed railroad easement; and/or</p> <p><b>Option #2</b> - Reconfigure the portion of this Pasture remaining north of the proposed railroad easement in the NW/4 Sec. 36, T41N, R70W to incorporate it into the adjacent Winter Pasture to the north. This will avoid leaving any isolated grazing acres of this Pasture on the north side of the proposed railroad easement. The north boundary of this Pasture would be redefined as the south railroad easement line.</p> <p><b>Option #3</b> - Leave the Pasture configuration unchanged.</p>
North Antelope	North Horse	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Reconfigure the portion of the Pasture south of the proposed railroad easement in the NE/4 Sec. 35, T41N, R70W to incorporate it into one of the adjacent pastures. This would redefine the south boundary of this Pasture as the north railroad easement line.</p> <p>The proposed railroad easement potentially impacts a water impoundment in the NE/4 Sec. 35, T41N, R70W. If this impoundment is impacted, and to the extent practicable, this impact could be mitigated by replacing the impoundment with one of equal capacity elsewhere, in accordance with Wyoming water rights law. The location will be coordinated with the private landowner.</p>
North Antelope	South Horse	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock north-south across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Reconfigure the portion of the Pasture remaining north of the proposed railroad easement in the NW/4 Sec. 35, T41N, R70W to incorporate it into one of the adjacent pastures to the north. This would redefine the north boundary of this Pasture as the south railroad easement line.</p>
North Antelope	Meadow	<p>The proposed east-west alignment of the railroad bisects this Pasture. Any impacts will be coordinated with the private landowner.</p>
North Antelope	Private	<p>If the east North Antelope - Rochelle Mine spur alignment proposal is constructed, it will bisect this Pasture. Any impacts will be coordinated with the private landowner.</p>
North Antelope	Buck Draw	<p>If the east North Antelope - Rochelle Mine spur alignment proposal is constructed, it will run along the west side of this Pasture. Any impacts will be coordinated with the private landowner.</p>
Jacob's	Railroad	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>The proposed railroad easement potentially impacts a wetland and wildlife habitat in the NE/4 Sec. 12, T40N, R71W. If this is impacted, and to the extent practicable, the impact could be mitigated by recreating a new wetland and wildlife habitat outside of the proposed railroad easement, subject USACE 404 permit requirements and applicable Wyoming regulations.</p> <p><b>Option to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for all the USFS land within this Pasture northwest of the existing BNSF Railroad in Sec. 6, T40N, R70W; Sec. 1, T40N, R71W; and Sec. 12, T40N, R71W.</p>
Stringer	Stringer	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad and access water sources. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Livestock movement and water access can be mitigated by the dual use of a large drainage structures as a livestock underpasses of the proposed railroad. These are anticipated in the NE/4 Sec. 30, T43N, R69W.</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>The proposed railroad easement potentially impacts a water impoundment in the NE/4 Sec. 30, T43N, R69W. If this impoundment is impacted, and to the extent practicable, this impact could be mitigated in the following manner:</p> <p>The impoundment could be expanded to the north along the same drainage, subject to Wyoming water rights laws, to compensate for any loss of storage capacity due to the railroad construction.</p> <p><b>Option to consider:</b></p> <p>Implement a land adjustment for the USFS land remaining south of the proposed railroad easement in the NW/4 Sec. 29, T43N, R69W.</p>
<b>Kerr - McGee</b>	<b>South #3</b>	<p>The proposed railroad alignment crosses this Pasture along the southerly edge. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Reconfigure the south Pasture boundary line in Sec. 19, T43N, R69W and Sec. 24, T43N, R70W to be the north line of the proposed railroad easement; and</p> <p>Design the south railroad easement line to coincide with the north easement line of WY Highway 450 in Sec. 19, T43N, R69W and Sec. 24, T43N, R70W. This would eliminate the isolation of minor Pasture acres south of the proposed railroad.</p> <p><b>Option to consider:</b></p> <p>Implement a land adjustment for all USFS land in the NE/4 SW/4 Sec. 24, T43N, R70W.</p>
<b>Stringer</b>	<b>North Highway</b>	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for all USFS land in this Pasture north of Wyoming Highway 450 in the Sec. 23, T43N, R70W or</p> <p><b>Option #2</b> -</p> <p>Reconfigure the portion of this Pasture that would remain east of the proposed railroad easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into one of the adjacent pastures; and</p> <p>Implement a land adjustment for the USFS land in this Pasture west of the mainline railroad easement and north of the railroad mine spur easement in the NE/4 Sec. 23, T43N, R70W.</p> <p>Reconfigure the north Pasture boundary line in NE/4 Sec. 23, T43N, R70W to coincide with the southwest line of the proposed railroad easement; or</p> <p><b>Option #3</b> -</p> <p>Reconfigure the portion of this Pasture that would remain east of the proposed railroad easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into one of the adjacent pastures; and</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Reconfigure the portion of this Pasture west of the mainline railroad easement and north of the railroad mine spur easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining north of the railroad mine spur and west of the proposed mainline railroad easement; and</p> <p>Reconfigure the north Pasture boundary line in NE/4 Sec. 23, T43N, R70W to coincide with the southwest line of the proposed railroad easement.</p>
Kerr - McGee	Middle #3	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1 -</b></p> <p>Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 14, T43N, R70W; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 14, T43N, R70W; or</p> <p><b>Option #2 -</b></p> <p>Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 14, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 14, T43N, R70W; and</p> <p>If livestock movement between adjacent pastures remains necessary, it could be mitigated by the dual use of large drainage structures as a livestock underpasses of the proposed railroad. These structures are anticipated in the SE/4 Sec. 14, T43N, R70W and one on the approximate section line between the NE/4 Sec. 23 and SE/4 Sec. 14, T43N, R70W.</p>
