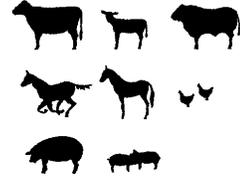




N-4 State Grazing Board
P.O. Box 461, Panaca, Nevada 89042
(775) 728-4682



August 7, 2008

Dr. Jane Summerson
Office of Civilian Radioactive Waste Management
U.S. DEPARTMENT OF ENERGY
1551 Hillshire Drive M/S 011
Las Vegas, Nevada 89134

RE: N-4 State Grazing Board Comments on the Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada DOE / EIS-0369

Dear Dr. Summerson:

The N-4 State Grazing Board, hereby referred to as the Board, is a legal entity of Nevada State Government, organized under NRS Chapter 568 "Grazing and Ranging." The Board represents grazing interests within White Pine and Lincoln Counties as well as a portion of Nye County. The proposed Caliente Rail Corridor, which is identified as the Department of Energy's (DOE) preferred alternative in the above-listed document, would result in serious impacts to the ranchers and public lands grazing operators that this Board represents. The Board has prepared a list of comments to EIS-0369 per the National Environmental Policy Act (please see enclosure 1).

This Board has requested status as a Cooperating Agency for this project. DOE subsequently denied the request. This Board has also been active with the NEPA process. A thorough review of the Railroad DEIS raised significant concern for this Board. In terms of grazing and public land use, the Railroad DEIS was inaccurate, inadequate, and incomplete. Those shortcomings were highlighted extensively within comments provided in January of this year. A thorough review of the Railroad FEIS has been recently completed, and comments are attached.

While the FEIS is a vast improvement over the DEIS due to the incorporation of some of the comments provided by this Board, it is still far from adequate. It remains clear that the DOE does not understand the manner in which public land grazing allotments are operated. As such, the DOE cannot accurately describe the effects and impacts of the proposed action, nor can they identify appropriate mitigation actions to minimize such actions. The inadequacies of the FEIS must be resolved, and to do so requires expertise with public lands grazing, the local environment and livestock husbandry. As such, the

Dr. Jane Summerson

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N-4 Board requests full involvement in the development of proper impact classification and mitigation actions per the process outlined in Chapter 7 of the FEIS. The N-4 Board would also be willing to send a representative to any pertinent proceedings of the NRC, STB, and BLM to further express our concerns with the information that they are basing their respective permitting concerns on.

Sincerely,



Merlin R. Flake, Chairman
N-4 State Grazing Board

MRF:sta

Enclosures:

“N-4 State Grazing Board Comments on the Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada DOE / FEIS-0369.”

cc: *Nye County Commission*
Lincoln County Commission
Esmeralda County Commission
Tony Lesperance, Nevada Department of Agriculture
John Ruhs, Ely BLM Field Office
Ron Wenker, Director, Nevada BLM
Governor Jim Gibbons
Nevada Legislative Committee on Public Lands
United States Senator Harry Reid
United States Senator John Ensign
Congressman Dean Heller
Surface Transportation Board
Nuclear Regulatory Commission
Michael Stewart, Nevada Legislative Counsel Bureau
Congresswoman Shelley Berkley
Congressman Jon Porter
Mike Dwyer, BLM Liaison with DOE
Ned Larson, Project Director, Nevada Rail Line Project
State Senator Mike McGinness

**N-4 State Grazing Board Comments on the Final Environmental Impact
Statement for a Rail Alignment for the Construction and Operation of a Railroad
in Nevada to a Geological Repository at Yucca Mountain, Nye County, Nevada
DOE / EIS-0369**

GENERAL COMMENTS:

Chapter 1 – Purpose and Need for Agency Action

Any rail alignment will have profound impacts on public lands grazing, surface and ground water resources and biological resources. The only means of substantially reducing the impacts to public lands grazing is to utilize trucks on existing highways for hauling nuclear waste from Caliente to Yucca Mtn. Alternatively, any rail route through the Nevada Test and Training Site, such as the Caliente-Chalk Mountain Alignment, would reduce impacts to some ranching operation.

Chapter 2 – Proposed Action and Alternatives

The absolute most essential BMP during construction of the rail is to minimize the construction disturbance area to the highest extent practical. The DOE's assertion that the area used for construction, but not occupied for operations, will return to its natural pre-disturbance condition is false. Studies and previous projects have proven that a return to pre-disturbance condition very seldom happens, and if it does, it requires decades to do so. As such, the DOE should limit the construction area by delineating the construction limits with bright orange snow fencing and impose penalties on companies and/or individuals who work outside of the construction limits. Additionally, there is no need to place the rail and the access road on separate raised roadbeds. The rail and access road should be on a single raised roadbed to reduce the disturbance area and operational footprint.

Furthermore, restoration of disturbed sites is essential. The DOE needs to incorporate the use of Ecological Site Descriptions into their proposed restoration actions along with adaptive plant species and temporary irrigation. These are three critical components of any restoration effort, yet they are not mentioned within the FEIS.

The DOE has improved its document by including the need for the interim and new or revised Allotment Management Plans. The interim plans will be required during the construction phase, and should be completed with specific input from the permittee or their representative. Construction is likely to have a greater impact than operations, as the activities and timing are going to be highly variable. The DOE should make every effort to complete construction in an expeditious manner.

Chapter 3 – Affected Environment

The region of influence defined for "Land Use" consists of the 1,000' wide construction right-of-way. This is an inappropriate region of influence for grazing operations. The region of influence should consist of each impacted allotment in total.

The DOE used the BLM database from 2004 to determine the location and number of range improvements across the project area. This is not an accurate means of identifying range improvements. Not only is the database outdated, it often does not include all of the improvements that are actually on the ground. As such, the impacts to allotments should be considered preliminary at best. All range improvements and critical grazing allotment features

will need to be surveyed prior to the start of construction with the assistance of allotment permittees or representative.

In addition, the DOE did not provide mapping of all of their proposed improvements associated with the construction of the rail. There is no mapping associated with items such as construction access roads, communications sites, etc.

Chapter 4 – Environmental Impacts

The DOE shows cut and fill heights and quantities in a tabular format. However, there is no mapping that indicates the locations of these areas. In order to determine the actual impacts to livestock grazing operations these areas must be mapped.

The DOE calculated the potential loss of AUMs on each allotment based on the proportion of the allotment that is within the construction right-of-way versus the total area of the allotment. Their analysis does not consider allotment specific conditions. As such, this analysis of impacts is preliminary at best. The DOE uses the potential loss of AUMs as their means of quantifying the potential impact to ranchers. However, there are several key components missing from this analysis including:

- Costs associated with relocating range improvements
- Costs associated with altering livestock operations during construction
- Time and overhead costs associated with participating in planning efforts
- Overhead costs associated with inefficiencies in managing livestock in altered allotments
- Costs associated with the potential impact to base property (both land and water)

The DOE designates the BLM as the agency that will interface with the grazing permittees in many instances. However, the BLM is currently understaffed. The DOE offers no indication as to how they will ensure that the personnel are made available to properly identify impacts and develop BMP and mitigation actions in a timely manner.

The DOE also asserts that a shared rail will result in a minor increase in impacts. However, from a grazing prospective, impacts could be profound given the fact that there are likely to be more trains on the rail that will be traveling at higher rates of speed. Both of these factors equate to more livestock and wildlife collisions and overall disturbance of an otherwise remote area.

Chapter 5 – Cumulative Impacts

The DOE changes the region of influence for this chapter from the 1,000' wide construction corridor to the whole of the three impacted counties for land use. As such it serves to dilute and marginalize the cumulative impacts to grazing operations. This chapter does not properly or adequately address the cumulative impacts to grazing operations within the project area, which in some cases are profound. Once again, the proper region of influence for grazing impacts would be the whole of each effected allotment. As with Chapter 4, the impact analysis is based heavily on an AUM calculation that is likely a gross underestimation and does not include any impacts on overall capitol costs of grazing operations. In general, this chapter does not adequately or accurately describe the cumulative impacts associated with this project in terms of land use.

Chapter 6 – Statutory, Regulatory and Other Applicable Requirements

This chapter was not reviewed.

Chapter 7 – Best Management Practices and Mitigation

This chapter is vastly improved from the Draft EIS. The process for addressing mitigation should have been presented in the Draft EIS in order to allow for adequate review and comment. Despite the improvement there remain several concerns.

The process outlined appropriately includes directly affected parties. However, ranching is a 24-hour a day, 365-day a year enterprise. As such, it is going to be extremely difficult for ranchers to take the time to travel to planning and mitigation meetings. Therefore the DOE should allow for hired representatives to serve on behalf of the individual ranchers if they so desire and the DOE should cover the cost for such representative.

The major concern with the process outlined is with DOE accountability. It would appear that the DOE will have the ultimate authority to determine the actual impacts and appropriate mitigation or compensation. The entity responsible for creating impacts should NOT have the final authority for determining the extent of those impacts and the proper mitigation or compensation. If the DOE and affected party can work together to come to an agreement there is not a problem. However, there is no mechanism in place to resolve a disputed claim as to an appropriate mitigation effort or compensation. It is imperative to outline this process within the ROD.

Chapter 8 – Unavoidable Adverse Impacts, Short-term Uses and Long-term Productivity, Irreversible and Irrecoverable Commitment of Resources

This chapter shows little improvement over the Draft EIS. Many of the unavoidable adverse impacts, and irreversible or irretrievable commitment of resources are not address, particularly in regards to public land use and biological resources. Public land grazing operations will sustain a high degree of unavoidable adverse impacts due to construction and operation of this rail. Every effected grazing permittee is likely to experience substantial economic impacts and a dramatic change to their overall way of life. The DOE continues to marginalize these crucial impacts by not recognizing them.

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Section 1.1.5, Page 1-11

Free-use permit: An authorization to extract mineral materials from public lands at no charge. The BLM issues free-use permits to a federal or state agency when the materials are for use in a public project (43 CFR Part 3620).

DOE could need one or more quarries to provide rail line construction materials. The potential quarry sites analyzed in this Rail Alignment EIS are all on BLM-administered land, with the exception of one potential site, which would be partially on private land. Before excavating materials at any of the potential quarry sites, DOE would obtain *free-use permits* from the BLM. Additional rights-of-way might also be required to facilitate transporting the materials to the construction site.

- *Comment: It is important that DOE and/or BLM coordinate with the grazing permittees well in advance of any quarry, well, borrow pit or communications facility construction. Activities of this nature can easily impact grazing operations in a number of ways and require remedial measures to minimize the impacts.*

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Section 2.2, Page 2-4

During the railroad operations phase, the right-of-way would be reduced to a smaller width (nominally 61 meters [200 feet] on either side of the centerline of the rail line). DOE would minimize this *operations right-of-way* to the extent practicable and would determine the operations right-of-way in consultation with the BLM. Lands formerly inside the construction right-of-way but not included in the operations right-of-way would be reclaimed (restored to natural conditions), as appropriate.

- *Comment: It will be extremely difficult to reclaim disturbed sites to natural conditions, and it will likely take decades to do so if ever.*

Section 2.2, Page 2-5

During the railroad operations phase, the right-of-way would be reduced to a smaller width (nominally 61 meters [200 feet] on either side of the centerline of the rail line). DOE would minimize this *operations right-of-way* to the extent practicable and would determine the operations right-of-way in consultation with the BLM. Lands formerly inside the construction right-of-way but not included in the operations right-of-way would be reclaimed (restored to natural conditions), as appropriate.

- *Comment: It will be extremely difficult to reclaim disturbed sites to natural conditions, and it will likely take decades to do so, if ever. To assume or assert that the portion of the construction right-of-way not occupied by the operations right-of-way will return to a natural condition in a short time frame is grossly underestimating the long-term impacts.*

Section 2.2, Page 2-7

Best Management Practices: Practices, techniques, methods, processes and activities commonly accepted and used throughout the construction and railroad industries that DOE would implement as part of the Proposed Action to facilitate compliance with applicable requirements and that provide an effective and practical means of preventing or minimizing the environmental impact of an action.

- *Comment: Activities should not be limited to those common to the construction and railroad industries. Common practices used by the industries that will also be impacted by the rail construction and operation should be implemented in the form of BMPs and mitigation.*

Mitigation (40 CFR 1508.20) 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.

Figure 2-20, Page 2-40

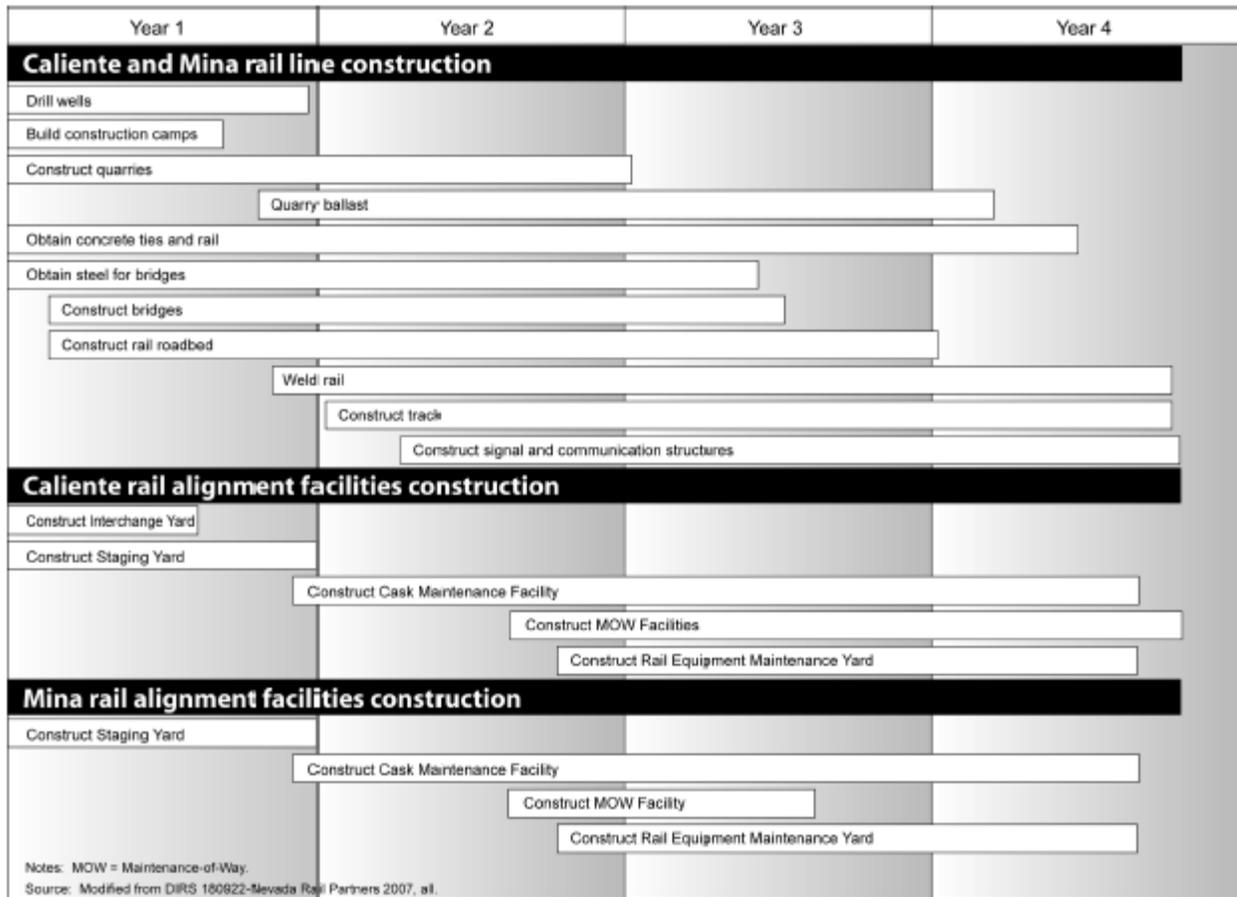


Figure 2-20. Four-year schedule for railroad construction.

- **Comment:** Figure 2-20, or an additional figure should show the planning timeline that is anticipated for competition of items such as: mitigation planning, geotechnical exploration, filing for and obtaining water rights, etc.
- **Comment:** Figure 2-20 does not include BMP measures such as restoration of disturbed areas.

Section 2.2.2.1, Page 2-41

The Department has conducted a preliminary inventory of the subsurface conditions along both the Caliente and Mina rail alignments, the results of which are presented in two geotechnical reports (DIRS 183639-Shannon & Wilson 2007, all; DIRS 180880-Shannon & Wilson 2007, all). These reports address potential geologic hazards such as rockfalls, earthquakes, debris flows, surface erosion, and land subsidence from mining. Before constructing the proposed railroad, DOE would conduct a geotechnical exploration program to gather data on subsurface conditions along the rail alignment and address any hazards previously identified in the preliminary inventory. These data would support the final design of bridge foundations, embankments, deep cuts, major culverts, potential quarry sites, fills, and excavations. This work would involve collecting geotechnical information by drilling *boreholes* at locations along the rail alignment within the construction right-of-way. Under the Caliente Implementing Alternative, there would be approximately 3,200 boreholes; under the Mina Implementing Alternative, there would be

approximately 2,100 boreholes. DOE would obtain any other required permits and approvals for these activities, as necessary.

- **Comment:** *The geotechnical exploration should not be allowed to proceed until a BLM right-of-way has been granted. The right-of-way grant should include stipulations that minimize impacts from this specific program as it will be conducted ahead of the actual construction.*

Section 2.2.2.3, Page 2-47

During the construction phase, DOE would install an unpaved service road parallel to the rail line within the construction right-of-way. This rail alignment service road would be utilized primarily to provide construction workers access to rail line construction sites. In some locations, this service road would be utilized as a public road. In these locations, the service road would be two lanes and 7.3 meters (24 feet) wide. Where the service road is used solely for accessing the rail line, it would be a single lane and 4.3 meters (14 feet) wide.

Under both implementing alternatives, the rail alignment service road would parallel the entire length of the rail line except over bridges, and through environmentally or culturally sensitive areas.

- **Comment:** *There should be a map showing the segments of road that would be utilized as a public road. The segments designated as public roads should be coordinated with each county and directly affected parties, as should the design for such segments of road. For example, is 24' wide enough to allow two-way traffic in the presence of large construction or rail maintenance equipment?*

Section 2.2.2.3, Page 2-48

After the construction phase, the rail alignment service road would remain in place to provide additional access to the rail line for maintenance and emergency response, and to act as a firebreak. It is important to note that DOE would not maintain the service road as a public road and the Department would post signs indicating potential users would proceed on the service road at their own risk.

- **Comment:** *Without maintenance the road may become a fire liability rather than a firebreak, and without maintenance additional access will not be provided. If DOE does not maintain the public segments of road, who is expected to? This question must be resolved with affected counties.*

Section 2.2.2.4.1, Pages 2-48 to 2-51 Acquisition of Materials - Water

- **Comment:** *There have been no changes to this section. The DOE still plans to drill new water wells and install pipelines and access roads to well sites. Well sites and roads should be mapped. All roads used to access wells are listed, but not mapped.*

Section 2.2.2.4.3, Page 2-66 Subballast

New subballast borrow sites would be located approximately every 16 to 32 kilometers (10 to 20 miles) along the rail alignment, which would result in the development of approximately 15 to 30 new sites.