Kerr - McGee	North #3	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1 -</b></p> <p>Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 11, 12 and 14, T43N, R70W; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 11, 12 and 14, T43N, R70W; or</p> <p><b>Option #2 -</b></p> <p>Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 11, 12 and 14, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 11, 12 and 14, T43N, R70W; and</p> <p>If livestock movement between adjacent pastures remains necessary, it could be mitigated by the dual use of a large drainage structure as a livestock underpass of the proposed railroad. One is anticipated near the section line between the NE/4 Sec. 14 and SE/4 Sec. 11, T43N, R70W.</p>
Kerr - McGee	#6	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p><b>Option #1 -</b></p> <p>Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 12, T43N, R70W; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in the Sec. 12, T43N, R70W; or</p> <p><b>Option #2 -</b></p> <p>Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 12, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in the Sec. 12, T43N, R70W.</p> <p>If livestock movement between adjacent pastures remains necessary, it could be mitigated by the dual use of a large drainage structure as a livestock underpass of the proposed railroad. One structure is anticipated in the SW/4 Sec. 12, T43N, R70W.</p>
Kerr - McGee	Kerr - McGee Mine	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p>Grazing operational issues to be coordinated with the mine.</p> <p><b>Options to consider:</b></p> <p><b>Option #1 -</b> Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 12, T43N, R70W; or</p> <p><b>Option #2 -</b> Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 12, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement.</p>
Ostlund	Bull	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p>

Allotment	Pasture	Proposed Mitigation (Listed by Forest Service Preference)
		<p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 23, T44N, R70W; and</p> <p>Livestock movement between adjacent pastures and water access could be mitigated by the dual use of large drainage structures as a livestock underpasses of the proposed railroad. Large structures are anticipated in the SW/4 Sec. 23, T44N, R70W; and NW/4 Sec. 23, T44N, R70W.</p>
<b>Ostlund</b>	<b>Thomas</b>	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Reconfigure the east Pasture boundary line to coincide with the west line of the proposed railroad easement in Sec. 11 and Sec. 2, T44N, R70W. The portion of this Pasture that would remain east of the proposed railroad easement in the Sections 2, 11, 12, 13, and 14, all in T44N, R70W could be reconfigured to incorporate it into the adjacent Cottonwood Pasture; and</p> <p>If livestock movement under the proposed railroad remains necessary, it could be mitigated by the dual use of the large drainage structures anticipated in the NW/4 Sec. 11, T44N, R70W and SW/4 Sec. 2, T44N, R70W. An additional structure is located close to the south Pasture boundary, but on adjacent property. This large structure is anticipated in the NW/4 Sec. 14, T44N, R70W.</p>
<b>Ostlund</b>	<b>Cottonwood</b>	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting the ability to move livestock across the railroad. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 2, T44N, R70W. The portion of this Pasture that would remain west of the proposed railroad easement in the NE/4 Sec. 2, T44N, R70W could be reconfigured to incorporate it into the adjacent Thomas Pasture.</p> <p>Implement a land adjustment of any remnant of USFS land that may remain west of the proposed railroad easement in the NE/4 Sec. 2, T44N, R70W, if necessary,</p>
<b>Little Thunder</b>	<b>West Peck</b>	<p>If the South Black Thunder Mine Spur proposal is constructed, the proposed alignment would bisect this Pasture. This will impact grazing operations by limiting livestock movement. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>Livestock movement and water access can be mitigated by the dual use of a large drainage structure anticipated for the North Prong of Little Thunder Creek. This structure is anticipated in the NW/4 Sec. 23, T43N, R70W.</p>
<b>Little Thunder</b>	<b>Black Thunder Mine</b>	<p>Grazing operational issues to be coordinated with the mine.</p>

**TABLE 2.b**

**THUNDER BASIN NATIONAL GRASSLAND**

**TRANSPORTATION / GRAZING**

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
Shaw 395	Summer	7866+14	1255J	From Cheyenne River Road north of the proposed railroad.	The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to the Pasture south of the proposed railroad. To the extent practicable, this impact can be mitigated in the following ways:
					Provide an at-grade crossing of the proposed railroad at the approximate intersection of the railroad and the south line of SE/4 SW/4 Sec. 9, T41N, R63W. Relocate a portion of the two-tracked road on both sides of the proposed railroad easement to connect the crossing with the existing two-tracked road. The existing two-tracked road across the railroad easement will be decommissioned and revegetated.
					<b>Options to consider:</b>
					<b>Option #1</b> - Eliminate this Pasture and combine the two bisected portions with the bisected portions of the Shaw/North Pasture to create two new Pastures. One pasture (Summer North) would be completely on the north side of the proposed railroad and one (Summer South) would be completely on the south side.
					<b>Option #2</b> - Reconfigure this Pasture into two new pastures. One would be completely on the north side of the proposed railroad and one would be completely on the south.
					<b>Option #3</b> - Leave the Pasture configuration unchanged.
Shaw 395	North	7989+49	1255I	From Cheyenne River Road north of the proposed railroad.	The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to the portion of the Pasture south of the proposed railroad. To the extent practicable, this impact can be mitigated in the following ways:
					Provide an at-grade crossing of the proposed railroad at the approximate intersection of the railroad and the half section line between the NE/4 and the NW/4 Sec. 18, T41N, R63W. Relocate a portion of the two-tracked road on both sides of the proposed railroad easement to connect the crossing with the existing two-tracked road. The existing two-tracked road across the railroad easement would be decommissioned and revegetated; and
		8011+75	1255ID		Decommission and revegetate a portion of the existing two-tracked road (USFS # 1255ID) on both sides and across the proposed railroad easement in the Sec. 18, T41N, R63W.
<b>Options to consider:</b>					

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions with the bisected portions of the Shaw/Summer Pasture to create two new Pastures. One pasture (Summer North) would be completely on the north side of the proposed railroad and one (Summer South) would be completely on the south side.</p> <p><b>Option #2</b> - Reconfigure the portion of this Pasture south of the proposed railroad to incorporate it into an adjacent pasture within this Allotment.</p> <p><b>Option #3</b> - Leave the Pasture configuration unchanged.</p>
AU7	Stud	8170+00		From private lands adjacent to this Pasture.	<p>The proposed southeast-northwest alignment of the railroad across this Pasture leaves two smaller portions bisected by the proposed railroad. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in one of the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other pastures within the AU7 Allotment.</p> <p><b>Option #2</b> - Leave the Pasture configuration as it is and potentially mitigate access issues by the use of a large drainage structure anticipated in the NW/4 Sec. 10, T41N, R64W as an underpass of the railroad.</p>
AU7	Lodgepole	8239+33		From Cheyenne River Road and Grieves Road, plus private roads within the Pasture	<p>The proposed southeast-northwest alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p>
		8267+30			Provide at-grade crossings at the Cheyenne River Road and Grieves Road; and
		8294+00			<p>Provide vehicular access under the bridge required for Lodgepole Creek in the S/2 Sec. 32, T42N, R64W; and</p> <p>Several large drainage structures will be required in this Pasture and offer the potential dual use for access under the railroad. These are anticipated the following areas: SE/4 Sec. 4, T41N, R64W; NW/4 Sec. 4, T41N, R64W; SW/4 Sec. 33, T42N, R64W; SE/4 Sec. 31, T42N, R64W; and SW/4 Sec. 31, T42N, R64W.</p> <p>Other crossing requirements will be coordinated with private landowner.</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)		
Grieves	Wildcat	8511+30		From Grieves Road south of the proposed railroad and along the southerly portion of this Pasture .	The proposed southeast-northwest alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:		
			1258A		Provide an at-grade crossing of the proposed railroad in the NE/4 Sec. 27, T42N, R65W; and		
					Several large drainage structures will be required in this Pasture and offer the potential dual use for access under the railroad. These are anticipated the following areas: NE/4 Sec. 36, T42N, R65W; NW/4 Sec. 36, T42N, R65W; SE/4 Sec. 26, T42N, R65W; and the NE/4 Sec. 27, T42N, R65W.		
					<b>An option to consider</b> Reconfigure the remnant portion of this Pasture south of the proposed railroad in the NE/4 Sec. 27. T42N, R65W to incorporate it into the adjacent pasture (Wildcat Creek / Shook).		
Wildcat Creek	Shook	8549+35	1258B	From Grieves Road south of the proposed railroad and along the southerly portion of the Pasture; and from Bruce Road north of the proposed railroad and west of this Pasture.	The proposed southeast-northwest alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:		
				8560+00	1258B		Provide an at-grade crossing of the proposed railroad in the SW/4 Sec. 22, T42N, R65W; and
							Relocate a portion of the two-tracked road to replace the segment of existing two-tracked road falling within the proposed railroad easement in SE/4 Sec. 21 and SW/4 Sec. 22, T42N, R65W. The portion within the proposed railroad easement will be decommissioned and revegetated.
					<b>Options to consider</b> <b>Option #1</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures. Also implement a land adjustment for the two portions of USFS land remaining south of the proposed railroad easement in the SW/4 Sec. 22 and the NW/4 Sec. 27, both in T42N, R65W. <b>Option #2</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures.		

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #3</b> - Generally leave the Pasture configuration unchanged, except to avoid leaving a remnant portion northeast of the proposed railroad easement in the E/2 Sec. 27, T42N, R65W. This could be accomplished by reconfiguring a segment of the north and east Pasture boundary line in the SE/4 Sec. 27 to coincide with the proposed southwest railroad easement line in that area.</p>
Wildcat Creek	Fisher				<p>Crossing requirements will be coordinated with private landowner.</p>
Bruce	Calf			<p>From Bruce Road both north and south of the proposed railroad.</p>	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>Provide an at-grade crossing of Bruce Road.</p> <p>Other crossing requirements will be coordinated with private landowner.</p>
Sewell	Winter	8759+36	1257C	<p>From Bruce Road both north and south of the proposed railroad.</p>	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>Provide an at-grade crossing of the proposed railroad for an existing two-tracked road in the NE/4 Sec. 24, T42N, R66W; and</p> <p>Two large drainage structures anticipated in this Pasture offer the potential dual use for access under the railroad. One near the section line between the NW/4 Sec. 24 and the NE/4 Sec. 23, T42N, R66W and one in the NW/4 NE/4 Sec. 23, T42N, R66W.</p>
Keeline	Piney Creek	9435+50	1267A	<p>From Wyoming Highway 450 north of the proposed railroad; and from Piney Canyon Road south of the proposed railroad.</p>	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>Decommission and revegetate a segment of USFS #1267A between an existing well north of the proposed railroad and the proposed south railroad easement line in the SW/4 Sec. 1, T42N, R68W; and</p> <p>Decommission and revegetate a segment of the east - west USFS two-tracked road near and along the north Pasture boundary in Sec. 1, T42N, R68W; and</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p>Relocate a segment of two-tracked road for USFS #1267A between the north Pasture boundary and WY Highway 450 in Sec. 36, T43N, R68W. Acquire a USFS access easement across State of Wyoming land for this portion of relocated road; and</p> <p>Relocate a segment of east- west USFS two-tracked road in the NW/4 Sec. 1, T42N, R68W to connect USFS #1267A with an existing east - west two-tracked road in Sec. 2; and</p>
		9474+40	1267C		<p>Decommission and revegetate a segment of USFS #1267C between an existing east - west two-tracked road north of the proposed railroad in the NE/4 Sec. 2 and the proposed south railroad easement line in the SE/4 Sec. 2, all within T42N, R68W; and</p> <p>Relocate a segment of east- west USFS two-tracked road in the W/2 Sec. 2, and the E/2 Sec. 3 to connect USFS #1267D with an existing east - west two-tracked road in Sec. 3 T42N, R68W; and</p>
		9497+90	1267D		Decommission and revegetate a segment of USFS #1267D between the relocated east - west two-tracked road north of the proposed railroad in the SW/4 Sec. 2, and the proposed south railroad easement line in the SW/4 Sec. 2, T42N, R68W; and
		9527+83	1267F		Decommission and revegetate USFS #1267F only within the proposed railroad easement line in the SE/4 Sec. 3, T42N, R68W.