- **Comment:** *This section still does not show locations of subballast quarries, only states that they are within the construction corridor. There is a figure for the Mina alternative, but not the Caliente alternative. The location of subballast quarries should be determined in coordination with affected counties and agencies as well as directly affected parties in order to avoid areas critical to public land use and management.*

Figure 2-37, Page 2-75

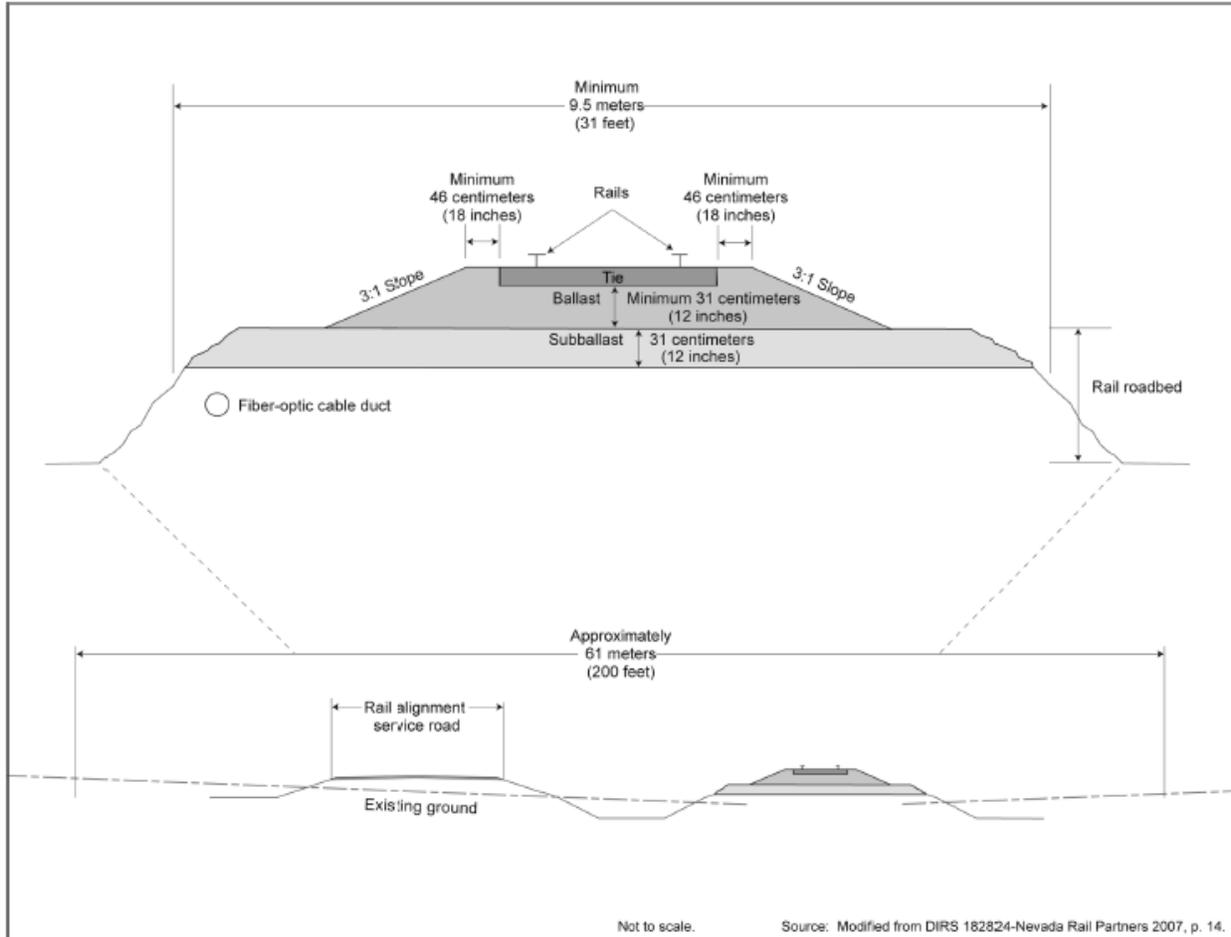


Figure 2-37. Cross-section of a typical rail and roadbed design.

- **Comment:** This figure still shows the rail service road on a separate raised roadbed, which results in:
 - Problems with wildlife and livestock crossing.
 - Increased disturbance of native vegetation and soils.
 - Increased costs for underpasses and culverts.
 - Potential for ponding of water between the rail and access road.
 - Increased costs associated with fill, construction water requirements for compaction, etc.

The access road should be located immediately adjacent to the rail and on a common raised roadbed.

Section 2.2.10, Page 2-81

Under the Caliente Implementing Alternative, DOE would construct the railroad in accordance with BLM rights-of-way; under the Mina Implementing Alternative, DOE would construct the railroad in accordance with BLM and/or Bureau of Indian Affairs rights-of-way. During and following construction, DOE would implement a program to:

- Identify the methods of restoration required on lands disturbed during the construction phase
- Restore and revegetate disturbed lands not required for railroad operations
- Monitor restoration programs and remediate revegetated areas as required

Resource Concepts, Inc.

This program would meet DOE and BLM requirements for the restoration of disturbed sites. As part of the program, DOE would conduct reclamation inventories and develop site-specific restoration plans prior to construction. These plans would include recommendations for topsoil salvage depth, topsoil stockpile placement and stabilization, vegetation salvation, recontouring, and use of native seed mixes. DOE would stockpile topsoil onsite and manage it to prevent erosion and maintain soil viability, as appropriate. The removal of cacti and yucca without permission of the landowner, if prohibited, and the removal for commercial purposes, is regulated by the State of Nevada (Nevada Revised Statutes 527.060 through 527.120 and Nevada Administrative Code 527.500). Cacti and yucca would be salvaged for replanting pursuant to BLM protocols for land reclamation. Restored sites would be monitored periodically to evaluate soil erosion, the presence of invasive species, and the abundance of native plants.

An associated program would be implemented to prevent the spread of noxious and other invasive weeds during construction and operation of the railroad. An inventory of noxious and invasive weeds would be conducted prior to construction as part of the development of this program. Weeds would be controlled on disturbed and reclaimed sites as necessary using mechanical and chemical methods throughout construction and operation of the railroad.

- **Comment:** *Reclamation inventories should include a review of ecological site descriptions for areas where these surveys have been completed. Ecological site descriptions should be developed for sites that do not already have them. These should dictate the restoration activities. This approach is established in the Proposed Ely RMP.*
- **Comment:** *Adapted plant species should be considered in addition to native species in order to stabilize soils and prevent invasive or noxious weeds. This approach is approved within the Proposed Ely RMP. Establishment of native species following seeding is typically a 2-3 year timeframe. Invasive weeds are quick to establish on disturbed areas and will out compete the native species for limited moisture. Including adapted species in seed mixes will encourage perennial plant establishment and provide competition to annuals while native species are establishing.*
- **Comment:** *There is no indication of irrigation for stand establishment. Absent irrigation the chance of success diminishes significantly. This is one of the most arid areas in the country and precipitation is highly variable. DOE must include temporary irrigation as part of its restoration plan.*

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Section 3.2, Page 3-3

The **region of influence** is the physical area that bounds the environmental, sociologic, economic, or cultural features of interest for analysis purposes.

Table 3.1, Page 3-3 to 3-4

Table 3-1. Regions of influence for environmental resource areas – Caliente rail alignment

Land use and ownership: The nominal width of the construction right-of-way, including all private land (including patented mining claims), American Indian lands, and public land fully or partially within this area. Also includes the locations of construction and operations support facilities outside the nominal width of the construction right-of-way. See Section 3.2.2.1.

Surface-water resources: The nominal width of the construction right-of-way for most of the analysis. In cases where surface-water flow patterns (including floodwaters) could be modified or surface-water drainage patterns could carry eroded soil, sedimentation, or spills downstream, the region of influence extends to 1.6 kilometers (1 mile) on either side of the centerline of the rail alignment. See Section 3.2.5.1.

Groundwater resources: **Aquifers** that would underlie areas of proposed railroad construction and operations, portions of groundwater aquifers DOE would use to obtain water for construction and operations support and that would be affected by these groundwater withdrawals, and nearby springs that might be affected by such groundwater withdrawals. The horizontal extent of the region of influence varies depending on withdrawals. The horizontal extent of the region of influence varies depending on the particular aspects of the specific project activity. See Section 3.2.6.1.

Biological resources: DOE used two areas of assessment to describe the affected environment for biological resources: a region of influence and a study area.

Region of influence: Generally, the nominal width of the construction right-of-way. For facilities that would be outside the nominal width of the construction right-of-way (such as quarries), the footprint of the proposed facility.

Study area: A 16-kilometer (10-mile)-wide area, extending 8 kilometers (5 miles) on either side of the centerline of the rail alignment, for use in database and literature searches to ensure the identification of sensitive **habitat** areas near the Caliente rail alignment and transient or migratory wildlife, particularly special status species, that could pass through the region of influence. See Section 3.2.7.1.

- **Comment:** *In terms of land use the construction right-of-way is an insufficient region of influence for certain existing uses such as grazing. Each affected allotment in whole should be considered the region of influence.*

Section 3.2.1.2.3, Page 3-16

DOE used soil survey databases from the U.S. Department of Agriculture, Natural Resources Conservation Service (DIRS 184079-Natural Resources Conservation Service 2007, all), to identify soil types and characteristics along the Caliente rail alignment. Approximately 95 percent of the project area has been surveyed. However, soil surveys around the Nevada Test and Training Range have not been completed. For areas with no available soils data, the Department does not consider the unavailable data critical to the design and construction of a railroad along the Caliente rail alignment because soils are expected to be similar to those already surveyed. In addition, as part of the final design, DOE would place geotechnical borings along the entire rail alignment to obtain site-specific soils data.

- **Comment:** Soil surveys are an essential tool through the entire route of the proposed railroad. They provide the ecological site information regarding native fauna and flora that exist on a given soil type, soil pH, soil capabilities and limitations, and other information important for planning. Geotechnical borings are directed more toward soil structure for supporting roads, railroads, structures, etc. rather than information to assist with reclamation and plant communities. Therefore, soil surveys should be completed for areas that do not already have that information available. All restoration activities should use the ecological site description to guide the restoration approach.

Table 3.5, Page 3-18

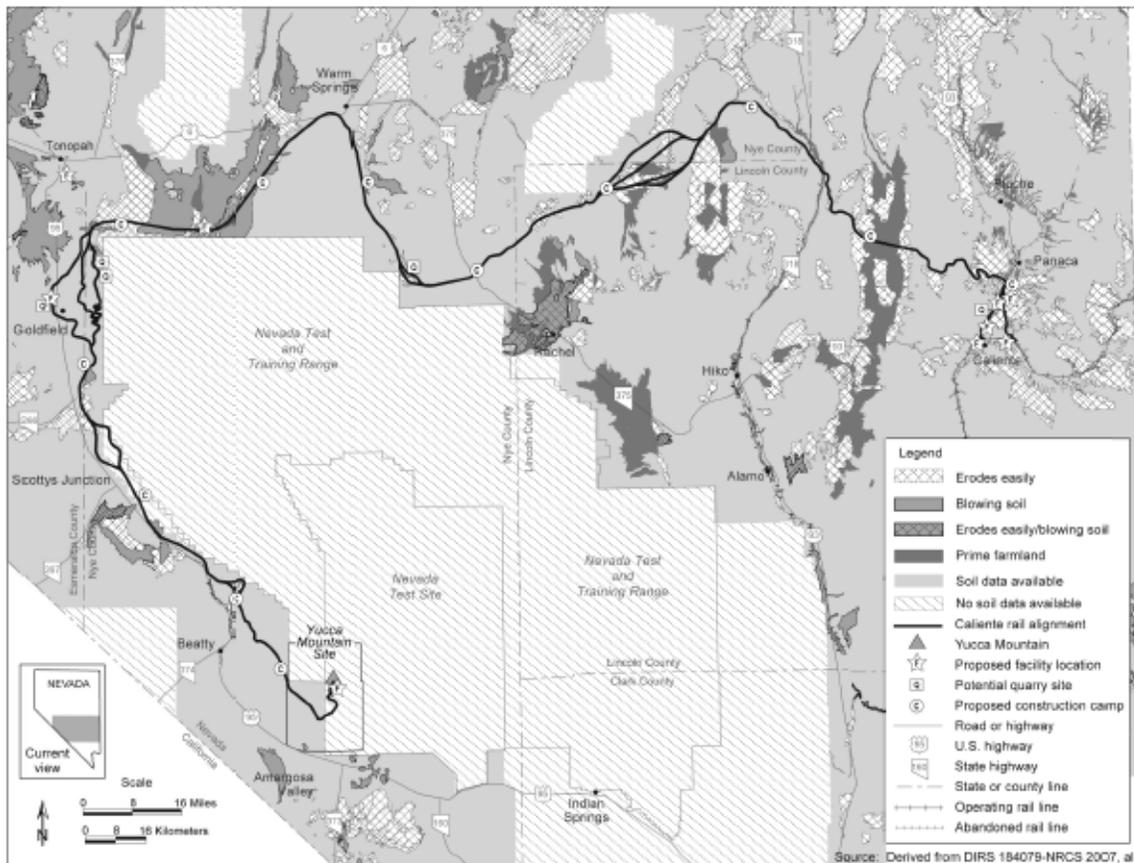


Figure 3-5. Soils with prime farmland, erodes easily, and blowing soil characteristics along the Caliente rail alignment.

- **Comment:** *This figure emphasizes the need to employ BMPs that minimize soil erosion and blowing. The loss of topsoil is unacceptable, and will greatly hamper restoration efforts. As such, DOE should coordinate with the Nevada Department of Environmental Protection for appropriate BMPs. Frequent and continual BMP compliance inspection by an impartial third party with extensive expertise in the field should be included as part of the effort to reduce soil erosion and blowing.*

Section 3.2.2.4.1, Page 3-53 and 54

Approximately 97 percent of the lands along the Caliente rail alignment are BLM-administered public lands. Therefore, the proposed railroad project would in large part be subject to BLM land-use plans. The BLM manages public lands under the multiple-use concept, which balances the present and future needs of the American people. The BLM implements this concept through resource management plans, which are long-range, comprehensive land-use plans intended to provide for multiple uses and identify planning objectives and policies for designated areas. Resource management plan objectives are implemented through activity plans, such as allotment management plans and wildlife habitat management plans. BLM resource management plans that apply to the Caliente rail alignment are included in the following:

- *Ely Proposed Resource Management Plan/Final Environmental Impact Statement (Ely Resource Management Plan; DIRS 184767-BLM 2007, all)*
- *Tonopah Resource Management Plan and **Record of Decision** (Tonopah Resource Management Plan; DIRS 173224-BLM 1997, all)*

The BLM issued the Ely Proposed Resource Management Plan in November 2007. While this plan has not been finalized with a Record of Decision, DOE evaluated the Proposed Action and alternatives against this plan with the approval of BLM, as it represents the best available information relating to the existing environment and reflects the anticipated BLM management actions and goals for this district.

- **Comment:** *Restoration of disturbed sites should follow the goals objective and management actions listed in section 2.4.5 of the proposed Ely RMP, including the use of “ecological site descriptions as the initial basis to guide integrated management/treatments to meet the desired goals and objectives for vegetation.” In addition to management action VEG-7, “determine seed mixes on a site-specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives.”*

Section 3.2.2.5.1, Pages 3-60 and 61

The Taylor Grazing Act of 1934 (43 U.S.C. 315-316o), as amended, authorizes the Federal Government to issue permits for grazing livestock in grazing districts to settlers, residents, and other livestock owners for an annual payment of reasonable fees. An applicant who owns a base property or controls a water source may apply to the BLM for a lease or permit to use public lands for the grazing of livestock. The BLM grazing administration regulations (43 U.S.C. 4100.0-5) define a base property as land that has the capability to produce crops or forage that can be used to support authorized livestock for a specified period of the year (land base property), or a privately owned right to water that is suitable for consumption by livestock and is available and accessible to livestock when the public lands are used for livestock grazing (water base property). The area that can be properly grazed by livestock watering at certain water sources is considered the “service area” and becomes the allotment for which the permit is issued (43 CFR Part 4100).

The grazing allotments are leased or permitted for 10 years and may be renewed under specific circumstances.

Livestock permitted on grazing allotments include cattle, sheep, goats, horses, and burros. Cattle and sheep are the typical livestock grazed within the Caliente rail alignment region of influence. The grazing lease or permit specifies the types and numbers of livestock based on the property acreage, the period of use, and the amount of use in *animal unit months*. The intent of assigning animal unit months is to allow grazing on public lands without exceeding the capacity of the allotment to sustain livestock (43 CFR Part 4100).

Depending on the combination of common segments and alternative segments, the Caliente rail alignment would cross up to 20 active grazing allotments, and 3 inactive allotments (Ralston, Montezuma, and one labeled Unused) (see Figures 3-26 through 3-33). Tables 3-6 and 3-7 list information about grazing allotments within the Caliente rail alignment region of influence.

Access to a water source is an essential requirement for livestock grazing in the high *desert* of Nevada. In accordance with the Nevada State Water Law, the State Engineer in the Nevada Division of Water Resources may issue permits for water rights to applicants who can demonstrate a beneficial use for the water. Once permitted, water rights are treated as property rights and can be bought and sold (DIRS 178301-State of Nevada [n.d.], all). Because water rights greatly influence the uses and value of land in this generally arid region, any impacts to water rights can directly affect land use. (See Section 3.2.6 for a description of *groundwater* resources.)

It is essential to provide adequate water for livestock within reasonable distances of grazing areas. Stockwater is water that is physically diverted from the natural water course or storage of water for use by livestock or wildlife. There are several methods for developing stockwater, including spring developments; wells, ponds, or dugouts; and pipelines with a trough or tank for storage. Table 3-7 lists stockwater features within each Caliente rail alignment segment. The locations of springs and wells near the Caliente rail alignment are provided in Figures 3-75 through 3-82 in Section 3.2.6, Groundwater Resources.

DOE collected information on range improvements (pipelines and fences) based on BLM records in November 2004. Therefore, there could be some range improvements authorized on allotments since that time. Based on the 2004 BLM data, the following rail segments would cross existing allotment fences: Eccles and Caliente alternative segments – two crossings; Caliente common segment 1 – nine crossings; Garden Valley alternative segments 1, 2, and 8 – five crossings; and Garden Valley alternative segment 3 – four crossings (DIRS 185440-BSC 2008, all).