<b>Keeline (Cont.)</b>	<b>Piney Creek (Cont.)</b>				<p><b>An option to consider:</b></p> <p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged.</p>
<b>Keeline</b>	<b>Bull</b>			From Wyoming Highway 450 north of the proposed railroad; and from Piney Canyon Road south of the proposed railroad.	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for the SE/4 Sec. 4, T42N, R68W; or</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #2</b> - Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p>
Keeline	South Burdwick			From Wyoming Highway 450 north of the proposed railroad.	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p>
					<p>The West Staging Yard will cut off an existing access to the water source in the NE/4 Sec. 12, T42N, R69W. This can be mitigated by relocating a segment of existing USFS two-tracked road in the NE/4 Sec. 12, T42N, R69W and the N/2 Sec. 7, T42N, R68W. This will provide access from an existing USFS road in the NE/4 Sec. 7, T42N, R68W.</p>
					<p>The road relocation will allow a segment of USFS two-tracked road to be decommissioned and revegetated in the NE/4 Sec. 12, T42N, R69W and the NW/4 Sec. 7, T42N, R68W.</p>
					<p>Eliminate this Pasture and combine the two bisected pasture portions of this Pasture with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement.</p>
					<p>Other access issues will be resolved with the private landowner.</p>
Small	Little Thunder			From Wyoming Highway 450 north of the proposed railroad.	<p>The proposed east-west alignment of the railroad bisects this Pasture. A portion of the West Staging Yard will be constructed in this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p>
					<p><b>Options to consider:</b></p>
					<p><b>Option #1</b> - Eliminate this Pasture and combine the two bisected pasture portions with the bisected portions of other adjacent pastures to create two new Pastures; one completely north of the proposed railroad easement, but south of WY Highway 450 and one completely south of the proposed railroad easement; or</p>
					<p><b>Option #2</b> - Eliminate this Pasture and reconfigure the two bisected pasture areas to incorporate them into other adjacent pastures within the Small Allotment.</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
School Creek	Little Thunder			From Wyoming Highway 450 north of the proposed railroad; and from School Creek Road west of the proposed railroad.	<p>The proposed east-west alignment of the railroad bisects this Pasture. Multiple approach tracks to the west end of the Staging Yard will be constructed in this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Reconfigure the north boundary of this Pasture to be the south easement line of the proposed railroad. Reconfigure the portion of this Pasture north of the proposed railroad to incorporate it into a newly created pasture between WY 450 and the proposed railroad. The new pasture could either be a new separate pasture by itself or it could be part of a new pasture that combines several of the adjacent bisected portions of other pastures remaining north of the proposed railroad but south of WY 450.</p>
		N50+88			<p>Access to the proposed new northerly pasture would be north and west of the proposed railroad from WY 450 and from School Creek Road; and</p> <p>East-west access within the proposed new northerly pasture could be under the proposed bridge over Little Thunder Creek in the SW/4 Sec. 29. T43N, R69W; and</p>
		9873+90	1110B		Access to the reconfigured Pasture south of the proposed railroad would be from WY Highway 450 and across an at-grade railroad crossing provided in the NW/4 Sec. 34, T43N, R69W; and
		S59+60	968C		Access to the reconfigured Pasture south of the proposed railroad would be from School Creek Road and across an at-grade railroad crossing in the SW/4 Sec. 29, T43N, R69W; or
School Creek (Cont.)	Little Thunder (Cont.)				<p><b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate access issues in the following ways:</p> <p>Access to the portion of the Pasture north of the proposed railroad would be from the north off of WY 450 and from the west off of School Creek Road; and</p>
		N50+88			East-west access within the portion of the Pasture north of the proposed railroad could be under the bridge proposed over Little Thunder Creek in the SW/4 Sec. 29. T43N, R69W.
		9873+90	1110B		Access to the portion of the Pasture south of the proposed railroad would be from WY Highway 450 and across an at-grade railroad crossing provided in the NW/4 Sec. 34, T43N, R69W; and
		59+60	968C		Access to the portion of the Pasture south of the proposed railroad could also be from School Creek Road and across an at-grade railroad crossing provided in the

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					SW/4 Sec. 29, T43N, R69W; and
School Creek	Lovin			From School Creek Road west of the proposed railroad.	The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
					<b>Options to consider:</b>
					<b>Option #1</b> - Reconfigure the portion of this Pasture east of the proposed railroad to incorporate it into other pastures within the School Creek Allotment.
		95+00 to 150+00	968		Access to the portion of the existing Pasture west of the proposed railroad would continue to be from School Creek Road, which lies west of the proposed railroad. However, a segment of this Road will have to be relocated since it will lie within the proposed railroad easement. This relocation will be required in the SE/4 Sec. 31, T43N, R69W, the NE/4 Sec. 6, T42N, R69W, and in the NW/4 Sec. 6, T42N, R69W; and
		133+24	968B		Access to the reconfigured portion of the Pasture east of the proposed railroad would be across an at-grade crossing provided in the NE/4 Sec. 6, T42N, R69W; or
					<b>Option #2</b> - Leave the Pasture configuration unchanged and mitigate access issues in the following ways:
		95+00 to 150+00	968		Access to the portion of the Pasture west of the proposed railroad would be from School Creek Road, which lies west of the proposed railroad. However, a segment of this Road will have to be relocated since it will lie within the proposed railroad easement. This relocation will be required in the SE/4 Sec. 31, T43N, R69W, the NE/4 Sec. 6, T42N, R69W, and in the NW/4 Sec. 6, T42N, R69W; and
		133+24	968B		Access to the portion of the Pasture east of the proposed railroad would be across an at-grade crossing provided in the NE/4 Sec. 6, T42N, R69W.
School Creek	Meadow			From School Creek Road west of the proposed railroad.	The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
					Crossing requirements will be coordinated with the private landowner.
School Creek	Rock			From Reno County Road north of this Pasture.	The proposed north-south alignment of the railroad lies along the west side of this Pasture. Access impacts can be mitigated in the following ways, to the extent practicable:

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					Reconfigure the east boundary of this Pasture to coincide with the west easement line of the proposed railroad. Design the west railroad easement line so there are no isolated portions of this Pasture remaining on the west side of the proposed railroad easement.