- **Comment:** *The DOE has done a much better job of describing and explaining the concepts of AUMs and base property. However, it does not appear that impacts to base property have been properly identified or emphasized given the importance of base property to the given allotment.*
- **Comment:** *Natural springs are also a critical water source for livestock.*
- **Comment:** *The BLM records are often incomplete and out of date, as such this information should be considered preliminary. Any counts and locations for range improvements must be verified via field survey in conjunction with grazing permittees prior to construction.*

Figure 3-27, Page 3-63:

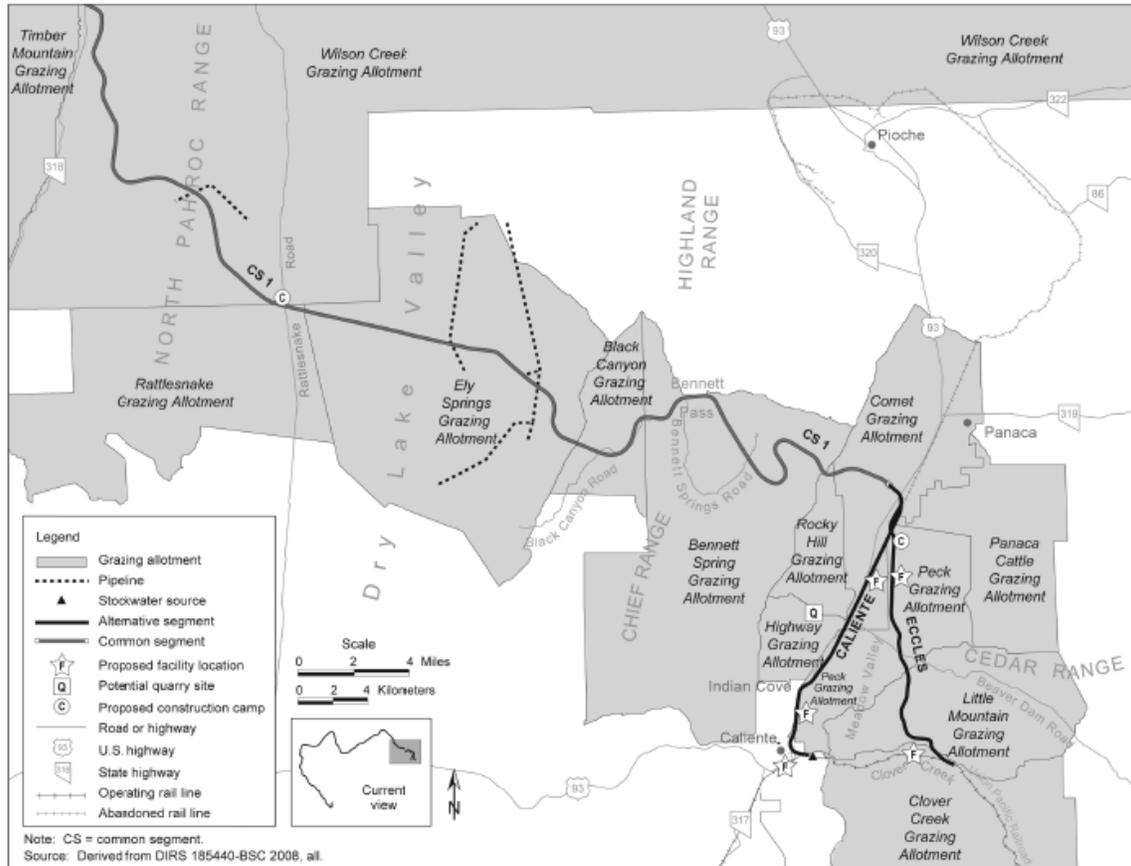


Figure 3-27. Grazing allotments with stockwater features within map area 1.

- **Comment:** The stockwater features shown in this figure are not complete. This figure does not show water troughs, tanks or natural springs, and the pipelines shown are not up to date with the current on-the-ground situation. The same can be said for Figures 3-28 through 3-33.
- **Comment:** This information will need to be updated in order to adequately quantify the impacts from construction and operation of the rail. To do so in a sufficient manner will require a field survey and the involvement of the grazing allotment permittee.

Table 3-6, Page 3-70:

Table 3-6. Grazing allotment lands within the Caliente rail alignment construction right-of-way (page 1 of 2).

Rail line segment/facility	Grazing allotment	Rail alignment crossing distance (miles) ^a	Area that would be within the construction right-of-way or disturbed (acres) ^b
Eccles alternative segment	Clover Creek	0.9	38
Eccles alternative segment	Little Mountain	4.3	450
Eccles alternative segment ^c	Peck	4.7	670
Eccles alternative segment	Comet	1.2	43
Caliente alternative segment	Comet	0.22	24
Caliente alternative segment	Peck	d	17
Potential quarry CA-8B – Indian Cove option	Highway	d	250
Potential quarry CA-8A – Indian Cove option	Peck	d	44
Potential quarry CA-8B – Upland option	Highway	d	280
Potential quarry CA-8B – Upland option	Rocky Hills	d	8
Caliente common segment 1	Comet	2	240
Caliente common segment 1	Rocky Hills	0.41	49
Caliente common segment 1	Bennett Spring	10	1,250
Caliente common segment 1	Black Canyon	3.2	390
Caliente common segment 1	Ely Springs Cattle	12	1,420
Caliente common segment 1	Rattlesnake	1.1	130
Caliente common segment 1	Wilson Creek	15	1,830
Caliente common segment 1	Timber Mountain	6.4	770
Caliente common segment 1	Sunnyside	11	1,360
Caliente common segment 1	Needles	8.7	1,060
Garden Valley alternative segment 1	Needles	5.9	720
Garden Valley alternative segment 1	Batterman Wash	5.3	640
Garden Valley alternative segment 1	Pine Creek	4.8	580
Garden Valley alternative segment 1	Cottonwood	4.6	540
Garden Valley alternative segment 1	McCutcheon Springs	1.7	110
Garden Valley alternative segment 2	Coal Valley Lake	0.8	93
Garden Valley alternative segment 2	Pine Creek	9.3	1,130
Garden Valley alternative segment 2	Cottonwood	5.5	640
Garden Valley alternative segment 2	Needles	5.5	670
Garden Valley alternative segment 2	McCutcheon Springs	1.8	95
Garden Valley alternative segment 3	Needles	6	730
Garden Valley alternative segment 3	Pine Creek	2.8	340
Garden Valley alternative segment 3	Batterman Wash	9.1	1,100
Garden Valley alternative segment 3	Cottonwood	4.1	490
Garden Valley alternative segment 3	McCutcheon Springs	1.4	170
Garden Valley alternative segment 8	Coal Valley Lake	0.8	100
Garden Valley alternative segment 8	Pine Creek	9.8	1,050
Garden Valley alternative segment 8	Needles	5.5	660

- **Comment:** The added information in Table 3-6 still does not include:
 - Expansion of access roads.
 - Disturbance due to construction camps.
 - Locations of communications towers.
 - Locations of well sites and associated pads, pipelines and access roads.

As such, all impacts have not been adequately identified.

Table 3-7, Page 3-72:

Table 3-7. Features of grazing allotments within the Caliente rail alignment region of influence (page 1 of 2).

Grazing allotment	Area (acres) ^a	Active animal unit months (for cattle and year-round, unless otherwise specified)	Stockwater features that would be within the region of influence ^b
Clover Creek ^c	22,880	613	None
Little Mountain ^c	18,580	Relinquished	None
Peck ^c	17,740	397	None
Comet ^c	9,150	214	None
Panaca Cattle ^c	16,280	453	None
Highway ^c	4,250	118	None
Rocky Hills ^c	4,380	Relinquished	None
Bennett Spring ^c	48,260	3,498 (October 16 to April 30)	None
Black Canyon ^c	8,440	1,105 (October 16 to April 30)	None
Ely Springs Cattle ^c	55,170	4,248	Caliente common segment 1 would cross two pipelines (water base property). ^f
Rattlesnake ^c	28,430	1,180 (October 16 to May 30)	None
Wilson Creek ^{c,d}	1,077,990	48,250 cattle and sheep	Caliente common segment 1 would cross one pipeline (water base property). ^f
Timber Mountain ^c	43,840	2,373 cattle and sheep (November 1 to April 10)	None
Sunnyside ^c	219,520	5,402 (June 1 to October 31)	None
Needles ^c	85,500	2,679 (cattle October 1 to February 28 and sheep October 1 to April 15)	None
Batterman Wash ^c	39,880	2,093 (cattle November 15 to June 15 and sheep December 1 to April 15)	None
Pine Creek ^c	34,690	2,667 (May 1 to December 31)	Garden Valley alternative segments 1 and 3 would cross one pipeline.
Coal Valley Lake ^e	115,180	4,821 (cattle September 1 to May 5 and sheep November 1 to April 10)	None
Cottonwood (#11015) ^c	42,170	1,177 (October 1 to December 31 and April 1 to May 31)	None
McCutcheon Springs ^c	18,280	446	None
Sand Springs (#1066) ^c	249,690	7,005	Caliente common segment 2 would cross two pipelines.
Reveille ^g	657,520	25,730	Caliente common segment 3 would cross five pipelines. South Reveille alternative segment 2 may cross the Reveille Peak pipeline extension.
Stone Cabin ^h	389,500	13,963	Caliente common segment 3 would cross one pipeline.

- **Comment:** This table should be presented as preliminary as not all range improvements and stockwaters are accurately depicted. The region of influence also reduces the number of stockwaters that would truly be impacted. Stockwaters within 1-mile of the track would be greatly impacted, while the service area for a stockwater is considered 4-miles. Therefore any stockwater within 4-miles of the track may be impacted by construction and operation of the rail.
- **Comment:** There are other important range improvements and allotment features that have not been classified including: natural springs, pasture fences, chutes and corrals, access roads and trails, etc. Therefore, all potential impacts have not been properly identified.

Section 3.2.6.1, Page 3-170

The region of influence for groundwater resources along the Caliente rail alignment includes aquifers that would underlie areas of railroad construction and operations, portions of groundwater aquifers DOE would use to obtain water for construction and operations support and that would be affected by these groundwater withdrawals, and nearby springs, seeps or other surface-water-right locations that might be affected by such groundwater withdrawals. The horizontal extent of the region of influence varies depending on the particular aspects of the specific project activity, as follows:

- DOE used the nominal width of the rail line construction right-of-way and the footprints of construction and operations support facilities to define where there would be construction or other land disturbances. These areas could be susceptible to changes in groundwater *infiltration*, discharge (for example, spring discharge), or quality. There could also be damage to, or loss of use of, an existing well (including potential need for well abandonment), if that well fell within the rail roadbed or was disturbed during construction activities. Review of the available information on the locations of existing wells indicates that rail roadbed construction would not disturb any existing wells. However, the precise locations of existing wells have not been field-verified and actual well locations might vary from the coordinates identified and cataloged for the wells in State of Nevada and U.S. Geological Survey (USGS) well databases (see Section 3.2.6.2.1).
- DOE used an initial screening-level distance of 1.6 kilometers (1 mile) on either side of the rail alignment centerline and an initial radius of 1.6 kilometers surrounding each proposed new well if that well would be outside of the nominal width of the construction right-of-way to define areas in the general vicinity of the rail alignment and proposed well locations that could also be affected by changes in groundwater discharge or quality at existing wells, springs, seeps, and other surface-water right locations.
- DOE used a distance criterion of 150 meters (500 feet) on either side of the proposed rail alignment centerline to identify whether there could be damage to, or loss of use of, an existing well if that well fell within the rail roadbed or was disturbed during construction activities.
- DOE considered both the individual groundwater basins (hydrographic areas) that underlie the Caliente rail alignment and the railroad construction and operations support facilities and adjacent hydrographic areas for evaluating areas that might be affected by proposed groundwater withdrawals for construction or operations support. This would include areas that could be susceptible to changes in groundwater discharge or flow to an adjacent groundwater basin.
- ***Comment:** There will likely be wells within the construction right-of-way that were not identified in the initial screening. DOE should have a process in place to address mitigation of such situations when encountered.*

Table 3-35, Page 3-177

Table 3-35. Perennial yield and annual committed groundwater resources of hydrographic areas the Caliente rail alignment would cross (page 1 of 2).

Rail line segment	Hydrographic area ^a number	Hydrographic area name	Perennial yield (acre-feet) ^{b,c}	Annual committed groundwater resources/pending annual groundwater duties (acre-feet) ^d	Designated groundwater basin ^e
Caliente alternative segment, Eccles alternative segment	204	Clover Valley	1,000	3,787/0	No
Caliente alternative segment, Eccles alternative segment, Caliente common segment 1	203	Panaca Valley	9,000	31,367/0	Yes
Caliente common segment 1	181	Dry Lake Valley	2,500	57/21,824	No
Caliente common segment 1	208	Pahroc Valley	21,000	30/0	No
Caliente common segment 1	207	White River Valley	37,000	31,819/42,512	No
Caliente common segment 1; Garden Valley alternative segments 1, 2, 3, and 8	171	Coal Valley	6,000	38/33,071	No
Garden Valley alternative segments 1, 2, 3, and 8; Caliente common segment 2	172	Garden Valley	6,000	559/12,224	No
Caliente common segment 2	170	Penoyer Valley (Sand Spring Valley)	4,000	14,461/11,888	Yes
Caliente common segment 2; South Reveille alternative segments 2 and 3; Caliente common segment 3	173A	Railroad Valley, southern part	2,800	3,867/0	No
Caliente common segment 3	156	Hot Creek Valley	5,500	4,231/0	No
Caliente common segment 3	149	Stone Cabin Valley	2,000	11,532/6,400	Yes
Caliente common segment 3; Goldfield alternative segments 1, 3, and 4	141	Ralston Valley	6,000	4,330/1	Yes
Goldfield alternative segments 1 and 4	142	Alkali Spring Valley	3,000	2,596/0	No
Goldfield alternative segments 1 and 3	145	Stonewall Flat	100	12/0	No

- **Comment:** *Nearly all of these basins are over-allocated or have significant pending permits. How does the DOE propose getting approval for new construction water wells in a timely manner, ahead of the pending permits for these basins?*

Section 3.2.7.3.1.1, Page 3-232:

Cheatgrass is found along most of the Caliente rail alignment where it fills open space between shrubs. Red brome is also common, although it is generally confined to areas along the rail alignment that would cross the Mojave Desert region. These observations were made during the 2005 field surveys.

- **Comment:** *Cheatgrass and Red brome are annual invasive grasses that can increase rapidly when soils are disturbed. These grasses are also extremely flammable and can rapidly spread fire throughout rangelands under brittle conditions. Successful reclamation of construction sites will be essential to minimize the spread of these species. Absent temporary irrigation, these and other invasive species will prevail on seeded areas.*

N-4 Grazing

FEIS Comments

August 7, 2008

Section 4.1.4, Page 4-6

During the preparation of this Rail Alignment EIS, DOE and BLM reviewed resource management plans for lands that would be affected by the Caliente and Mina rail alignments to identify potential inconsistencies with the plans. An inconsistency is defined as a component of the Proposed Action or alternatives that would not be allowed by the BLM without preparation and approval of an amendment to the resource management plan.

The resource management plans address the types of land uses the BLM considers to be allowable so that various resources (such as soils, wildlife, and recreation) are protected and multiple-use land-management objectives would be achieved. The following plans were reviewed: Proposed Ely Resource Management Plan, Tonopah Resource Management Plan, Las Vegas Resource Management Plan, and Carson City Consolidated Resource Management Plan. These plans are referenced in many sections of Chapters 3 and 4 for resource areas managed by the BLM. Additional information about the plans are included in sections 3.2.2.4.1, 3.3.2.4.1, 4.2.2.2.3.1, 4.3.2.2.3.1, 5.2.1.2.3, and 5.3.1.2.3. DOE and BLM did not identify any inconsistencies with the resource management plans as a result of the review.

- **Comment:** *When the DOE discusses restoration of disturbed areas they only reference the use of native species; however, the Proposed Ely RPM discusses the use of both native and adapted plant species. This appears to be an inconsistency.*

Table 4.3, Page 4-16

Table 4-3. Summary of key information for assessing potential impacts from constructing the proposed railroad along Caliente rail alignment common segments (page 1 of 2).

Key information	Caliente common segment 1	Caliente common segment 2	Caliente common segment 3	Caliente common segment 4	Common segment 5	Common segment 6
Length (miles) ^{a,b}	71	31	70	7	25	32
Rise and fall (feet) ^{a,c}	4,300	1,400	2,400	60	560	1,400
Earthwork cut quantities (cubic yards) ^{a,d}	12.2 million	1.56 million	3.05 million	0.3 million	0.59 million	7.69 million
Earthwork fill quantities (cubic yards) ^a	7.7 million	0.68 million	2.53 million	0.26 million	1.32 million	3.85 million
Construction ^e	Generally, cuts and fills ranging 40 to 70 feet high; cut in rock to 70 feet high at Bennett Pass; 40-foot cuts and 65-foot-high fill at the crossing of Black Canyon; fills up to 30 feet and cuts in rock to 100 feet high along White River.	Cuts up to 40 feet and fills up to 80 feet.	Cuts up to 50 feet and fills up to 30 feet.	Cuts up to 15 feet and fills up to 35 feet.	Cuts up to 50 feet; fills generally up to 10 feet.	Cuts up to 140 feet and fills up to 110 feet.
Number of construction camps ^f	2 (nos. 2, 3)	1 (no. 5)	3 (nos. 6, 7, 8)	1 (no. 9)	1 (no. 10)	1 (no. 12)
Number of well sites outside nominal width of construction right-of-way ^f	4 (nos. 4, 5, 6, 7)	2 (nos. 8, 9)	0	0	0	2 (nos. 14, 15)

- **Comment:** *The information regarding cuts and fills will need to be shown on maps, and used when determining required BMP and mitigation actions described in Chapter 7.*

Section 4.2.1.3, Page 4-32

The proposed railroad would operate for up to 50 years (DIRS 182826-Nevada Rail Partners 2007, p. 4-1). The operations right-of-way would be nominally 61 meters (200 feet) on either side of the centerline of the rail line. By definition, the operations right-of-way would be within the construction right-of-way; therefore, use of the completed rail line to Yucca Mountain would have no additional impact to physical setting beyond the permanent alternations resulting from construction.

- **Comment:** *The roadway adjacent to the railway grade should be designed to occupy the same grade as the rail rather than a separation between the road and the railway grade. As presented, the separation will create numerous problems for managing livestock including: trapping livestock between the grades when trains are approaching, fencing problems at allotment boundaries, and allowing for collection of runoff with little or no drainage that tends to draw livestock and wildlife to the railway. In addition, weed control will be a challenge under the present design and more land is potentially disturbed. The cost of extending drainage pipe, large culverts, crossings and other structures is obviously going to cost much more under the present design.*

Section 4.2.1.5, Page 4-33

Table 4-9 summarizes potential impacts to physical setting from constructing and operating the proposed railroad along the Caliente rail alignment. With the exception of topsoil loss, the overall impacts would be small because of the best management practices or mitigation measures DOE would implement (see Chapter 7). There would be a potential for increased erosion because relatively undisturbed land would be extensively graded. Impacts related to soil erosion or loss of topsoil would be small, because implementation of best management practices would effectively reduce the potential for increased erosion and sedimentation that could occur during construction activities. In addition, soil disturbance would be distributed throughout several counties, reducing the concentration of increased soil erosion.