School Creek	Buck			From School Creek Road north of this Pasture and via a proposed at-grade crossing of the railroad in a pasture to the north. (USFS #968B)	The proposed north-south alignment of the railroad lies along the west side of this Pasture. Access impacts can be mitigated in the following ways, to the extent practicable:
					Reconfigure the west boundary of this Pasture to coincide with the east easement line of the proposed railroad. Any isolated portion of the existing Pasture remaining on the west side of the proposed railroad easement would be reconfigured to incorporate it into the adjacent School Creek/Rock Pasture.
					Access to the remaining portion of this Pasture lying east of the railroad would be over the proposed at-grade crossing of the railroad for the School Creek/Lovin Pasture (USFS #968B).
School Creek	Thornburg			From School Creek Road and Reno County Road north of this Pasture; and from Piney Canyon Road south of this Pasture.	The proposed northwest-southeast alignment of the railroad crosses the northeast corner of this Pasture. Access impacts can be mitigated in the following ways, to the extent practicable:
		263+50	934AI		Decommission and revegetate USFS # 934AI only across the proposed railroad easement in the W/2 Sec. 18, T42N, R69W.
					<b>Options to consider:</b>
					<b>Option #1</b> - Reconfigure the portion of this Pasture lying east of the proposed railroad easement to incorporate it into the adjacent Thornburg II Pasture; or
					<b>Option #2</b> - Leave the Pasture configuration unchanged.
School Creek	Thornburg II			From School Creek Road and Reno County Road north of this Pasture; and from Piney Canyon Road south of this Pasture.	The proposed northwest-southeast alignment of the railroad crosses the southwest corner of this Pasture. Access impacts can be mitigated in the following ways, to the extent practicable:
					<b>Options to consider:</b>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #1</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture; or</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged.</p>
<b>School Creek</b>	<b>Calf</b>			From School Creek Road and Reno County Road north of this Pasture; and from Piney Canyon Road south of this Pasture.	<p>The proposed northwest-southeast alignment of the railroad crosses the southwest corner of this Pasture. Access impacts can be mitigated in the following ways, to the extent practicable:</p> <p><b>Options to consider:</b></p> <p><b>Option #1</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture. Also implement a land adjustment for the portions of USFS land remaining east of the proposed railroad easement in Sec. 19, T42N, R69W; or</p> <p><b>Option #2</b> - Reconfigure the portion of this Pasture lying west of the proposed railroad easement to incorporate it into the adjacent Thornburg Pasture; or</p> <p><b>Option #3</b> - Leave the Pasture configuration unchanged.</p>
<b>Teckla</b>	<b>North</b>			From Piney Canyon Road south of this Pasture and on both sides of the railroad.	<p>The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>An at-grade crossing of the railroad is proposed for Piney Canyon Road, south of this Pasture. This crossing will allow access to both sides of this Pasture; and</p>
		Crossings @ 370+00 and 384+85 New 368+00 to 386+00	1111		<p>USFS #1111 provides north-south access across this Pasture and access to several other USFS pastures to the north. Most of this two-tracked road will lie east of the proposed railroad easement. However, the proposed railroad will cross this two-tracked road twice within 0.3 mile in the NW/4 Sec. 29, T42N, R69W. A safer USFS network would be provided by relocating a segment of two-tracked road on the east side of the proposed railroad easement between these two crossings. Only the portions of the existing two-tracked roads across the proposed railroad easement would be decommissioned and revegetated. The resultant USFS network would lie completely on the east side of the railroad across this Pasture; and</p>
					<b>Options to consider:</b>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #1</b> - Combine the bisected portions of this Pasture with the bisected portions of the pasture to the south, Teckla/South. The portion of Teckla/North lying east of the proposed railroad easement could be combined with the portion of Teckla/South lying east of the railroad easement to form a new pasture (Teckla/East). Likewise the bisected portions of these two pastures lying west of the proposed railroad easement could be combined to form a new Teckla/West Pasture; or</p> <p><b>Option #2</b> - Leave the Pasture configuration unchanged.</p>
<b>Teckla</b>	<b>South</b>			From Piney Canyon Road in the northerly portion of the Pasture and on both sides of the proposed railroad.	The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
		434+78			An at-grade crossing of the railroad is proposed at Piney Canyon Road in the northerly portion of this Pasture. This crossing will allow access to both sides of this Pasture; and
		Crossings @ 434+78 and 445+65 New 434+78 Only	1618		USFS #1618 provides north-south access across this Pasture and access to other USFS pastures to the south. Most of this road will lie west of the proposed railroad easement. However, the proposed railroad crosses it in the SE/4 Sec. 32, T42N, R69W, which is 0.2 mile south of Piney Canyon Road. A safer USFS network would be provided by relocating a segment of new crowned and ditched road west of the proposed railroad easement between this crossing and Piney Canyon Road to the north. The portion of this road across the proposed railroad easement and on to the east side to Piney Canyon Road would then be decommissioned and revegetated. The resultant road would lie completely west of the proposed railroad easement and there would be only one crossing of the railroad at Piney Canyon Road; and
		500+00 to 507+00	1112D		The proposed railroad easement may encroach on a short segment of USFS #1112D in the SE/4 Sec. 5, T41N, R69W. If this two-tracked road is impacted, the portion within the proposed railroad easement would be decommissioned and revegetated.