- **Comment:** *Soil disturbance should be addressed seriously and mitigation should be diligently applied in each instance. Impacts caused by the rail cannot be discounted because of the amount of undisturbed area.*
- **Comment:** *The impacts are likely to be more significant than “low” as indicated by the DOE even with implementation of BMPs and mitigation actions.*

Table 4-10, Page 4-37

Table 4-10. Impact assessment considerations for land use and ownership.

Land use	Potential for impact
General	Nonconformance with applicable general and regional plans and approved or adopted policies, goals, or operations of communities or governmental agencies
Private land	Change in current land use Permanent displacement of existing, developing, or approved urban/industrial buildings or activities (residential, commercial, industrial, non-federal governmental, or institutional) Loss of ownership or title to private land
American Indian land	Conflict with existing land-use plans or cause incompatible land uses
Department of Defense land	Conflict with existing land-use plans or cause incompatible land uses
Livestock grazing lands	Loss of grazing land and associated animal unit months Alteration of livestock operations or disruption of livestock movement Change to the amount or distribution of existing stockwater sources Potential human disturbance to livestock (such as loss of livestock due to collisions with trains)
Mineral and energy resources	Potential to preclude mining operations or the extraction of oil, gas, and geothermal resources within the rail line construction right-of-way Disturbance to existing or proposed mining operations with an approved mining plan Potential to cause the collapse of active underground mines, tunnels, or shafts
Recreational areas and access to public or private lands	Potential disturbance to any land designated as recreational sites Potential alteration of routes for large, recurring organized off-highway vehicle events and races Restricted or altered access to any recreational sites or public land Restricted or altered access to private land
Utility and transportation corridors and rights-of-way	Interference with an existing or planned utility or transportation right-of-way Need for a new right-of-way within a BLM-designated right-of-way avoidance area, such as an Area of Critical Environmental Concern

- **Comment:** *The impact considerations for livestock grazing lands are much too narrow in scope. The following items are not included:*
 - *Base Property – both land and water base property*
 - *Range Improvements – livestock water troughs, tanks and waterhails, pipelines, fences, chutes, corrals, wells, etc.*
 - *Deferred grazing rights during construction of the rail.*
 - *Increased overhead costs associated with mitigation planning processes, and altered grazing operations during construction and operations of the rail.*

This reiterates the need to more thoroughly identify the full suite of impacts to livestock grazing operations.

Section 4.2.2.1, Page 4-39

Construction camps, some construction wells, and some facilities would lie within the nominal 300-meter (1,000-foot) wide area that supports the construction of the rail line and service road. Where this occurs, these facilities are included in the analysis of their respective rail segment and are not addressed separately. However, just as rail segments are analyzed individually, facilities that are located outside the nominal construction footprint of the rail line, as shown in Table 4-11, are also individually addressed.

Although not all the well locations identified would be used for the project, for the purposes of analysis and to conservatively estimate impacts to land use and ownership, DOE assumes that it would develop all the well locations outside the nominal rail line construction right-of-way and footprints of the quarry sites.

- **Comment:** *Locating well locations for the project should be coordinated closely with the permittees to assure that the wells do not create a problem with the livestock operation or potentially draw livestock in close to the construction areas in search of water.*

Section 4.2.2.2, Page 4-39

Sections 4.2.2.2.1 through 4.2.2.2.8 discuss potential land-use impacts during the construction phase. Because potential impacts to land use would occur primarily from the presence of the rail line, the construction timeframe (which could range from 4 to 10 years) would have little effect on the resulting land-use impacts, other than to provide greater lead time to implement mitigation measures, establish land-use agreements, and revise grazing allotment permits where applicable. Therefore, DOE did not assess potential land-use impacts for different construction timeframes.

- **Comment:** *This statement is completely false. Construction will have just as much if not more impacts on grazing allotments, as conditions during operations of the rail are much more predicible and set than the conditions during construction. The longer construction goes, the worse the impacts. Interim grazing management plans need to be in place ahead of any construction. Revised allotment management plans should be developed for the operations phase. ANY REVISIONS TO GRAZING ALLOTMENT PERMITS SHOULD NOT TAKE INTO ACCOUNT CONDITIONS DURING CONSTRUCTION. The State Grazing Board only supports no net loss in grazing AUMs.*

Section 4.2.2.2.3.2, Page 4-46 to 7

Construction of the rail line and support facilities would result in surface disturbance across up to 20 active grazing allotments. To characterize this impact, DOE quantified the potential loss in animal unit months associated with this disturbance for each active grazing allotment crossed by each rail segment.

In order to calculate potential loss of animal unit months, DOE evaluated the proportion of land within each grazing allotment that would fall within the footprints of the rail line construction right-of-way and support facilities. For this analysis, DOE assumed that the entire land area within the rail line construction right-of-way would be unavailable for forage and would no longer support grazing. The Department did not consider site-specific allotment characteristics. In fact, this calculation method assumes that there is uniform forage distribution across the entire allotment, which would be unlikely. Because the proposed rail line would generally follow flatter terrain, such as valley floors (due to grade limitations of the railroad), the rail alignment would likely transect those areas that typically sustain a greater proportion of high-quality forage. Furthermore, where the rail line would bisect allotments or isolate portions of allotments or pastures, additional land and possibly water features such as springs may be inaccessible for grazing and there could be substantially greater losses of animal unit months unless mitigation measures are employed. The BLM would work with affected permittees to develop Interim Grazing Managements Plans and revise their allotment management plans to address impacts of the rail alignment. The BLM would determine actual loss of animal unit months for each affected allotment, based on these interim and revised plans, in association with the issuance of a **right-of-way grant**.

- **Comment:** *The DOE acknowledges that the AUM calculation is likely not accurate due to the basic assumptions used. As such, this analysis should be considered preliminary and allow for increased mitigation measures if the true impacts are greater than predicted.*
- **Comment:** *The potential loss of AUMs is only one part of the overall impacts that will be experienced by public land ranching operations. This section, and the FEIS as a whole,*

does not address the increased overhead and time required to partake in planning processes or to adjust to new circumstances within the allotments. As such, the DOE's approach to identifying impacts remains greatly flawed.

- ***Comment:*** *The BLM is currently understaffed. This process will require a much higher workload. The DOE must be willing to compensate the BLM for an increased staff or contracting a private consultant who will be required to handle the greatly increased workload due to this project.*

Section 4.2.2.2.3.2, Page 4-47 to 8

Chapter 7, Best Management Practices and Mitigation, describes measures DOE, in consultation with the BLM, would use to minimize or compensate for the loss of animal unit months. The goal of the measures described in Chapter 7 would be to reduce impacts to both grazing operations and existing range improvements. Mitigation measures could include:

- Relocating existing infrastructure and water resources
- Providing temporary feed, water, and assistance in cattle movement during rail line construction
- The construction of culverts, bridges, and cattle guards to facilitate or prevent the movement of livestock.

The presence of a rail line could require livestock on some allotments to adjust to new routes to access water and forage. Generally, livestock could adapt to new routes and should be able to cross the rail line in most areas. The revised allotment management plans developed by the BLM and the affected permittees would be designed to address forage and water accessibility problems introduced by the presence of the rail line. The railroad could result in additional impacts to ranching operations because livestock could be struck by passing trains. DOE could provide mitigation to reduce the likelihood of livestock collisions through measures such as relocating stockwater sources further from the rail line and preventing the ponding of water near the rail line. These measures would be site-specific, determined through coordination with permittees and the BLM. DOE or the commercial user (under the Shared-Use Option) would reimburse ranchers for livestock losses due to train strikes, as per Nevada law.

The rail line would also intersect 16 existing fences on active grazing allotments. DOE would coordinate with permittees and the BLM when determining a fencing plan to promote livestock safety and management while considering the need to prevent the segmenting of wildlife habitat. For allotments that are divided into pastures that would be bisected by the rail line, permittees may choose to alter pasture boundaries to coincide with the rail line under revised allotment management plans. If this approach was taken, it would necessitate the removal of old pasture fences and the installation of miles of new fence along the rail line. DOE would provide mitigation in the form of compensation or range improvements as described in Chapter 7, Best Management Practices and Mitigation.

The Caliente rail alignment would cross up to 12 stockwater pipelines on active grazing allotments, some of which convey water that is base property owned by the permittee. During the construction phase, DOE would sleeve these pipelines within a casing pipe under the rail roadbed to protect them and keep them operational. The casing pipe would be capable of withstanding the load of the roadbed, track, and rail traffic. DOE would also ensure that permittees retained access to pipelines and other range improvements within the rail line right-of-way for maintenance activities.

It is important to note that DOE collected information on range improvements (pipelines and fences) based on BLM records in November 2004 (DIRS 185440-BSC 2008, all). Therefore, there could be range improvements authorized on allotments since that time that are not reflected in this Rail Alignment EIS. Similarly, DOE did not include the locations of troughs, tanks, corrals, and other range infrastructure in the geographic information system baseline dataset. Therefore, DOE would coordinate with the BLM and allotment permittees to verify the location of potentially affected range improvements prior to construction. The mitigation measures and best management practices outlined in Chapter 7 would apply to all affected improvements, including those that were not specifically addressed in this Rail Alignment EIS. There would also be a number of new construction wells on grazing allotments outside the construction right-of-way. The well footprints would be small (approximately 0.0057 square kilometer [0.4 acre] each) and would not affect grazing patterns except for the presence of human activity during the construction phase.

If DOE were to select Goldfield alternative segment 1 or 3, the Maintenance-of-Way Headquarters Facility would be located in Esmeralda County, approximately 8 kilometers (5 miles) southeast of Tonopah along U.S. Highway (95) (see Figure 2-50). It would occupy approximately 0.013 square kilometer (3.2 acres) of vacant, BLM-administered public land. The facility would be within the Silver King Grazing Allotment, which at present is unused (DIRS 176942-Metscher 2006, all). Although there is no active grazing on this land, because a permanent structure would be constructed, there would be long-term changes in land use. The associated Maintenance-of-Way Trackage Facility would be located along Caliente common segment 3, within the construction right-of-way of the rail line across both the Stone Cabin and Ralston Grazing Allotments. If DOE were to select Goldfield alternative segment 4, then a single Maintenance-of-Way Facility would be constructed along that segment north of Goldfield, within the construction right-of-way within the inactive Montezuma Grazing Allotment. Where the facilities fall within the construction right-of-way, their impacts are not addressed separately as described in Section 4.2.2.1.

- *Comment: All range improvements will need to be surveyed (GPS), and documented prior to construction with the help of allotment permittees. The numbers presented in this section should be considered preliminary as they are likely outdated and do not accurately reflect conditions on the ground.*
- *Comment: This section discusses coordination with BLM, but who is accountable for making sure that actual impacts are properly quantified and that mitigation actions are carried out? DOE must identify how they will be held accountable for accurately describing impacts based on information obtained via on-the-ground survey, and how they will be held accountable for mitigating these impacts.*
- *Comment: Pipelines near construction camps (such as in Garden Valley) should also be protected. Camp activities and heavy equipment traffic could potentially damage base property in the cottonwood and pine creek allotments.*

Section 4.2.2.2.7, Page 4-59

Although many undeveloped recreation opportunities exist over much of the public lands surrounding the rail alignment (such as off-highway vehicle use and dispersed hunting), descriptions of potential impacts in Sections 4.2.2.2.7.1 through 4.2.2.2.7.3 are limited to defined recreation areas. While impacts to non-designated recreation areas are not specifically addressed, individuals might have to alter their access routes to particular recreation areas near the rail line.

Construction of the rail line might also cause some dispersed recreationists (such as hunters) who use non-designated areas nearby to temporarily relocate. Future Special Recreation Permits issued by applicable BLM offices would take the presence of the rail line into consideration to minimize impacts to both the applicant and the construction and operation of the railroad. Most organized off-highway vehicle events with previously approved race routes are on existing roads and trails, and access across the rail line for these events would not be compromised. However, some previously permitted routes that the rail line would cross might need to alter their crossing locations in areas where crossings are consolidated.

- **Comment:** *Steps should be taken to ensure a commensurate level of access to public lands before and after construction of the rail. This is critical not only for recreation, but also public land uses and management.*

Section 4.2.2.3, Page 4-62

Land-use and ownership impacts would occur before or during the railroad construction phase. The nominal width of the operations right-of-way would be narrower than the nominal width of the construction right-of-way, and some of the land could therefore be returned to its previous uses.

Topics related to the quality-of-life aspects of land use include visual quality, air quality, and noise and vibration, as described in other sections of this Rail Alignment EIS (see Section 4.2.3, Aesthetic Resources; Section 4.2.4, Air Quality and Climate; and Section 4.2.8, Noise and Vibration).

Railroad operations could affect the use of grazing land. For example, the presence of a rail line could require livestock on some allotments to adjust to new routes to access water and forage. Generally, livestock could learn these new routes after construction of the rail line was complete and could acclimate to and cross the rail line in most areas. The revised allotment management plans developed by the BLM and the affected permittees would be designed to address forage and water accessibility problems introduced by the presence of the rail line.

Nevada is an open-range state, where it is the responsibility of private landowners to fence their properties to prevent livestock from damaging their property and where ranchers could be compensated for the loss of their livestock killed by vehicles and trains. If DOE trains struck and killed livestock, DOE or the commercial carrier (under the Shared-Use Option) would reimburse ranchers for such losses, as per Nevada law. DOE would implement measures to prevent the congregation of livestock near the rail line, such as fencing, relocating stockwater sources further from the rail line, and preventing the ponding of water near the rail line. These measures would be site-specific, determined through coordination with permittees and the BLM.

- **Comment:** *The first sentence of this section is in stark contrast to the assertion on page 4-39 that most impact to public land use will be due to the presence of the rail.*
- **Comment:** *Railroad operations WILL affect the use of grazing land, to state otherwise marginalizes the extent of the impacts that will occur.*

Section 4.2.2.3, Page 4-63

The parallel rail alignment access roads (unpaved) could improve land access along most of the rail alignment. While most of the rail alignment would follow or be within a few kilometers of existing unpaved roads and trails that are currently open for public use, the new access roads could be of better quality in some areas than nearby existing roads, increasing the likelihood of

use. Off-road vehicle use, hunting intensity, and other recreational activities could increase along the rail alignment access roads. Improved human and vehicle access to surrounding areas could result in indirect impacts to vegetation and wildlife, as described in Section 4.2.7, Biological Resources. Recreational uses of public land along the access roads (as with other similar roads on public land) would be monitored by the BLM to ensure compliance with its land management goals, as stated in applicable BLM resource management plans. It is important to note that DOE would not maintain the access roads as public roads, except in locations where they would be used for rerouting to consolidate rail line crossings, and the Department would post signs indicating potential users would proceed on the roads at their own risk.

- **Comment:** *It makes no sense that DOE will not maintain the access road. The access road must be in good working order to allow for:*
 - *Emergency access in the event of an emergency*
 - *Access for land use and recreational activities*
 - *The road serving as a firebreak.*

Either the DOE needs to maintain the roads, or it must compensate another entity to carry out this task. Either way the DOE should be accountable for keeping the access road in working order, otherwise the assertions that the road will be used as a firebreak and to provide public access is void.

Section 4.2.2.3, Page 4-63

Impacts to land use and ownership under the Shared-Use Option would be similar to those described for the Proposed Action without shared use, with a small addition of impacts from the construction and operation of commercial sidings. Under the Shared-Use Option, commercial trains would haul a range of products to and from businesses, including stone and other nonmetallic minerals, oil and petroleum products, and nonradioactive waste materials (see Section 2.2.6.3). DOE cannot predict the exact locations of these possible commercial-use sidings, but they could include Caliente, Panaca/Bennett Pass, the Warm Springs Summit area, Tonopah, Goldfield, and the Beatty Wash/Oasis Valley area. The sidings would likely be constructed within the railroad operations right-of-way; if so, there would be no additional impacts to land use and ownership (see Figure 2-54). Because only approximately 1 percent of land within the rail line construction right-of-way is privately owned, any commercial sidings or commercial facilities that would be outside the construction right-of-way would likely be on BLM-administered land, and implemented under a separate BLM-issued right-of-way.

- **Comment:** *Impacts will also be greater due to increased train traffic and increased train speeds, primarily in terms of wildlife and livestock impacts due to collisions.*

Section 4.2.2.5, Page 4-63 to 5

The Caliente rail alignment construction right-of-way would occupy between 153 and 162 square kilometers (37,900 and 40,100 acres) of land. Most of the land would be public land, although DOE would need to gain access to up to 1.25 square kilometers (310 acres) of private land for the rail alignment and another possible 0.93 square kilometer (230 acres) required to accommodate support facilities. This amount of private land would be very small (about 1 percent) compared to the total amount of land that would be required for the project.

The Caliente rail alignment would not displace existing or planned land uses over a substantial area, nor would it substantially conflict with applicable land-use plans or goals. A portion of the Eccles alternative segment and common segment 1 would cross through Areas of Critical Environmental Concern under the Ely Proposed Resource Management Plan. These areas were

designated after the issuance of the Draft Rail Alignment EIS and would be finalized after further study by the BLM. In consultation with the BLM, DOE would conduct pre-construction surveys and implement avoidance, minimization, and mitigation strategies to protect the resource values of these areas. If the BLM finds that through these strategies there would be minimal conflict with the areas' resource values, then the right-of-way could be authorized.

The areas with the highest densities of private land the rail alignment would cross are near Caliente and Goldfield. If DOE selected the Caliente alternative segment, some structures at the existing Union Pacific Railroad train yard and three structures or residences along the former Pioche and Prince Branchline would need to be demolished or relocated. This alternative segment would also occupy portions of the Caliente Hot Springs Motel access road and parking lot. DOE would work with the property owner to develop specific measures that could avoid, reduce, or mitigate impacts to this property, including measures to maintain access to the motel during construction. Finally, DOE could also negotiate compensation with the landowner if the design, construction, or operations accommodations were not sufficient to mitigate the impacts. Alternative segments near Goldfield would cross private (although vacant) land, including patented mining claims and state and county land. DOE would work with affected landowners to develop specific measures to avoid, reduce, or mitigate impacts to private land as described in Chapter 7, Best Management Practices and Mitigation.

DOE developed the Caliente rail alignment to avoid American Indian lands. The closest rail line segment, common segment 5, would be approximately 3 kilometers (2 miles) east of the Timbisha Shoshone Trust Lands near Scotty's Junction. The Caliente rail alignment would use up to 161.9 square kilometers (40,000 acres) of BLM-administered land. Some of the rail line segments would pass through lands the BLM has identified for potential disposal (sale). However, the land withdrawals already in place for the rail alignment and the potential use by another federal agency would take precedence over disposal actions that could affect the project.

Where the rail line segments and facilities would cross active grazing allotments on BLM-administered land, some grazing land would be lost or may be isolated by the rail line. Assuming all the vegetation in the construction right-of-way or support facilities was unavailable for forage, the Caliente rail alignment would directly result in less than a 1-percent loss of animal unit months across all affected allotments. The greatest percentage loss of animal unit months for any one grazing allotment would occur on the Black Canyon Allotment under common segment 1 (4.6-percent loss). Of the potential quarries, quarry CA-8B would result in the highest percentage loss of animal unit months (6.6 percent on the Highway Allotment). While DOE would coordinate with permittees and the BLM to institute mitigation measures and allotment management plans to minimize impacts associated with the rail line, additional animal unit months could be lost due to the inaccessibility of forage where the rail line acts as a barrier.

The presence of a rail line and the implementation of revised allotment management plans could require livestock on some allotments to adjust to new routes to access water and forage. Generally, livestock could learn these new routes and acclimate to and cross the rail line in most areas. DOE would provide temporary feed, water, and assistance in livestock movement during rail line construction to assist with the adjustment of cattle to the presence of the rail line. The rail line could affect ranching operations because livestock could be struck by passing trains. DOE would coordinate with permittees and the BLM to provide mitigation measures to prevent congregation of livestock near the rail line. DOE or the railroad's commercial operator (under the Shared-Use Option) would reimburse ranchers for such losses, as appropriate. DOE would consult with permittees and the BLM to determine where fences should be restored or constructed

on specific allotments to facilitate grazing operations, while minimizing impacts to wildlife movement.

Construction wells located on grazing allotments outside the construction right-of-way would have small and temporary impacts in terms of loss of grazing area. Once each well was drilled, DOE would reclaim the site in accordance with DOE and BLM requirements. The Department would construct a 10- to 15- centimeter (4- to 6-inch)-diameter temporary pipeline on top of the ground along access roads to transport water to the construction right-of-way. Wells not needed for railroad operations would be properly abandoned in compliance with State of Nevada regulations, and sites and access roads would be reclaimed (DIRS 180922-Nevada Rail Partners 2007, p. 4-12).

- *Comment: This section does not describe the impacts that would occur to base property that is essential for grazing permits. This is a major omission.*
- *Comment: The DOE does not address the increased overhead cost that will be borne by ranchers to acclimate their cattle to the presence of the rail line, nor the costs associated with the need to reconfigure their allotments.*

Section 4.2.2.5, Page 4-65 to 6

Construction and operation of a railroad along the Caliente rail alignment could result in the following general impacts to land use and ownership along the entire alignment:

- Changes in land uses on private and public lands within the construction and operations rights-of-way
- Possible increase in livestock mortality (collisions with trains)
- Reduced animal unit months on affected grazing allotments as determined by the BLM
- Reduction in land available for BLM disposal
- Alteration of past routes for BLM-permitted off-highway vehicle events
- Possible expansion of mining, manufacturing, industrial, or commercial land uses under the Shared-Use Option

Tables 4-23 through 4-30 summarize potential impacts to land use and ownership for each rail line segment and construction and operations support facility. As discussed in Section 4.2.2.2.3.2, the loss of animal unit months reflected in these tables are potential direct losses within the construction right-of-way due to possible vegetation loss. Potential changes to permitted animal unit months for each grazing allotment due to the presence of the rail line would be influenced by the possible isolation of forage where the rail line acts as a barrier, the degree to which mitigation measures can offset adverse impacts, and the degree to which revised allotment management plans can be implemented to sustain or improve grazing operations.

- *Comment: Again, DOE simply estimates the lost AUMs as the primary impacts. The table does not include any range improvements, save the number of pipelines crossed. Furthermore, there is no mention as to the amount of base properties that will be impacted.*

N-4 Grazing

FEIS Comments

August 7, 2008

Section 5.1.1, Page 5-1:

DOE considered regions of influence in this cumulative impact analysis that extend beyond most of the resource-specific regions of influence (for example, width of the construction right-of-way) described in Chapters 3 and 4 of this Rail Alignment EIS. For the Caliente rail alignment, the region of influence for cumulative impacts consists of Lincoln, Nye, and Esmeralda Counties (referred to as the Caliente region of influence in this chapter). For the Mina rail alignment, the region of influence for cumulative impacts consists of the Walker River Paiute Reservation, and Lyon, Mineral, Esmeralda, and Nye Counties (referred to as the Mina region of influence in this chapter). Clark, Churchill, and Washoe Counties are generally excluded from the cumulative impacts regions of influence except as needed to maintain consistency with individual resource analyses in Chapters 3 and 4 of this Rail Alignment EIS, such as socioeconomics or air quality. Because the cumulative impacts regions of influence for the Caliente and Mina rail alignment are different for much of their routes, some of the past, present, and reasonably foreseeable activities and projects affecting cumulative impacts for each rail alignment are also different, as described in this chapter.

- *Comment: The DOE completely changes the region of influence for this analysis. The region of influence should remain the same for all analyses. By expanding the region of influence the DOE has essentially diluted the cumulative effects within the project area, for the sake of describing the impacts to entire counties. This makes no logical sense. A cumulative analysis at a county level is appropriate, but there also needs to be an analysis of the cumulative effects within the actual project area and this chapter does not contain that.*

Section 5.2, Page 5-4:

Sections 5.2.1 and 5.2.2 summarize the projects and activities considered in the Caliente rail alignment cumulative impacts analysis. Figure 5-1 shows the locations of these major projects and activities, including:

1. Southwest Intertie Project
2. Southern Nevada Water Authority Groundwater Development Project
3. Nevada Test and Training Range
4. Timbisha Shoshone Trust Lands
5. Yucca Mountain Repository
6. Nevada Test Site
7. Coyote Springs Development Project
8. Union Pacific Railroad Operations
9. Toquop Energy Project Site
10. BLM Disposal of Public Land – Lincoln County Land Sales
11. Department of Justice Detention Facility

- **Comment:** *There are no renewable energy projects included on this list. Such projects that are in the approval and planning stages could have significant impacts to land use – grazing in particular, ground and surface water resources, and biological resources.*
- **Comment:** *The Silver State OHV Trail should also be included in this list, as it is within the actual project area.*

Section 5.2.2.2, Page 5-24:

Grazing is a significant land use on public lands in and around the proposed Caliente rail alignment. Section 5.2.1 describes existing and proposed projects that could impact land use in the Caliente region of influence.

The proposed Caliente rail alignment would disturb up to 162 square kilometers (40,000 acres) of BLM land, most of which would be within the construction right-of-way. Therefore, the proposed Caliente rail alignment would directly affect about 0.3 percent of the BLM-administered land in Lincoln, Nye, and Esmeralda Counties. This disturbance would include construction and operation of the proposed rail line, facilities, quarries, water wells, construction camps, and access roads.

- **Comment:** *Simply presenting the number of acres of BLM-administered land in the three counties dilutes and marginalizes the impacts of the rail and the cumulative impacts of land uses such as grazing. Some grazing allotments will be impacted by multiple projects listed in Section 5.2.*
- **Comment:** *The region of influence for impacts to grazing should be the impacted allotments. The analysis conducted in Chapter 4 was too narrow, and considering only the construction right-of-way and the analysis conducted in this Chapter is too broad. This does nothing to address the cumulative impacts to the grazing permittees within the project area.*

Section 5.2.2.2.1, Page 5-24 to 27:

BLM land-management goals allow for management of the land for special purposes (protection of cultural resources, wilderness designations or study areas, protection of wildlife habitat, or visual resource management), but with increasing development in the Caliente region of influence there are more occurrences of land-use conflicts. As noted in Chapter 4 of this Rail Alignment EIS, construction and operation of a railroad along the Caliente rail alignment would have potential direct and indirect conflicts with grazing uses, access to grazing infrastructure, access to mineral resources, recreational resources, other linear rights-of-way (for example, utility corridors), and wildlife movement patterns in some locations. Potential impacts from the proposed railroad outside the construction right-of-way would include fragmentation of grazing allotments, particularly where the rail line would act as a barrier and “isolate” a portion of land. However, DOE would work with affected grazing permittees and the BLM to mitigate adverse impacts to the land both inside and outside the construction right-of-way. As described in Chapter 7, Best Management Practices and Mitigation, DOE would work with the permittees and the BLM to develop interim grazing management plans and allotment management plans, which could include compensation or range improvements for the direct loss of crops, pastures, rangelands, or reductions in animal unit months.

Between 1980 and 2004, there has been an almost 30 percent reduction in authorized animal unit months state-wide. Table 5-3 illustrates the animal unit month reductions in BLM districts between 1960 and 2004. Within the BLM Ely District over that period, animal unit months

declined approximately 13 percent. The Tonopah District experienced the largest decline over that period, at 34 percent. A 2001 study of grazing trends on federal lands in Nevada revealed that one-third of animal unit month reductions were the result of permit violations or for resource protection reasons. These reasons included: trespass violations, non-payment, exceeding standards or guidelines, carrying capacity estimates, threatened and endangered species conflicts, wildlife conflicts, and wild horse competition (DIRS 176949-Resource Concepts 2001, p. 60). Other reasons for reductions include transfer of ownership and changes in class of livestock grazed.

Table 5-3. Animal unit month reductions in the State of Nevada and the Ely, Carson City and Tonopah BLM Districts.^a

Location	1960 levels ^b	1980 levels ^b	1999 levels ^b	2004 levels ^c	Percent reduction, 1980-2004	Percent reduction, 1960-2004
State of Nevada (all federal land)	Not available	3,020,399	2,546,846	2,129,485	29.5	Not available
Ely District	605,962	598,675	502,280	523,504	12.6	13.6
Carson City District	197,409	193,665	160,841	171,291	11.6	13.2
Tonopah District	198,208	198,228	134,120	130,435	34.2	34.2

a. The proposed railroad would not affect active grazing allotments in the Las Vegas BLM District and therefore, cumulative impacts in that district were not evaluated.

b. Source: Grazing Statistics Report and Economic Analysis for Federal Lands in Nevada (DIRS 176949-Resource Concepts 2001, p. 94).

c. Source: "Federal Expenditures and Receipts" (DIRS 185482-U.S. G.A.O. 2005, p. 70).

Wildland fire has also contributed to losses in animal unit months in Nevada. For example, the 6,500-square-kilometer (1.6 million-acre) fire of 1999 contributed to the loss of over 133,000 animal unit months across five of Nevada's northern counties (DIRS 185481-Riggs, Brazeale, and Myer 2001, pp. 39 and 40). The losses due to fires may be considered temporary in the sense that plant life would eventually recover naturally or be replanted, although the process of restoring land to its former grazing capacity could take years.

While the number of animal unit months authorized in the state has declined over time, livestock grazing is an important land use both historically and socioeconomically to Nevada that will continue on federal lands. Through their respective resource management plans, each BLM district office aims to manage the land to allow grazing in a manner and at levels consistent with multiple use, sustained yield and the standards for rangeland health. As illustrated in Table 5-3, although there are decreases in animal unit months since 1980 levels, there was an increase between 1999 and 2004 in the Ely District. The authorized grazing levels in the Caliente region of influence may continue to fluctuate based on a variety of factors, including: BLM management goals and actions, permittee decisions, wildlife levels and use, and even natural processes, like rainfall levels, spread of invasive species, and wildland fire.

The proposed railroad could reduce animal unit months by less than 1 percent across all affected allotments in the Caliente region of influence (maximum of 974 animal unit months lost over 20 active allotments). Land disturbance from other proposed rights-of-way or projects on federal lands could also reduce animal unit months, although with the use of best management practices, these reductions would be minimal.

- **Comment:** *It is unclear what DOE is attempting to point out with the losses of AUMs statewide over time, as this information is inconsequential to this project. Of greater*

importance to this EIS is what impact the railroad will have on permits within the construction area and on important economic use of the land.

- ***Comment:*** *The wildfire statistics from the 1999 fires forward do relate that while wildfires have consumed a good part of the state over the past 10 years, the size and number of fires are growing and that has resulted in a significant loss of grazing privileges. The construction and operation of the rail will result in the increased probability of a wildfire start and the increased probability of introduction and spread of noxious and invasive weeds. However, this potential major impact is not analyzed in this section, nor is it analyzed anywhere else within the EIS.*
- ***Comment:*** *To assume a less than 1 percent loss of animal unit months of grazing as a result of the proposed railroad is a far reach. It is likely under the proposed reclamation that the disturbed areas will convert to invasive species as a result of the DOE failure to commit to temporary irrigation for stand establishment of seeded species. The impact of increased invasive species could have far reaching implications over time including more wildfires resulting in allotment wide, or partial allotment closures for range recovery. Fire closures can financially cripple permittees, as alternative forage opportunities are sparse in the region. It takes decades for burned areas to return to pre-burned conditions, if it ever happens. In the meantime AUMs are often deferred, leaving permittees with no place to graze their cattle for several years, resulting in significant overhead costs that are oftentimes never recovered.*
- ***Comment:*** *The BLM understandably does not utilize or recommend temporary irrigation with their seeding standards, as they mostly seed extensive burn areas and are dependant upon the existing climate. Their success rate with seedings is low in Nevada, due in part to invasive species competition for very limited moisture. Additionally, BLM seed mixes show an absence of rapid establishing adapted species that can compete with invasive species. Therefore, success of invasive species only help to promulgate more fires over a wider region.*
- ***Comment:*** *Many of the allotments will be heavily impacted with respect to the manner that livestock are presently run and conditioned to the terrain and forage. Increased costs for management due to the railroad could potentially tip the scale for some operators and force them out of business.*

The Southwest Intertie Project would require a new substation and transmission line interconnections that would result in the permanent displacement of 0.31 square kilometers (77 acres) on the 730-square kilometer (180,000-acre) Thirty Mile Spring BLM grazing allotment in the Ely BLM District. This displacement could result in the potential loss of 4 animal unit months on that allotment (0.04 percent of the allotment's 8,405 authorized animal unit months).

The Toquop Energy Project (under the Proposed Action) within the Ely BLM District would temporarily disturb 0.36 square kilometers (90 acres) within the Garden Springs and Gourd Springs allotments for installation of the water line, but would not impact to management of livestock because best management practices would be followed. The project's well sites, monitoring well, and storage tank would remove up to 0.07 square kilometers (17 acres) from current livestock use, affecting a portion of the White Rock, Garden Springs, Summit Spring and Snow Springs allotments, depending on the location of the well sites (DIRS 185338-BLM 2007, p. 4-62). However, this disturbance would result in a loss of animal unit months of 2 or less (regardless of the allotment affected) as shown in Table 5-4.

Table 5-4. Potential animal unit months affected by the Toquop Energy Project.^a

Grazing allotment	Allotment acreage	Authorized animal unit months	Maximum animal unit month loss	Percent loss
White Rock	32,916	2,880	2	0.1
Garden Spring	38,823	2,809	2	0.1
Summit Spring	18,035	715	1	0.1
Snow Springs	44,042	3,567	2	0.1

a. Source: DIRS 184767-BLM 2007, Tables 2.4-15 and 2.4.-16.

Under the Draft Programmatic Environmental Impact Statement of the Designation of Energy Corridors in the 11 Western States (DOE/EIS-0386), corridors would be identified and designated as necessary and to expedite applications to construct or modify oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities. Routes studied in the energy corridor EIS would cross BLM-managed lands within the Ely and Tonopah Districts. As a programmatic analysis, potential losses in animal unit months along proposed corridors in Nevada or within the BLM districts crossed by the proposed rail corridors was not quantified. Furthermore, additional rights-of-way for electric lines associated with solar and wind energy projects could also disturb forage within grazing allotments. However, corridor development for electric transmission lines and buried pipelines would be generally compatible with many land uses, including livestock grazing. Nevertheless, impacts could result in areas where permanent loss of forage occurs, although these impacts could be avoided or minimized through coordination with BLM on best management practices and mitigation measures.

Cumulatively, the proposed railroad, the Southwest Intertie Project and the Toquop Energy Project would reduce animal unit months by less than 1.5 percent in the Caliente region of influence. The proposed Coyote Springs Development Project would be located on private land that is not used for grazing, and would not affect levels of authorized animal unit months in the study area. Similarly, existing activities and proposed projects on other federally-operated land in the study area, like the Nevada Test Site and Nevada Test and Training Range, do not have active grazing programs and would not affect grazing levels in the study area in the foreseeable future.

- ***Comment:** Impacts on grazing cannot be analyzed for a project such as the proposed railroad by merely calculating vegetation losses beneath the right-of-way. The number can appear insignificant when compared to the whole; however, each allotment can incur AUM losses differently. If management costs are elevated greatly as a result of the railroad, some operators could be put out of business. Allotment specific analysis, and an evaluation of the overhead costs associated with altered allotments due to construction and operation of the rail will be required to determine real impacts.*
- ***Comment:** The Toquop Energy Project isn't even within the project area. Why is the DOE analyzing this project and not a project such as the Silver State OHV Trail that is within the project area?*

Section 5.2.2.2.8, Page 5-30:

Although there are a large number of existing and proposed projects in the Caliente region of influence, there would not be any major land use conflicts, nor would there be a major change in the balance of land use types within the Caliente region of influence. Because the majority of the land in the region of influence is managed by the BLM, protective measures and BLM management actions would allow for the continuation of grazing as a significant land use, as well as the continuation of recreation, rights-of-way, energy and mineral development projects. The

cumulative impacts on local-scale private land use and ownership from the proposed railroad and other existing and reasonably foreseeable projects could be moderate to large, particularly in the City of Caliente and the Town of Goldfield. Cumulative impacts of reasonably foreseeable projects and rights-of-way on public land would be small on a regional scale, as they would only affect a small percentage of public land. However, DOE is committed to working with the BLM and the landowners to ensure that impacts to both public and private land uses are minimized.

- *Comment: For ranching interests, trains passing within sight and sound of ranch headquarters constitute a major land use conflict. The same is true when trains pass through an allotment and create significant disruption to what was a quiet, lifestyle under mostly solitude conditions.*

Section 5.2.2.6, Page 5-30:

Increasing urbanization and other development in the Caliente region of influence presents the challenge of matching water supply with water demand. Because water availability is a potential resource constraint in the Caliente region of influence over time, water demand can be both competitive among potential users and controversial among users and the general public. To allocate water uses, the State of Nevada uses a water-permit application process coordinated by the State Engineer. Once granted, water rights in Nevada have the standing of both real and personal property. It is possible to buy or sell water rights and change the water's point of diversion, manner of use, and place of use by filing the appropriate application with the State Engineer. Overall, because the water permitting and allocation process considers the broad range of factors noted above, the process serves as a way to manage potential cumulative impacts of water demand and use within each basin.