					<b>Options to consider:</b>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #1</b> - Combine the bisected portions of this Pasture with the bisected portions of the pasture to the north, Teckla/North. The portion of Teckla/South lying east of the proposed railroad easement could be combined with the portion of Teckla/North lying east of the railroad easement to form a new pasture (Teckla/East). Likewise the bisected portions of these two pastures lying west of the proposed railroad easement could be combined to form a new Teckla/West Pasture; or</p>
					<p><b>Option #2</b> - Leave the Pasture configuration unchanged.</p>
North Antelope	Reno			From Piney Canyon Road north of this Pasture and from Phillips Road in the southerly portion of this Pasture. These roads provide access to both sides of the proposed railroad.	The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
		535+25	1618		Provide an at-grade crossing of the proposed railroad in the NE/4 Sec. 8, T41N, R69W; and
		564+74	Oil Well Access		Provide an at-grade crossing of the proposed railroad in the SE/4 Sec. 8, T41N, R69W; and
		611+00 - 615+00 and 620+00 - 627+00	1618		The proposed railroad easement will potentially encroach upon two short segments of this two-tracked road in the SE/4 Sec. 17, T41N, R69W. If there is encroachment, it can be mitigated by relocating the two short segments to the east of the proposed railroad easement; and
		627+33	973	Phillips Road	Provide an at-grade crossing of the proposed railroad in the SE/4 Sec. 17, T41N, R69W.
Irwin	Winter			From Phillips Road north of this Pasture and along the easterly portion of the Pasture. This road provides access to both sides of the proposed railroad.	The proposed north-south alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
		667+50	Oil Well Access		Provide an at-grade crossing of the proposed railroad in the SE/4 Sec. 20, T41N, R69W; and

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
		706+72	Oil Well Access		Provide an at-grade crossing of the proposed railroad in the NE/4 Sec. 29, T41N, R69W; and
		745+83	Oil Well Access		Provide an at-grade crossing of the proposed railroad in the SW/4 Sec. 29, T41N, R69W; and
		754+00	943M		Provide an at-grade crossing of the proposed railroad in the SE/4 Sec. 30, T41N, R69W.
<b>Irwin</b>	<b>House</b>			From Irwin Road along the southerly portion of this Pasture and from Phillips Road in the southeast portion of this Pasture.	The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
		808+50	943L		Access under the railroad would be provided via a large drainage structure for Sunny Draw approximately 500' west of USFS #943L. The structure will be located approximately on the section line between SE/4 Sec. 25 and NE/4 Sec. 36, T41N, R70W. Approximately 0.3 miles of two-tracked road would be relocated between the ends of the structure and the existing two-tracked road. The relocated road would lie entirely outside of the proposed railroad easement. Only the segment of USFS #943L across the proposed railroad easement would be decommissioned and revegetated.
					<b>Options to consider:</b>
					<b>Option #1 -</b>
		844+00 400' Lt.	Oil Well Access		<b>Part #1A</b> - Access to the oil well south of the proposed railroad easement in the NW/4, Sec. 36, T41N, R70W could be provided directly off Irwin Road. This would require relocating and upgrading a segment of private two-tracked road between Irwin Road and the well. It would also require a segment of the existing private road to be decommissioned and revegetated; and
		844+00 700' Rt.	Oil Well Access		<b>Part #1B</b> - Access to the oil wells north of the proposed railroad could be provided by using the proposed railroad bridge over Porcupine Creek in the NW/4 Sec. 35, T41N, R70W as a railroad underpass. This would require the relocation and upgrading of a segment of USFS #943 on USFS and private land in Sec. 35; the relocation of a portion of USFS #943CA on private land in Sec. 36; the decommissioning and revegetation of a portion of USFS # 943 on USFS land in Sec. 35; and the decommissioning and revegetation of USFS #943CA on USFS land in Sec. 35, all within T41N, R70W; or
<b>Irwin (Cont.)</b>	<b>House (Cont.)</b>				<b>Option #2 -</b>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Part #2A</b> - Access to the oil well south of the proposed railroad easement in the NW/4, Sec. 36, T41N, R70W could be provided directly off Irwin Road. This would require relocating and upgrading a segment of private two-tracked road between Irwin Road and the well. It would also require a segment of the existing private road to be decommissioned and revegetated; and</p> <p><b>Part #2B</b> - Access to the oil wells north of the proposed railroad easement could be provided by an at-grade crossing of the proposed railroad on USFS #943CA in the NE/4 Sec. 35, T41N, R70W. This would require the relocation of a portion of USFS #943CA on private land in Sec. 36 where the existing road would lie within the proposed railroad easement. The segment of USFS #943CA within the proposed railroad easement in Sec. 36 would decommissioned and revegetated; or</p> <p><b>Option #3</b> -</p> <p><b>Part #3A</b> - Access to the oil wells could be provided by a private at-grade crossing of the proposed railroad in NW/4 36, T41N, R70W. This crossing would be gated and locked, with the private landowner agreeing to accept all liability for its use. This approach is aimed at providing a whistle-free crossing. This approach is deemed a reasonable and prudent approach to avoid the disturbance of a bald eagle nesting site within the train whistle influence zone of this crossing; and</p> <p><b>Part #3B</b> - This private crossing would require relocation of a segment of existing private oil field road. The segment of road that would lie within the proposed railroad easement would be decommissioned and revegetated; or</p> <p><b>Option #4</b> - Access to the oil wells could be provided by an at-grade crossing of the proposed railroad in NW/4 36, T41N, R70W. This would require relocation of a segment of existing private oil field road. The segment of road that would lie within the proposed railroad easement would be decommissioned and revegetated.</p>
North Antelope	North Horse			From Irwin Road south of this Pasture.	<p>The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:</p> <p>Reconfigure the portion of the Pasture south of the proposed railroad easement in the NE/4 Sec. 35, T41N, R70W to incorporate it into one of the adjacent pastures. This would redefine the south boundary of this Pasture as the north railroad easement line.</p> <p><b>Options to consider:</b></p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<b>Option #1</b> - Access to oil wells north of the proposed railroad could be provided by using the proposed railroad bridge over Porcupine Creek in the NW/4 Sec. 35, T41N, R70W as a railroad underpass. This would require the relocation and upgrading of a segment of USFS #943 on USFS and private land; the decommissioning and revegetation of a portion of USFS # 943 on USFS land; and the decommissioning and revegetation of a portion of USFS #943CA on USFS land, all in Sec. 35, T41N, R70W; or
		876+71	943CA		<b>Option #2</b> - Access to oil wells north of the proposed railroad could be provided by a private at-grade crossing for USFS #943CA in NE/4 35, T41N, R70W. This crossing would be gated and locked, with the private landowner agreeing to accept all liability for its use. This approach is aimed at providing a whistle-free crossing. This approach is deemed a reasonable and prudent approach to avoid the disturbance of a bald eagle nesting site within the train whistle influence zone of this crossing; or
		876+71	943CA		<b>Option #3</b> - Access could be provided by an at-grade crossing of the proposed railroad for USFS #943CA in the NE/4 Sec. 35, T41N, R70W.
North Antelope	South Horse			From Irwin Road south of this Pasture.	The proposed east-west alignment of the railroad bisects this Pasture. This will impact access to both sides of the railroad. To the extent practicable, this impact can be mitigated in the following ways:
					Reconfigure the portion of the Pasture remaining north of the proposed railroad easement in the NW/4 Sec. 35, T41N, R70W to incorporate it into one of the adjacent pastures to the north. This would redefine the north boundary of this Pasture as the south railroad easement line.
North Antelope (Cont.)	South Horse (Cont.)				<b>Options to consider:</b>
		896+40	943		<b>Option #1</b> - Access to pastures north of the proposed railroad could be provided by using the proposed railroad bridge over Porcupine Creek in the NW/4 Sec. 35, T41N, R70W as a railroad underpass. This would require the relocation of a segment of two-tracked road for USFS #943 on USFS and private land and the decommissioning and revegetation of a portion of USFS # 943 all in Sec. 35, T41N, R70W; or

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					<p><b>Option #2</b> - Access to pastures north of the proposed railroad could be provided by an at-grade crossing for USFS #943CA in the NE/4 Sec. 35, T41N, R70W if provided for another pasture. This would require the relocation of a portion of two-tracked road on the north side of the proposed railroad easement to connect the crossing with the existing two-tracked road in the NW/4 Sec. 35. A segment of USFS #943 south of the proposed railroad easement would be decommissioned and revegetated in the NW/4 Sec. 35.</p>
North Antelope	Meadow			From Irwin Road south of this Pasture.	The proposed east-west alignment of the railroad bisects this Pasture. Any impacts will be coordinated with the private landowner.
North Antelope	Private			From Irwin Road south of this Pasture.	If the east North Antelope - Rochelle Mine spur alignment proposal is constructed, it will bisect this Pasture. Any impacts will be coordinated with the private landowner.
North Antelope	Buck Draw			From Irwin Road south of this Pasture.	If the east North Antelope - Rochelle Mine spur alignment proposal is constructed, it will run along the west side of this Pasture. Any impacts will be coordinated with the private landowner.
Jacob's	Railroad			From the Antelope Road.	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:</p> <p>North - south access throughout the pasture will continue via Antelope Road. There is a grade separation at the existing the rail entrance to the Antelope Mine. The proposed railroad will also be constructed under this bridge in NW/4 Sec. 12, T40N, R71W; and</p> <p>North - south access throughout the Pasture will continue on Antelope Road as the proposed railroad easement would remain southeast of this Road in Sec. 6, T40N, R70W and Sec. 1, T40N, R71W</p>
Jacob's (Cont.)	Railroad (Cont.)				<p><b>Option to consider:</b></p> <p><b>Option #1</b> - Implement a land adjustment for all the USFS land within this Pasture northwest of the existing BNSF Railroad in Sec. 6, T40N, R70W; Sec. 1, T40N, R71W; and Sec. 12, T40N, R71W.</p> <p><b>Option #2</b> - Provide an at-grade crossing of the proposed railroad in the SE/4 31, T41N, R70W.</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
Stringer	Stringer			From the Wyoming State Highway 450 along the south edge of this Pasture; and from Little Thunder Road off Hwy. 450.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:
					Provide a grade separation of the proposed railroad over Wyoming Highway 450 in the NW/4 Sec. 29, T43N, R69W; and
					Provide an at-grade crossing of the proposed railroad in the NE/4 Sec. 30, T43N, R69W. This will provide access to the portion of the Pasture north of the proposed railroad.
					<b>Option to consider:</b> Implement a land adjustment for the USFS land remaining south of the proposed railroad easement in the NW/4 Sec. 29, T43N, R69W.
Kerr - McGee	South #3			From the Wyoming State Highway 450 along the south edge of this Pasture; and from Little Thunder Road off Hwy. 450 on the east side of the Pasture.	The proposed railroad alignment crosses this Pasture along the southerly edge. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:
					Reconfigure the south Pasture boundary line in Sec. 19, T43N, R69W and Sec. 24, T43N, R70W to be the same as the north line of the proposed railroad easement.
					Design the south railroad easement line to coincide with the north easement line of WY Highway 450 in Sec. 19, T43N, R69W and Sec. 24, T43N, R70W. This would eliminate the isolation of minor Pasture acres south of the proposed railroad.
					<b>Option to consider:</b> Implement a land adjustment for all USFS land in the NE/4 SW/4 Sec. 24, T43N, R70W.
Stringer	North Highway			From the Wyoming State Highway 450 along the south edge of this Pasture.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:
					Decommission and revegetate the portion of this trail across the proposed railroad easement at the crossing in the NE/4 Sec. 23, T43N, R70W; and
		209+00	1108D		

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
		204+00 to 218+00			Decommission and revegetate the portion of this trail in the NE/4 Sec. 23, T43N, R70W that will fall within the proposed railroad easement; and
					Relocate a segment of two-tracked road outside and southwest of the proposed railroad easement in the NE/4 Sec. 23, T43N, R70W. This relocated two-tracked road would connect the existing USFS #1108D with the south end of a large drainage structure under the proposed railroad on the approximate line between the NE/4 Sec. 23 and SE/4 Sec. 14, T43N, R70W.