- *Comment: The DOE is taking a pass on this analysis. It cannot simply be assumed that because there is a process in place that cumulative impacts will be properly managed. Many hydrologic basins are already over allocated, and there is no way to know what the annual recharge is going to be from year to year.*
- *Comment: DOE did not account for climatic variability. If the DOE's construction phase occurs during a drought cycle it will have a much more profound effect on groundwater than if the DOE's construction phase occurs during a wet cycle.*

Section 5.2.2.6, Page 5-37:

A number of scenarios have been developed to assess the potential effects of the proposed railroad's contribution to cumulative water demand in the Caliente region of influence. The assumption used for developing these scenarios is that proposed railroad construction and operations water demands would be met through installing and withdrawing groundwater from new wells. Pumping in individual wells would occur primarily over 9 months to support construction, over 2 to 3 years at quarry sites, and over the rail system operations period for the rail facilities. Total water withdrawals associated with the proposed railroad could substantially exceed annual perennial yield values for hydrographic areas 145 and 229, and could represent approximately 99 percent of the annual perennial yield in hydrographic area 227A. In other areas, water withdrawals associated with the railroad could range from less than 1 percent to as high as 57 percent of the annual perennial yield value.

- *Comment: What is the basis for asserting that the pumping in an individual well would only occur over a 9-month cycle? Until a site is restored it will have to be watered for dust suppression. The construction cycle is expected to take a minimum of*

four years, and up to ten years depending on funding. This assumption is a gross oversimplification.

Section 5.2.2.7.1, Page 5-39 and 40:

The past, present, and reasonably foreseeable future actions in the Caliente region of influence would result in noticeable cumulative land disturbance. Existing activities at the Nevada Test and Training Range and the Nevada Test Site have already resulted in land disturbance, and proposed projects such as the various proposed rights-of-way and the Coyote Springs development project would continue this trend. Such land disturbances result in altered natural biological and ecological conditions, and directly serve to reduce the amount of natural land available as habitat and open space.

The primary adverse construction-related impacts to vegetation communities from ground disturbance are the physical destruction or removal of the vegetation, and the permanent or temporary removal or compaction of the topsoil or other growing medium for the plants. These effects would occur with any major activity resulting in ground disturbance, including the proposed railroad. As more activity occurs, the cumulative loss of vegetative communities and associated habitats would increase. Management of these effects would typically be considered in project planning and mitigation, including projects on BLM-administered land. Much of the emphasis in land management in the Caliente region of influence concerns the maintenance or reconstruction of healthy habitats, particularly in BLM-designated Areas of Critical Environmental Concern.

Habitat destruction leads to direct impacts such as wildlife injury and mortality, alteration of behavior and movement patterns, and the indirect impacts of reduced vegetative health, reduced biological diversity, and locally degraded ecological function. When extensive habitat fragmentation occurs, the individuals or populations of particular species may have difficulty surviving. In larger ecosystems where diversity and spatial heterogeneity still exist with fragmentation, there is evidence that fragmentation may have negative effects on some species of wildlife, but the issue is less critical at these larger scales. Habitat destruction arises from a number of sources, including projects that involve land disturbance, and land-management actions including wild horse and burro management. Though any project that causes disturbance of vegetation contributes to habitat fragmentation, linear projects that impose any degree of impediment to movements, like the proposed railroad, contribute to the potential effects. This effect is different for all species depending on habitat needs, migratory patterns, and adaptability. A number of utility and water rights-of-way are anticipated in the eastern portion of the proposed Caliente rail alignment, with many of these crossing the Caliente rail alignment.

As discussed in Chapter 7, measures to avoid, minimize, or otherwise reduce impacts generally include actions to reduce or avoid habitat fragmentation and loss. Such actions would include minimizing land disturbance, using existing roads, interim reclamation, combined roads/utility rights-of-way for pipelines and cables, noise reduction, centralization of facilities, and employee training and education.

In areas proposed for railroad operations purposes, the impacts to vegetation would typically be moderate in scope, and cumulatively add to habitat loss and fragmentation. In areas slated for short-term use during construction, such as construction camps, revegetation and reclamation efforts would result in replacement of topsoil, reseeding of native species, monitoring for success, and eventual return of a native vegetation community somewhat comparable to predisturbance conditions. Displacement of species from construction and operations would be short term.

- **Comment:** *There is no mention here of invasive species that are certain to be a major adverse impact to any and all areas of disturbance. Given that DOE does not plan to provide temporary irrigation to reestablish perennial seeded species, it is certain that invasive species will prevail over the disturbed sites, spread to surrounding rangelands, and also enhance the risk of wildfires.*
- **Comment:** *Reseeding of native species alone will greatly increase the chances of seeding failure. The BLM Ely RMP clearly denotes the use of natives and other adapted species for reclamation seedings. Researchers have emphasized inclusion of adapted introduced, or exotic species in seed mixes for decades in the desert regions (see Great Basin Wildfire Forum –The Search For Solutions, 2008, UNR Nevada Agricultural Experiment Station). In addition, absent temporary irrigation for stand establishment, the chances of seeding failure increase significantly. The most limiting factor to plant growth is moisture. Precipitation along the proposed route is among the lowest in Nevada, a state recognized as the most arid in the nation. To have high expectations of success under these arid conditions shows inexperience in desert reclamation. Seeding research should commence as soon as possible with legitimate research institutions and seedings tested on all of the prevalent soil types along the rail corridor. It will be a mammoth task to test and screen species suitable for use along the rail corridor. In addition, availability of selected seed could become a serious issue at the time of construction unless planned for early in the process. Desert species are not readily abundant in supply, therefore contract growing may become a necessity at some point.*

Section 5.2.2.7.5, Page 5-43:

The cumulative impacts to biological resources from the proposed railroad and other existing and reasonably foreseeable projects could be small to moderate. As described above and in Chapter 7, mitigation measures would be implemented during the construction and operations phases to address impacts related to habitat loss and fragmentation, the introduction and spread of invasive species and noxious weeds, and the increased likelihood of wildfires. All existing and proposed projects, federal, state, or private, are subject to regulations that protect special status species, and protective habitat conservation plans are already underway for many of the proposed projects in the Caliente region of influence. The BLM manages most of the lands in the Caliente region of influence and has programs in place to minimize impacts to biological resources.

- **Comment:** *In reality the impacts to biological resources from the proposed railroad could be, and likely will be viewed by many as moderate to high rather than small to moderate as denoted above. A recent wildfire in the Caliente area consumed in excess of 700,000 acres before being controlled. Impacts to biological resources, watershed, and grazing were significant. This project has a potential to exacerbate conditions that lead to wildfires of this nature, and as such cumulative impacts could be significant. It is not a matter of if, but rather when a fire will occur that is potentially railroad related or as a result of other construction activities in the region. There is no protection for special status species when fire occurs, regardless of what BLM has in place for protection purposes.*

N-4 Grazing

FEIS Comments

August 7, 2008

Section 7, Pages 7-1 to 2:

As described in Chapter 2 and shown in Figure 7-1, early engineering and site evaluation and planning undertaken during preparation of this Rail Alignment EIS represent a preliminary step toward avoiding, minimizing, or otherwise reducing the environmental impacts of the Proposed Action.

In addition, DOE recognizes that it must also comply with applicable environmental requirements (see Chapter 6) during construction and operation of the railroad. The Department has incorporated a variety of preliminary best management practices to comply with the requirements. These best management practices have been incorporated into the *Proposed Action* and would further reduce the environmental impacts of constructing and operating the proposed *railroad*.

Lastly, DOE also has identified, preliminarily, various *mitigation* measures that would further avoid, minimize, rectify, reduce, or compensate for any remaining adverse environmental impacts. DOE regards mitigation measures as activities or actions that would be above and beyond the best management practices.

- *Comment: Snow fencing (bright orange Carsonite fencing) the limits of construction disturbance is the only way to effectively minimize environmental impacts. Maps, flagging and other methods have been proven over and over to be ineffective with construction crews. Leveling a fence is basis for a severe penalty and helps to rapidly educate equipment operators who typically blade off all vegetation as a starting point. There should also be repercussions for contractors and/or operators who work outside of the limits of construction.*
- *Comment: This is an important differentiation, as BMPs don't necessarily imply or serve as mitigation. It is good to treat these separately. Some BMPs could be included as a part of mitigation, but mitigation should be designed as a site-specific action.*

Section 7.1, Page 7-2:

Policy: DOE's policy is to work closely with directly affected parties to ensure, to the extent practicable, that adverse environmental impacts are avoided, and if unavoidable, minimized or reduced. In those instances in which Departmental efforts to minimize or reduce adverse impacts are insufficient, directly affected parties would be compensated.

- *Comment: Who determines what actions are beyond "the extent practicable?" Who determines if the mitigation is sufficient, and the proper mitigation for actions that aren't? What constitutes compensation and who is the ultimate decision maker in this regard? Is there an appeal process to a higher authority if terms are unacceptable?*
- *Comment: The DOE must lay out a means by which disputed claims for proper mitigation efforts and/or compensation can be resolved.*

Section 7.1, Pages 7-2 to 3:

DOE views the preliminary best management practices and mitigation measures discussed in Sections 7.1 and 7.2, respectively, as representing the initial step in a longer-term, iterative process to further develop, detail, and eventually implement these practices and measures. DOE considers the process to be "longer-

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term” in that the preliminary best management practices and mitigation measures identified in this Rail Alignment EIS would be further developed and detailed through (1) the regulatory compliance process, such as that associated with DOE’s right-of-way application with the Bureau of Land Management (BLM) or DOE’s application for a certificate of public convenience and necessity with the Surface Transportation Board (STB); (2) development of the final design and associated specifications, such as that associated with the selection of specific seed mixes and application techniques for reclaiming disturbed land; and (3) consultation with directly affected parties, such as grazing permittees and local communities through which the rail line would pass. The process is iterative in that DOE intends to consult with directly affected parties as the practices and measures advance from the conceptual to the more detailed, as engineering of the proposed rail line advances from preliminary through final design, and during implementation and monitoring of their effectiveness (see Figure 7-2).

This process is based, in part, on the use of an adaptive management approach described herein as – consider the magnitude of potential impacts, mitigate, implement, monitor, and adapt. Using this approach, DOE can respond to unanticipated changes in local conditions or subsequently developed information, for example, and thus make cost-effective adjustments to its best management practices and mitigation measures, as necessary.

In undertaking this process, DOE would:

1. Consider the magnitude of the potential adverse environmental impacts, based on the environmental conditions (affected environment), and analyses of this Rail Alignment EIS.
 2. Develop detailed best management practices and mitigation measures in response to these adverse impacts. In this step, DOE also would identify the desired outcome of these practices and measures, and identify associated performance measures by which DOE could determine the effectiveness of such practices and measures during their implementation.
 3. Identify monitoring protocols to determine the effectiveness of these practices and measures given the desired outcome. Prior to developing these protocols, DOE would undertake additional studies to further assess the then-current baseline conditions (affected environment), as appropriate. The protocols would be developed to distinguish between changes in conditions due to DOE’s action and those from other causes.
 4. Consider the cost of implementation, as well as monitoring, when developing the final practices and mitigation measures.
 5. Determine the need to adapt or modify the best management practices and mitigation measures, based on performance (outcome) monitoring, after such practices and measures have been implemented.
 6. Determine the extent to which the regulatory community and other directly affected parties find such mitigation measures, and their associated monitoring protocols and performance measures to be acceptable (see Section 7.1.1 below).
- **Comment:** *Adaptive management approach is good, but it also requires close cooperation and coordination with the affected parties (i.e. permittees). It is imperative that the DOE establish a communications network that can relay any changes to BMPs and mitigation actions per the adaptive approach. In turn, this network must allow for feedback from the affected parties in a timely manner.*
 - **Comment:** *Even the DOE admits that many of the impacts stated within this document are preliminary. As such, it is imperative to have a system in place that allows for adjustment of mitigation measures in response to more accurately quantifying impacts.*

- **Comment:** *It is imperative that DOE initiate field and bench research on the predominant soil types, to ascertain proper plant species selection, success in establishment, cultural practices needed for establishment, supplemental irrigation requirements and other parameters. Seeding could potentially be the most challenging and even costly endeavor undertaken toward mitigation.*

Section 7.1, Page 7-3:

The BLM regulations (43 Code of Federal Regulations [CFR] 2305.12) require a grantee (DOE) to comply with all stipulations that the BLM may require in granting a right-of-way. Further, the BLM's National Environmental Policy Act (NEPA) handbook (DIRS 182299-BLM 1988, all) indicates that "stipulations [mitigation measures] which will become part of the Bureau's authorization should be attached to the ROD [Record of Decision] or incorporated by reference." Accordingly, as part of the right-of-way application process, DOE has provided the preliminary practices and measures shown in Tables 7-1 and 7-2 to the BLM to (1) determine if these practices and measures are consistent with the BLM's policies and approaches, and (2) agree to a framework on how to implement these practices and measures. Based on further consultation with the BLM, these practices and measures may need to be revised and the right-of-way application amended.

- **Comment:** *BLM should be furnished with all comments provided on the Draft EIS and the Final EIS, so that their analysis and review includes the comments from the directly affected parties.*

Section 7.1, Pages 7-3 to 4:

The ICC Termination Act of 1995 (49 United States Code [U.S.C.] 10901(c)) authorizes the STB to issue a certificate for the construction and operation of a railroad if it is consistent with the public convenience and necessity. This Act further provides that the STB may approve any application as filed (or with modifications), and may require compliance with conditions that are necessary to the public interest. The STB typically requires mitigation measures (conditions) when issuing certificates for the construction and operation of a railroad. DOE has provided the preliminary practices and measures shown in Tables 7-1 and 7-2 to the STB to facilitate their review of DOE's application, and to determine if these practices and measures are consistent with the STB's policies and approaches.

- **Comment:** *BLM should be furnished with all comments provided on the Draft EIS and the Final EIS, so that their analysis and review includes the comments from the directly affected parties.*

Section 7.2, Page 7-5:

The Department would undertake this mitigation process in consultation with federal, state, and local regulatory authorities having jurisdiction over the construction and operation of the railroad, and in consultation with directly affected parties. To that end, DOE is proposing to charter one or more Mitigation Advisory Boards, each to be led by the governmental entities through which the rail line would pass, to provide independent advice and recommendations to assist DOE, the BLM, and the STB in developing, implementing, and monitoring best management practices and mitigation measures during the construction and operation of the railroad. DOE would determine in the future the exact construction of the boards and the processes under which they would operate. DOE would also invite the BLM and the STB to serve as ex-officio members.

- **Comment:** *The establishment of a Mitigation Advisory Board is a positive concept; however, the functionality of the Advisory Board is only as good as who holds representation. This document and/or the ROD must include the eligible parties who may participate. The N-4 and*

N-6 State Grazing Boards should be included on this list as they represent the “affected parties” in terms of public lands grazing.

- ***Comment:** Because this process will require intensive participation over a long period of time, participating parties should be eligible for compensation for their time and travel expenses. Parties will be providing required expertise to aid DOE in carrying out appropriate mitigation efforts. This is far outside of the normal expenses typically incurred by these parties, and without compensation their participation will be an added burden.*

Section 7.1.1, Page 7-4:

As part of the Proposed Action, DOE would implement appropriate best management practices to prevent or minimize environmental impacts. Table 7-1 lists, but does not limit, such practices. Some of the preliminary best management practices listed in Table 7-1 would change depending on the requirements included in permits and ***right-of-way grants*** applicable to construction and operation of the proposed railroad, and as a result of consultations with directly affected parties. The table identifies the affected resource area(s) for each best management practice, the requirement(s) the practice would support (see Chapter 6), and the purpose of the practice.

Best management practices: Practices, techniques, methods, processes, and activities commonly accepted and used throughout the construction and railroad industries that DOE would implement as part of the Proposed Action to facilitate compliance with applicable requirements and that provide an effective and practicable means of preventing or minimizing the adverse impacts of an action on human health and the environment.

- ***Comment:** BMPs can become a cookbook approach to addressing design and construction if not carefully fitted to a specific need on a site-specific location. Care should be exercised in formulating or selecting BMPs.*

Section 7.3.1, Page 7-5:

Table 7-2 summarizes mitigation measures that DOE is considering for potential impacts along the proposed railroad. Each mitigation measure is linked to an identified potential impact, and is either location specific or global (applicable to the entire appropriate ***region of influence***), depending on the level of knowledge and degree of certainty regarding the extent, duration, and location of the potential impact. As discussed above in Section 7.1, mitigation measures would continue to evolve with project development and would change or become more specific and refined in a mitigation action plan following a Record of Decision for this Rail Alignment EIS (see Section 7.3.3). Consistent with the definition of mitigation described above, the mitigation measures identified in Table 7-2 include only those actions that would be above and beyond compliance with statutory and regulatory requirements and implementation of best management practices DOE has incorporated into the Proposed Action.

- ***Comment:** The DOE has linked their “considered” mitigation actions “identified potential impacts.” However, there is a high degree of certainty that all of the potential impacts have not been identified or accurately quantified. The mitigation process must allow for refinement of the impacts as well as the mitigation actions.*

Section 7.3.2, Page 7-5 and 6

Mitigation Process Examples The following examples are provided to demonstrate how the mitigation process would apply to directly affected parties. Example 1 shows the general process DOE and the proposed Mitigation Advisory Board(s) would follow after the identification of a potential impact by a directly affected party. This example also includes several case studies to show how DOE may respond to

specific operational impacts. Example 2 describes the mitigation process DOE would use when evaluating and addressing impacts to a particular resource area, namely, ranching and grazing. Other types of potential impacts would be handled through similar mitigation processes that would be adjusted as appropriate to address specific impacts.