					<b>Options to consider:</b>
					<b>Option #1</b> - Implement a land adjustment for all USFS land in this Pasture north of Wyoming Highway 450 in the Sec. 23, T43N, R70W; or
					<b>Option #2</b> -
					Reconfigure the portion of this Pasture that would remain east of the proposed railroad easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into one of the adjacent pastures; and
					Implement a land adjustment for the USFS land in this Pasture west of the mainline railroad easement and north of the railroad mine spur easement in the NE/4 Sec. 23, T43N, R70W.
					Reconfigure the north Pasture boundary line in NE/4 Sec. 23, T43N, R70W to coincide with the southwest line of the proposed railroad easement; or
					<b>Option #3</b> -
					Reconfigure the portion of this Pasture that would remain east of the proposed railroad easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into one of the adjacent pastures; and
					Reconfigure the portion of this Pasture west of the mainline railroad easement and north of the railroad mine spur easement in the NE/4 Sec. 23, T43N, R70W to incorporate it into a new pasture comprised of other pasture segments remaining north of the railroad mine spur and west of the proposed mainline railroad easement; and
					Reconfigure the north Pasture boundary line in NE/4 Sec. 23, T43N, R70W to coincide with the southwest line of the proposed railroad easement.
<b>Kerr - McGee</b>	<b>Middle #3</b>			From the Wyoming State Highway 450 south of this Pasture; and from Little Thunder Road in the easterly portion of this Pasture.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
		225+00 to 235+00, 245+00 to 268+00, 271+00 to 274+00	1108		<p data-bbox="955 243 1915 308">Decommission and revegetate the portion of USFS #1108 in the NE/4 Sec. 14, T43N, R70W that will fall within the proposed railroad easement.</p> <p data-bbox="955 381 1207 414"><b>Options to consider:</b></p> <p data-bbox="955 422 1092 454"><b>Option #1 -</b></p> <p data-bbox="955 462 1816 527">Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 14, T43N, R70W; and</p> <p data-bbox="955 535 1879 600">Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 14, T43N, R70W; or</p> <p data-bbox="955 609 1092 641"><b>Option #2 -</b></p> <p data-bbox="955 649 1915 763">Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 14, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p> <p data-bbox="955 771 1879 836">Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 14, T43N, R70W.</p>
Kerr - McGee	North #3			From the Wyoming State Highway 450 south of this Pasture; and from Little Thunder Road in the easterly portion of this Pasture.	<p data-bbox="955 917 1915 1015">The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p data-bbox="955 1063 1207 1096"><b>Options to consider:</b></p> <p data-bbox="955 1104 1092 1136"><b>Option #1 -</b></p> <p data-bbox="955 1144 1816 1209">Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 11, 12 and 14, T43N, R70W; and</p> <p data-bbox="955 1218 1879 1282">Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 11, 12 and 14, T43N, R70W; or</p> <p data-bbox="955 1291 1092 1323"><b>Option #2 -</b></p> <p data-bbox="955 1331 1915 1437">Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 11, 12 and 14, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
					Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 11, 12 and 14, T43N, R70W.
Kerr - McGee	#6			From Little Thunder Road in the easterly portion of this Pasture; and from the Wyoming State Highway 450 south of this Pasture.	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p><b>Options to consider:</b></p> <p><b>Option #1 -</b></p> <p>Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 12, T43N, R70W; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in the Sec. 12, T43N, R70W; or</p>
Kerr - McGee (Cont.)	#6 (Cont.)				<p><b>Option #2 -</b></p> <p>Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 12, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement; and</p> <p>Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in the Sec. 12, T43N, R70W.</p>
Kerr - McGee	Kerr-McGee Mine			Mining Permits	<p>The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:</p> <p>Access issues to be coordinated with the mine.</p> <p><b>Options to consider:</b></p> <p><b>Option #1 -</b> Implement a land adjustment for all USFS land in this Pasture west of the proposed railroad easement in the Sec. 12, T43N, R70W; or</p> <p><b>Option #2 -</b> Reconfigure the portion of this Pasture that would remain west of the proposed railroad easement in the Sec. 12, T43N, R70W to incorporate it into a new pasture comprised of other pasture remnants remaining west of the proposed mainline railroad easement.</p>

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
Ostlund	Bull			From east of the Pasture due to mining operations in this area.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, and subject to current mining permits, these impacts can be mitigated in the following ways:
					Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 23, T44N, R70W.
Ostlund	Thomas			Off Keeline Road in the southerly portion of this Pasture.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:
					Provide an at-grade crossing at Keeline Road in the SW/4 Sec. 11, T44N, R70W; and
					Reconfigure the east Pasture boundary line to coincide with the west line of the proposed railroad easement in Sec. 11 and Sec. 2, T44N, R70W. The portion of this Pasture that would remain east of the proposed railroad easement in the Sections 2, 11, 12, 13, and 14, all in T44N, R70W could be reconfigured to incorporate it into the adjacent Cottonwood Pasture.
Ostlund	Cottonwood			Off Keeline Road south of this Pasture.	The proposed railroad bisects this Pasture. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:
					Decommission an unclassified USFS two-tracked road only within the proposed railroad easement in the NE/4 Sec. 2, T44N, R70W; and
					Reconfigure the west Pasture boundary line to coincide with the east line of the proposed railroad easement in Sec. 2, T44N, R70W. The portion of this Pasture that would remain west of the proposed railroad easement in the NE/4 Sec. 2, T44N, R70W could be reconfigured to incorporate it into the adjacent Thomas Pasture; and
					Implement a land adjustment of any remnant of USFS land that may remain west of the proposed railroad easement in the NE/4 Sec. 2, T44N, R70W, if necessary,
Little Thunder	West Peck			Off WY Highway all along the north boundary of this Pasture.	If the South Black Thunder Mine Spur proposal is constructed, the proposed alignment would bisect this Pasture. This will impact grazing operations by limiting access. To the extent practicable, these impacts can be mitigated in the following ways:
					Access will continue to both sides of the proposed railroad off of WY Highway 450.

Allotment	Pasture	RXR Station	NFS road	Current Access	Proposed Mitigation (Listed by Forest Service Preference)
Little Thunder	Black Thunder Mine			Off WY Highway all along the north boundary of this Pasture.	Access issues to be coordinated with the mine.