Section 7.3.2, Page 7-6

Example 2: Grazing and Ranching Specific Mitigation Process	
<p>Raising Concerns Pertaining to Mitigation</p> <p><i>How would the directly affected party, such as a directly affected rancher, raise a mitigation issue to DOE?</i></p>	<p>Ranchers who would be impacted by DOE actions pertaining to construction or operation of the railroad may raise those issues with DOE. Preferably, issues should be communicated in writing and should quantify the magnitude of the impact to the extent possible. (Many ranchers have already provided input that DOE would use. Ranchers are invited to provide additional or updated input.) Ranchers would also be invited to propose mitigations or solutions to the impact.</p> <p>Ranchers with similarly situated concerns may choose to approach DOE collectively. The group may request that a concern common to several ranchers be addressed as a group mitigation and request that implementation be applied in the same manner for all ranchers.</p>
<p>Analysis of Impacts</p> <p><i>What would DOE do with mitigation issues raised by directly affected parties, such as directly affected ranchers?</i></p>	<p>For ranching and grazing matters, DOE would work with the affected ranchers, the BLM, and the Mitigation Advisory Board(s) to understand all ranching mitigation concerns, the impacts related to each concern, and how potential mitigations may be implemented. DOE would begin developing solutions for the types of concerns as part of the preliminary design work. DOE and the BLM would also work with each affected rancher to guide the development of workable mitigation measures for that rancher's unique situation. <i>As an example, where the railroad would cross an existing stock water pipeline, mitigation may include methods to maintain water to the stock during all phases of construction, building good protection for the pipeline under the railroad, and making provisions for any maintenance of the pipeline that may be needed in the future. DOE recognizes that this simple example would be expanded to include other mitigations that may be needed to effectively maintain stock along with provision of water.</i></p>
<p>Response to Mitigation Concern</p> <p><i>How would DOE communicate its intentions to directly affected parties, such as ranchers?</i></p>	<p>DOE and the BLM would discuss concerns directly with ranchers in those instances where an impact is unique to the rancher. In situations where an impact is common to many ranchers, DOE may communicate with those ranchers collectively in a public forum.</p> <p>Once DOE has studied the issue and quantified the impacts as described above, DOE would consult with the BLM and the STB, and study the issue as described above.</p> <p>The ranchers would receive a written response from DOE indicating the mitigation decision and the solution.</p> <p>DOE would implement a design solution or operating policy that is responsive to minimizing or eliminating the impact. This mitigation would be understood in the context of typical agricultural practices, it would be consistent with mitigation of similarly situated conditions on other rail projects, and would be fully compliant with the BLM applicable regulatory framework. Where a design solution is not possible to fully mitigate the impact, compensatory mitigation strategies, encouraged by Council on Environmental Quality (CEQ) regulations for implementing NEPA, would be formulated.</p>

- Comment:** *Depending on the time of year, ranchers have a limited amount of time to participate in public forums. Additionally, the remote location of many of the affected ranchers results in high travel time and costs to attend public forums. As such, ranchers should be allowed to participate through representatives of their choosing, whether it be the N-Grazing*

Boards or a private consultant. This process will result in increased overhead to ranchers who are already operating on tight financial margins. Compensation should be provided by DOE to cover the cost of involvement.

- **Comment:** *There is nothing that states how conflicts will be resolved with this system. The DOE must clarify how disputes are settled in terms of the departure between what DOE and the affected party feels is an appropriate mitigation action or compensation. The DOE is the agency that is responsible for the impacts. It is not appropriate that they have the final say in determining appropriate mitigation or compensation measures.*

Section 7.3.3, Page 7-9:

DOE regulations at 10 CFR 1021.331 require the preparation of a mitigation action plan, if DOE identifies mitigation commitments in a Record of Decision. DOE anticipates that its Record of Decision based on this Rail Alignment EIS would include a description of the process described above in Section 7., identify and commit to best management practices and mitigation measures based on those of Tables 7-1 and 7-2, commit to the preparation of a Mitigation Action Plan, and identify the extent to which all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted. The Mitigation Action Plan would contain:

- An introduction describing the basis, function, and organization of the plan
- A summary of the impacts to be mitigated
- A description of specific mitigation measures
- A description of the Mitigation Action Plan monitoring and reporting system that DOE would implement to ensure that elements of the plan were met and were effective
- A schedule for actions and identification of the responsible parties

The Mitigation Action Plan would be developed in consultation with the proposed Mitigation Advisory Board(s).

- **Comment:** *The DOE MUST commit to some level of BMPs and mitigations within the ROD, in addition to a process that includes directly affected parties. To do otherwise would be gross negligence of this NEPA process, rendering this entire document invalid.*
- **Comment:** *The summary of the impacts to be mitigated, and mitigation actions, should be open to refinement by the Mitigation Advisory Board based on the MABs local expertise and input. In addition, the adaptive management approach and changing conditions on the ground may require a shift in mitigation actions. As such, the summary of impacts and mitigation measures should be open to revision and refinement as the process moves forward.*
- **Comment:** *The DOE has done nothing to indicate the timeframe of this process. An estimated timetable of this process should be developed similar to the construction time line included in Chapter 2 of this document.*
- **Comment:** *The DOE should compensate members of the MABs for their time and travel, as they will be providing technical expertise that would otherwise require retention of professional consultants by DOE.*

Table 7.1, Page 7-14:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 1 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Physical setting best management practices</i>				
[1] Eliminate new quarry access roads by removing pavement and regrading road to original contours following construction. Restore quarry walls to a 3-to-1 grade for public safety. Revegetate remaining disturbed areas, monitor to determine whether reclamation standards are being met, and remediate sites that do not meet success criteria.	Physical Setting Biological Resources Surface-Water Resources	NAC 445 – Water Controls NAC 519A – Reclamation of Land Subject to Mining 43 CFR Part 2800 – Rights-of-Way, Principles and Procedures; Rights-of-Way Under the Federal Land Policy and Management Act and the Mineral Leasing Act	Restoration of quarry sites. Minimize erosion.	Post-construction

- **Comment (1):** All compacted areas must be ripped and raked. Placement of growth medium, such as stockpiled topsoil, and temporary irrigation will likely be required to establish new desired vegetation. Temporary BMPs will need to be installed to provide erosion control prior to establishment of new vegetation. 3:1 grades should be a maximum steepness for quarry walls.

Table 7.1, Page 7-14:

<i>Land use best management practices</i>				
[2] Obtain and comply with the terms and conditions of all right-of-way grants from the appropriate federal agency for the rail line crossing public lands prior to initiating construction activities. ^a	Land Use and Ownership	43 CFR Part 2800 – Rights-of-Way, Principles and Procedures; Rights-of-Way Under the Federal Land Policy and Management Act and the Mineral Leasing Act	Minimize impacts to public lands	Pre-construction Construction

- **Comment (2):** Compliance with right-of-way grants will be necessary during operations as well.

Table 7.1, Page 7-15:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 2 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Land use best management practices (continued)</i>				
[4] Notify potentially affected utility owners prior to construction and coordinate with the owners to avoid or minimize impacts to utilities. Consult with utility owners to design the rail line so that utilities are protected to the extent practicable during construction activities. Contact Nevada Underground Service Alert or use methods to locate and mark underground facilities prior to construction.	Land Use and Ownership Utilities, Energy, and Materials Occupational and Public Health and Safety	NAC 455 – Excavations and Demolitions	Prevent and minimize damage to utilities, disturbances to utility service, and injuries to workers.	Pre-construction Construction
[5] Develop a procedure for train workers to document the injury or death of livestock that is the direct result of construction and operations activities. The procedure would also specify payment procedures, such as how to calculate fair market value, to compensate for the loss of or injury to livestock.	Land Use and Ownership	NRS 705.150 through 705.200	Compensate for activities that result in mortality or injury to livestock.	Construction Operations

- **Comment (4):** All grazing permittees must be notified prior to construction in a similar fashion as utility owners.

- **Comment (5):** This procedure should be determined during preconstruction and should include input from the permittee. There also needs to be a mechanism to inform the permittee of any livestock injury or death.
- **Comment (5):** There is nothing in the Land Use BMPs that discusses training of construction and rail workers in prevention of livestock harassment, or proper livestock husbandry. Nor is there anything that establishes a protocol for workers who are found to be vandalizing infrastructure on public lands, leaving gates open, harassing livestock or otherwise damaging private property.

Table 7.1, Page 7-23:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 10 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Biological resources best management practices (continued)</i>				
[27] Limit the area disturbed during construction to the extent practicable. For example, limit grading activities to the area immediately under construction and limit ground disturbance to areas necessary for construction activities. Identify limits of disturbance on maps and in the field, and convey to construction personnel.	Physical Setting Surface-Water Resources Groundwater Resources Biological Resources Paleontological Resources	40 CFR Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System 10 CFR Part 1022 – Compliance with Floodplain/Wetlands Environmental Review Requirements Clean Water Act of 1977 (33 U.S.C. 1251 <i>et seq.</i>)	Minimize erosion, ground disturbance, and disturbance to sensitive environments.	Pre-construction Construction
[28] Conduct surveys of native vegetation, weeds, and soil conditions within areas to be disturbed prior to construction. Use this information to develop and implement a habitat restoration plan, which would focus on habitats that are not addressed as part of wetland mitigation (such as winterfat, sage, conifer, riparian habitats). Restoration plans would include criteria for determining whether vegetation has been successfully restored on sites.	Physical Setting Biological Resources Aesthetic Resources	50 CFR Part 402 – Interagency Cooperation – Endangered Species Act of 1973, as Amended Ely Resource Management Plan and Environmental Impact Statement (Ely RMP/Final EIS)	Minimize impacts to sensitive habitats and species. Promote effective restoration efforts.	Pre-construction Construction Post-construction
[29] Conduct surveys for the presence of sensitive wildlife species and their habitats before and during construction, as required by right-of-way permits.	Biological Resources	43 CFR Part 2800 – Rights-of-Way, Principles and Procedures; Rights-of-Way Under the Federal Land Policy and Management Act and the Mineral Leasing Act	Minimize impacts to sensitive wildlife species.	Pre-construction Construction Post-construction

- **Comment (27):** A protocol for dealing with construction workers / companies who violate construction limits should be established to serve as a deterrent for working outside of designated areas.
- **Comment (27):** Limits of construction disturbance cannot be effectively outlined on a map and experience contractor compliance. The construction footprint must be fenced with temporary fencing and stringent rules applied for violation of these limits. Everyone knows if they encounter a fence. If serious penalties are applied, workers pay attention to the boundaries and learn fast. Lacking these controls, all land becomes fair game for large equipment operators. The wider the disturbance footprint, the greater the liability for extremely difficult and costly mitigation along with the occurrence of invasive species.

- **Comment (28):** Ecological site descriptions should be incorporated into the vegetation surveys for establishing a baseline preconstruction condition as well as in development of habitat restoration plans.

Table 7.1, Page 7-24:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 11 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Biological resources best management practices</i> (continued)				
[30] Develop and implement a weed-management plan to control noxious weeds and invasive species. Survey the rail line and associated facilities for weeds as necessary and control weeds as required. The plan would meet the requirements of the BLM for monitoring and control of weeds, and DOE would consult with other directly affected parties during the development of the plan. That program will include an inventory of the alignment prior to construction, monitoring of disturbed sites and control of weeds throughout construction and operations, and reclamation of disturbed sites no longer needed for operation of the railroad. It also will include education of personnel on weed identification, the manner in which weeds spread, areas and habitats at high risk of infestation, and methods for treating infestations. Trucks and equipment arriving from other locations with known invasive vegetation problems would be inspected and cleaned. Use of approved herbicides and other pest-management techniques would be in compliance with the BLM manual. Criteria would be developed to demonstrate successful weed management.	Surface-Water Resources	NAC 555 – Control of Insects, Pests, and Noxious Weeds	Prevent introduction of and minimize adverse impacts from insects, pests, and noxious weeds.	Pre-construction
	Groundwater Resources	Executive Order 13112 – Invasive Species		Construction
	Biological Resources	Federal Insecticide, Fungicide, and Rodenticide Act of 1948 (7 U.S.C. 136 et seq.)		Operations
	Occupational and Public Health and Safety	BLM Manual 9011 – Chemical Pest Control		
[31] Remove and stockpile topsoil for application during reclamation of disturbed areas. Stabilize topsoil stockpiles to prevent erosion. If the topsoil were to be stockpiled for more than 1 year, seed with native plant species. Periodically monitor and maintain the stability of the stockpile to minimize erosion.	Physical Setting	43 CFR Part 2800 – Rights-of-Way, Principles and Procedures; Rights-of-Way Under the Federal Land Policy and Management Act and the Mineral Leasing Act	Minimize erosion and promote revegetation with native species.	Pre-construction
	Biological Resources			Construction
	Surface-Water Resources			Operations
		40 CFR Part 122 – EPA Administered Permit Programs: The National Pollutant Discharge Elimination System		

- **Comment (30):** All trucks and equipment should be inspected and cleaned.
- **Comment (31):** Native seed is costly and difficult to come by in large quantities. The seed stock required for this size of a project will drain native seed sources that may be necessary for other restoration efforts across Nevada such as wildfire restoration.
- **Comment (31):** Native species do not as a rule compete well with invasive and noxious species. Desirable adapted plant species should be considered for temporary stabilization of topsoil stockpiles as they have been proven to compete favorably with invasive and noxious species. Adapted species seed may be more readily available and cost effective.
- **Comment (31):** Lacking temporary irrigation, it will be extremely difficult to effectively establish any seeding under the natural precipitation experienced along the proposed route.

Table 7.1, Page 7-25:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 12 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Biological resources best management practices (continued)</i>				
[32] Develop and implement site-specific plans for restoring and revegetating disturbed areas. Those plans will meet the requirements of the BLM and will be developed in consultation with other directly affected parties. The plans will include quantitative criteria for determining whether vegetation has been successfully restored. Disturbed areas not required for operation of the rail line would be revegetated with native species. Steep slopes may be covered with angular rock fragments to prevent erosion. Weed-free straw and mulch would be used for revegetation and restoration activities. To the extent practicable, all stream/wash crossing points would be returned to their pre-construction contours and reseeded or replanted with native species immediately following construction. If weather or season precludes the prompt reestablishment of vegetation, measures such as mulching or control blankets would be used to prevent erosion until reseeded can be completed. Soil and vegetation would be monitored after reclamation and sites experiencing soil erosion or not meeting the planned success criteria would be remediated by reseeded or other appropriate methods.	Physical Setting	43 CFR Part 2800 – Rights-of-Way, Principles and Procedures; Rights-of-Way Under the Federal Land Policy and Management Act and the Mineral Leasing Act The Fish and Wildlife Coordination Act of 1934 (16 U.S.C 661 through 666c) Endangered Species Act of 1973, as Amended (16 U.S.C. 1531 <i>et seq.</i>) Executive Order 13112 – <i>Invasive Species</i>	Prevent long-term loss of and damage to wildlife resources.	Pre-construction
	Aesthetic Resources		Prevent introduction of invasive or exotic species.	Construction
	Biological Resources		Reduce the visual scope of disturbed areas.	Post-construction
	Surface-Water Resources			

- **Comment (32):** *The DOE must use ecological site descriptions to help guide development of site-specific plans, and not limit restoration activities to only native plants. Desirable adapted plant species should also be considered. Desirable adaptive species are oftentimes more advantageous from a cost and availability standpoint as well as from an ecological standpoint. Even more importantly, they are generally the plants that are able to establish quickly and complete effectively with invasive weeds. Native species require 2-3 years under most natural conditions and are also slower to establish under temporary irrigation than are most adapted species.*
- **Comment (32):** *DOE states in a previous section of this document that it is working in compliance with applicable management plans including the proposed Ely RMP.*
 - *Per the Proposed Ely RMP, Section 2.4.5, “Ecological site descriptions will be used as the initial basis to guide integrated management/treatments to meet the desired goals and objectives for vegetation.”*
 - *Per the Proposed Ely RMP, Section 2.4.5.1, VEG-7, “Determine seed mixes on a site-specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives.”*

Table 7.1, Page 7-26:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 13 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Biological resources best management practices(continued)</i>				
[33] During construction, use temporary barricades, fencing, and/or flagging to demarcate sensitive habitats; contain project-related impacts to the area within the construction right-of-way. When practicable, locate staging areas in previously disturbed sites or in the construction right-of-way, and avoid sensitive habitat areas. Fence off areas of habitat for sensitive species or other special resources, such as wetlands, prior to ground-disturbing activities. Inform project workers of all resource protection goals.	Physical Setting	Clean Water Act of 1977 (33 U.S.C. 1251 <i>et seq.</i>)	Minimize impacts to sensitive habitats and species.	Construction
	Surface-Water Resources			
	Biological Resources	Endangered Species Act of 1973, as Amended (16 U.S.C. 1531 <i>et seq.</i>)		
[34] Comply with the Biological Assessment and the Biological Opinion (which would be prepared by the U.S. Fish and Wildlife Service) for this project. For example, implement management actions in areas of desert tortoise habitat pursuant to the biological opinion issued by the FWS, such as limiting vehicle access and speed restrictions, proper equipment storage, project area demarcation, fire suppression, litter control, agency notification, and habitat restoration. For areas within the desert tortoise range, employ qualified desert tortoise biologists to monitor for the presence of desert tortoises to ensure they are not inadvertently harmed during construction. Cease activities that may endanger desert tortoises if a tortoise is found on a project site and resume only after the biologist ensures that the tortoise is not in danger or after the tortoise has been moved to a safe area.	Biological Resources	Endangered Species Act of 1973, as Amended (16 U.S.C. 1531 <i>et seq.</i>)	Minimize impacts to sensitive habitats and species.	Construction Operations
		Ely Resource Management Plan and Environmental Impact Statement (Ely RMP/Final EIS)		

- **Comment (33):** *Flagging is not an effective means of deterring heavy equipment from impacting vegetation. Fencing with appropriate removable fence is generally the only effective practice.*

Table 7.1, Page 7-35:

Table 7-1. Best management practices and their relationships to applicable requirements^{a,b} (page 22 of 26).

Best management practice	Related environmental resource area(s)	Associated requirement(s) ^c	Purpose	Project phase ^d
<i>Hazardous materials and waste best management practices (continued)</i>				
[56] Establish and implement a centralized procurement and distribution program to purchase, track, distribute, and manage hazardous and toxic materials. Implement a Hazardous Material Management Program to review hazardous and toxic material requisitions and purchases; and to recommend feasible nonhazardous, biodegradable, or less-toxic substitutes, such as nonhazardous solvents, paints, and cleaning materials.	Hazardous Materials and Waste	Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management	Reduce the production of hazardous wastes.	Pre-construction Construction Operations
[57] Develop and implement an Environmental Management System and a Pollution Prevention/Waste Minimization Program, which would include an evaluation of alternatives to eliminate, reduce, or minimize the amounts of hazardous materials used and hazardous wastes generated. As part of the Environmental Management System, regularly perform Pollution Prevention Opportunity Assessments.	Hazardous Materials and Waste	Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management	Reduce the production of wastes.	Pre-construction Construction Operations
[58] Salvage and store extra materials not used as ballast for the rail alignment and use for other construction activities such as regrading during quarry reclamation or during maintenance of the rail line.	Hazardous Materials and Waste	Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management	Reduce the generation of wastes and contamination of environmental media.	Construction
[59] Dispose of drill cuttings through land application.	Hazardous Materials and Waste	Executive Order 13423 – Strengthening Federal Environmental, Energy, and Transportation Management	Prevent overburdening local landfill facilities with waste.	Construction

- **Comment (59):** *Where is the land application going to take place?*

Table 7.2, Page 7-40:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 1 of 12).

Project phase ^a	Nature of potential impact	Mitigation measure	Location
<i>Monitoring and enforcement</i>			
[1] Construction Operations	NA	If there is a material change in the facts or circumstances upon which the STB relied in imposing specific environmental mitigation conditions, and upon petition by any party who demonstrates such material change, the STB may review the continuing applicability of its final mitigation, if warranted.	Overall project and surrounding area, as determined in consultation with the STB.
[2] Construction Operations	NA	DOE shall retain a third-party contractor to assist the STB's Section of Environmental Analysis (SEA) in the monitoring and enforcement of mitigation measures on an as-needed basis until DOE has completed project-related construction activities, as well as any oversight period the STB imposes.	Overall project and surrounding area, as determined in consultation with the STB.
[3] Construction Operations	NA	To ensure DOE's compliance with the environmental mitigation conditions that may be imposed by the STB, DOE shall submit to SEA reports on no less than a quarterly basis for the duration of the oversight period, documenting the status of its mitigation implementation for each condition. The oversight period in this case shall be for the duration of construction and for the first 2 years of project-related rail operations, or any term the STB may impose.	Overall project and surrounding area, as determined in consultation with the STB.

- **Comment (1):** *Many of the impacts described are preliminary in nature and incomplete. Therefore the STB review must remain in place until all impacts are sufficiently quantified.*

- **Comment (2):** The STB should be consulted when there is a disagreement between the DOE and effected party in terms of mitigation actions or compensation.
- **Comment (3):** The DOE should not submit such a report. An impartial third party should submit compliance and SEA reports with input from the DOE and affected parties.

Table 7.2, Page 7-41:

Project phase ¹	Nature of potential impact	Mitigation measure	Location
<i>Land use mitigation measures (see Sections 4.2.2 and 4.3.2)</i>			
[5] Construction	Land-use conflict in areas with active mines and mining claims	Notify nearby mining lessees/claimants and consult with owners of active local mines and <i>mining claims</i> to ensure that impacts to mine-related operations are minimized during construction activities. Where feasible, reduce construction right-of-way in mining areas to minimize impacts to mining claims.	Site-specific dependent upon the locations of mining claims and active mines. DOE would work with the BLM and mining lessees/claimants/owners to identify these areas.
[6] Construction	Loss of private land	Provide compensation to private landowners for long-term use and access to their land. Consult with affected property owners to develop agreements that would be mutually beneficial.	Site-specific (that is, private land parcels that are directly affected by the railroad) as determined through coordination with the landowner.
[7] Construction	Damage and restricted access to private property	Consult with affected property owners to redress any damage to the property caused by construction. In residential, business, and industrial areas, project-related equipment and materials would be stored in established storage areas or within the right-of-way, and entrances and exits for these properties would not be obstructed by construction, except as required to move equipment. Parking of equipment or vehicles, or storage of materials along driveways or in parking lots would be prohibited unless agreed to by the property owner.	Site-specific as determined by consulting with residential and business property owners.
[8] Construction	Damage to county roads	Compensate affected counties or maintain roads on a more frequent basis, if justified by additional or unanticipated damage resulting from DOE construction.	Site-specific as determined by county roads that are directly impacted.

- **Comment (5):** The same should be done for all grazing allotment permittees in the area.
- **Comment (6):** The same should be done for Base Property on grazing allotments, both water and land.
- **Comment (7):** The same provisions should be employed on public lands where legitimate land uses are occurring (i.e. limited access to grazing allotments).
- **Comment (8):** The same should be done for private roads or access roads to range improvements on public lands. If the DOE does not intend to maintain the rail access road during operation of the rail, it should compensate the County or appropriate entity to do so in order to maintain a sufficient level of access.

Table 7.2, Page 7-42:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 3 of 12).

Project phase ^a	Nature of potential impact	Mitigation measure	Location
<i>Land use mitigation measures (see Sections 4.2.2 and 4.3.2) (continued)</i>			
[9] Construction Post-construction	Temporary road closures and disruptions of ranching operations	During the construction phase, roads may be temporarily closed to facilitate the construction by obtaining permission from BLM or local authorities, or by acquiring access to private land. During this period, DOE would minimize road closures to the extent practicable and provide alternative access to areas impacted by road closure. Alternative access may include temporary roads or detours to other existing roads. Detours would be one mile or less and, where practicable, be in effect only during off-peak hours. DOE would design crossings that are capable of allowing ranching vehicles (for example, pickup trucks with horse trailers) and agricultural vehicles to cross over the rail line. DOE would inform the public of road closures through various media outlets and would minimize trains blocking grade crossings throughout its system, to the extent practicable. Once the construction phase is completed, land disturbed to create temporary roads would be remediated to its original state.	Site-specific dependent upon the locations of road closures and through coordination with local authorities, Nevada land managers, BLM, permittees, Forest Service, and landowners.
[10] Construction Operations	Potential interference with maintenance of rangeland improvements	Provide timely access to a permittee's allotment to allow the permittee to maintain rangeland improvements within the right-of-way. For safety reasons, access would be provided on a scheduled basis, whenever possible. Access would be provided to the permittee, their work crews, and equipment needed to maintain rangeland improvements.	Site-specific as determined through coordination with permittees and BLM.
[11] Construction Operations	Financial loss on farms and ranches	Provide compensation or range improvements for the direct loss of crops, pastures, rangelands, or reductions in animal unit months.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.

- **Comment (9):** Road closures, be it permanent or temporary, are serious concerns to rancher permittees. Access is imperative to livestock moving, haying, watering, and other activities. Sound planning with permittees, early in the process, would help to minimize some of these concerns.
- **Comment (10):** Permittees will also need to access their allotments on a daily basis to not only work with their range improvements, but also for day to day management of their livestock which may include herding, hauling, doctoring, assuring that they have water, and other needs.
- **Comment (11):** Who will determine what financial loss has been experienced and who determines what just compensation amounts to? There needs to be some means of resolving conflicts in terms of just compensation as the DOE and affected ranchers will likely not agree on the appropriate level of compensation. Compensation will be different for every single allotment, so a standard compensation formula will not work. The only way to handle this is on an allotment-by-allotment basis with a means of negotiating proper compensation through an impartial third party. Whether it be the BLM, STB or other, the DOE should not have the final say in appropriate compensation.

Table 7.2, Page 7-43:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 4 of 12).

Project phase ^a	Nature of potential impact	Mitigation measure	Location
<i>Land use mitigation measures (see Sections 4.2.2 and 4.3.2) (continued)</i>			
[12] Construction Operations	Disruption to ranching operations and adverse impacts to range improvements	Protect existing ranching improvements in their pre-construction state, such as maintaining the integrity of existing fences, roads, infrastructure, and waterlines, or provide reasonably equivalent improvements such as relocating existing infrastructure and water sources.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.
[13] Construction Operations	Disruption to ranching operations and cattle movement	Provide temporary feed, water, and assistance in cattle movement during rail line construction for livestock that may be physically isolated from normal feed and water sources. Temporary feed, water, and/or assistance in cattle movement could continue for a short time after construction is completed as cattle adjust to the new rail line.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.
[14] Construction Operations	Disruption of cattle movement and potential injury to cattle	Construct culverts, bridges, and cattle guards to facilitate or prevent the movement of cattle to support grazing management plans.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.
[15] Construction Operations	Disruption to ranching operations and cattle movement	Support the development of interim grazing management plans and allotment management plans to mitigate construction and operations impacts on grazing operations. The plans would address how grazing operations would be conducted during construction. The plan would also include practices for communication and interactions regarding DOE activities that could directly impact grazing permittees or farmers, such as providing project-related reconstruction and construction schedules to allow them to determine whether they should continue to crop or graze in right-of-way areas or discontinue such activities due to impending construction activities.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.

- **Comment (12):** *This list should include access roads and trails, chutes, corrals, and BASE PROPERTY. Improvement within OR NEAR the right-of-way that requires relocation should be addressed before construction begins. Existing and relocated improvements on each allotment should be located (GPS), documented, and photographed prior to construction to provide a good record for the allotment should vandalism or other activities result in destruction of private or public property.*
- **Comment (13):** *All of these activities will require more time, effort and expense on the rancher's behalf. The rancher should be compensated for the increased amount of overhead costs associated with these activities.*
- **Comment (14):** *This needs to be done in direct coordination with the permittees, both in terms of placement of crossings and design standards.*
- **Comment (15):** *Interim grazing management planning should begin as soon after the decision as possible, if the decision is to move forward with the DOE railroad. The above describes how interim-grazing management plans and allotment management plans would be utilized to address grazing operations during construction. It is critical that this commitment extends to completion of new Allotment Management Plans (AMP) following construction. The railroad project will have dramatic impacts on the way the allotments will need to be managed post-construction, and require complete rewrites of the AMPs along with review and acceptance by the BLM and permittee. The permittee will need to be involved throughout this process to assure that the plan will work. The AMP planning process should begin as construction is underway on the*

permittees' specific allotment to assure a smooth transition from the interim plan to the final AMP.

Table 7.2, Page 7-44:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 5 of 12).

Project phase ^a	Nature of potential impact	Mitigation measure	Location
<i>Land use mitigation measures (see Sections 4.2.2 and 4.3.2) (continued)</i>			
[16] Construction Operations	Potential water ponding near the rail line resulting in increased cattle-train strikes	Design the rail line to avoid the ponding of water, through grading or other construction techniques, to avoid attracting cattle or wildlife near the rail line. Monitor the rail line post-construction to look for evidence of ponding of water. Construct additional culverts or fencing if necessary to avoid ponding of water and subsequent congregation of livestock near the rail line.	Site-specific (that is, ranches that are directly affected by the railroad) as determined through coordination with permittees and the BLM.
[17] Operations	Impacts from new access roads	Work with the BLM, ranchers, local residents, counties, and contractors to place new access roads in areas where the roads could be left after construction to provide potential future benefit to the local population. If the construction roads have no long-term benefit to the local population, they would be restored and revegetated. DOE would also place new access roads in areas that avoid sensitive habitats and grazing areas to the extent practicable.	Site-specific as determined by the locations of road closures.
<i>Aesthetics mitigation measures (see Sections 4.2.3 and 4.3.3)</i>			
[18] Construction	Visual impacts associated with the contrast between new soil in fill areas and existing landscape	Select soil types consistent in color with pre-construction adjacent soils for filling surface layers to the extent practicable. DOE would acquire these materials from local sources to help maintain the natural and visual environment.	Project-wide.
[19] Construction Operations	Visual impacts associated with the contrast between the rail line and existing landscape	Construct low, rolling earthwork berms with soils and vegetation that match the surroundings to mask the linear track from viewers in specific locations in Garden Valley where the track would otherwise cause a moderate contrast in Class II lands.	Site-specific locations in Garden Valley as determined in coordination with the BLM. ^b
[20] Construction Operations	Visual impacts associated with the contrast between project structures and surrounding landscape	Use non-contrasting, non-reflecting paint on structures and facilities in use during construction or operations. Where practicable, use fencing and/or vegetation to screen facilities from viewers around communities and in other visually sensitive areas.	Project-wide.

- **Comment (16):** *Ponding of water will draw livestock and wildlife to the rail. In addition, it will encourage new green-up growth of seeded species that will also draw livestock to the rail resulting in increased collisions. Good drainage is critical to allow for water to exit the right-of-way area. As such, the DOE should refine its design of the rail and access road to place both of these features on a single raised roadbed. Having the access road and rail on separate raised roadbeds encourages ponding and green-up between the rail and access road, which is essentially a trap to both wildlife and livestock.*
- **Comment (17):** *Are new access roads going to be tabulated in acres per allotment, and cumulatively across the project area for loss of AUMs? If not, they should be included along with other AUM losses due to disturbances such as quarries, construction camps and sidings.*

Table 7.2, Page 7-45:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 6 of 12).

Project phase ^a	Nature of potential impact	Mitigation measure	Location
<i>Aesthetics mitigation measures (see Sections 4.2.3 and 4.3.3) (continued)</i>			
[21] Construction Post-construction Operations	Visual impacts associated with the visibility of nighttime lighting	Minimize the effect of nighttime lighting by limiting its use near sensitive areas, and by requiring contractors to use directional lighting to shield viewers in these situations. On permanent structures, use downcast lighting, shielded lighting, or lower-wattage bulbs.	Project-wide.
[22] Post-construction	Visual impacts associated with the contrast caused by fresh rock cuts	Coat strongly contrasting cuts on rocks created by the construction of the rail line with a substance to add an artificial patina mimicking similar adjacent, naturally weathered areas of rock.	Project-wide.
<i>Air quality mitigation measures (see Sections 4.2.4 and 4.3.4)</i>			
[23] Operations	Reduction in air quality within the local area of quarry construction	Acquire access to additional land and move the public access (fence line) farther away from the quarries.	Site-specific quarry locations.
<i>Groundwater mitigation measures (see Sections 4.2.5 and 4.3.5)</i>			
[24] Post-construction	Access to groundwater wells	Prior to abandonment of groundwater wells, investigate whether there are other parties (for example, ranchers, the BLM, county governmental agencies) interested in using groundwater wells to obtain water or monitor groundwater conditions, and work with those parties to ensure they can use the wells upon completion of the railroad. Those interested parties would be responsible for following Nevada laws to obtain water rights and, if necessary, would also be responsible for obtaining a right-of-way from the BLM.	Site-specific as determined through consultation with ranchers, the BLM, county governmental agencies, and other entities.

- **Comment (23):** *Moving any fence on public land will potentially impact the permittees on either side. Any anticipated fence realignments should be closely coordinated with the permittees of record.*
- **Comment (24):** *This approach regarding wells and/or other developed water sources will be a good means of maintaining a working relationship with people on the land, as water is always in short supply in the desert. However, the DOE will likely need to take steps in their initial application to the State Engineer to ensure this possibility exists, if not, this is simply lip service.*

Table 7.2, Page 7-46:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 7 of 12).

Project phase ^a	Project phase ^a	Project phase ^a	Project phase ^a
Biological resources mitigation measures (see Sections 4.2.7 and 4.3.7)			
[25] Pre-construction Operations	Loss or disturbance to wildlife and their habitat	In areas where the rail line will disrupt the movements of big game, develop under- or overpass designs to protect wildlife. Considerations for under- or overpass locations would include providing access to wildlife water sources. Develop additional water sources for wildlife to replace those lost, adversely affected, or rendered inaccessible to wildlife due to new rail line construction if suitable alternative sources are not available to wildlife.	Specific locations as determined in consultation with land and wildlife management agencies.
[26] Pre-construction Construction Post-construction	Loss and disturbance to sensitive bird species, such as raptors and migratory birds	Conduct a survey for sensitive bird species (such as raptors and migratory bird nests) prior to the initiation of construction. DOE would minimize disturbance to active nests until after active nesting has been completed for the season to the extent practicable and would develop and implement appropriate actions to compensate for sensitive bird species nests removed or destroyed during construction.	Site-specific as determined through coordination with land and wildlife management agencies.
[27] Construction	Injury or loss of wildlife that are attracted to areas of active construction	Install fencing around temporary water storage reservoirs, or otherwise block access to temporary water storage reservoirs in areas where wildlife may be attracted to active construction sites.	Specific locations as warranted and determined through coordination with land and wildlife management agencies.

- Comment (25):** *It is important that DOE coordinate with the permittees when addressing wildlife under or overpass designs to protect wildlife. These structures can allow for livestock trespass, or inversely serve as a means to access important forage areas and water. Wildlife water is readily provided by ranch water developments whereas the State Engineer affords the Nevada Department of Wildlife an opportunity to spell out the wildlife needs before issuing a water right to ranching. If a water development is contemplated for large ungulate wildlife, then it is likely also suitable for livestock. Coordination with the permittees to leverage the benefits of the water development for both wildlife and livestock can go a long way to benefit both, just as livestock watering facilities have done for years.*

Table 7.2, Page 7-49:

Table 7-2. Preliminary measures to mitigate potential environmental impacts of constructing and operating the proposed railroad (page 10 of 12).

Project phase ³	Nature of potential impact	Mitigation measure	Location
<i>Socioeconomics mitigation measures (see Sections 4.2.9 and 4.3.9)</i>			
[35] Construction	Overburdened community services and degraded infrastructure	Reduce impacts on local roads, infrastructure, and community services by directing trucks to travel during off-peak hours, transporting construction materials by rail, providing fire-prevention equipment, and by developing and implementing an emergency response plan. If there are additional burdens on local services and infrastructure, DOE would work with local counties to acquire some additional infrastructure, equipment, and/or personnel for the duration of the construction period, if demonstrated to be required to meet DOE's needs. It might be possible for the residual equipment acquired to support the construction effort (such as police cruisers, fire trucks, and equipment) to be transferred to the counties if applicable law and regulations allow.	Overall project area.
[36] Construction	Overextended community services and potential negative impacts of construction camps on communities	Establish policies that define expectations for environmental compliance and employee conduct, staff construction camps with security personnel to ensure compliance with such policies, and require training of all workers prior to the beginning of work. Establish personnel policies intended to minimize recreational activity outside of the construction camps, avoid the creation of new trails, and avoid damage to property, wildlife, and cattle. Encourage workers not to move families to prevent overcrowding at schools and potential overburdening of other community services and infrastructure. Work with existing communities to convert construction camps into facilities that provide lasting benefits to the communities and counties, or, to close the camps as sections of the rail line are completed. If additional services are required, DOE would work with local communities and counties to determine if there are mutually beneficial actions or improvements, such as water system improvements, cell towers, fiber-optic connections, and upgrades to some of the electrical grid to provide required power.	Construction camp sites.

- **Comment (35):** *It is predictable that weeds will become a serious challenge for many years throughout the project area. Weed control equipment and support are continuously in want for the Tri-County Weed District. With such a large area of responsibility it is very likely that the District would appreciate receipt of any excess weed treatment equipment whenever available.*
- **Comment (36):** *Employee conduct is a serious concern and will require both educating the construction crews and policing their free time activities on public lands. OHV activity is particularly of concern because of the extensive permanent damage to resources that can occur. Close coordination with local law enforcement, the BLM, and permittees is essential.*
- **Comment:** *Mitigation actions that were notably absent in Table 7.2:*
 - *Temporary irrigation for seeded species establishment. This is a major component of successful vegetation establishment that has not been addressed anywhere in the FEIS.*
 - *Collaboration with key scientists and researchers. DOE has not committed to work with research organizations knowledgeable of desert conditions such as the University of Nevada, USDA Natural Resources Conservation Service Plant Materials Centers, or USDA Agricultural Research Service, to initiate a process of collecting and testing seed from both native and adapted plant species that could show promise for developing the final seed mixes for the project area. Without the science and seed testing on soil samples of the project area, there is high probability that numerous costly and time-consuming mistakes will occur in the field as construction gets underway. It appears that DOE may be looking for 'cure all' seed mixes that can be*

spread across numerous soils under variable conditions and expect success. It is highly improbable. Developing a seed collecting and testing program relationship with these institutions will help to refine seed mixes appropriate to ecological sites and avoid costly purchase and dispersal of seed that has no chance of success. Much of the work could be carried out by graduate students through greenhouse bench studies on soils collected across the project area.

- *Fire suppression and restoration. Rail lines and construction sites are prime sources of fire ignitions. A serious wildfire could result in major impacts across a large scale as a result of rail construction and operations. This would result in detrimental impacts to biological resources, surface water resources and land use. DOE does not present a plan within this FEIS that addresses how they plan to:*
 - *Suppress wildfire starts during construction and operation of the rail*
 - *Rehabilitate burned areas*
 - *Compensate for lost public land use due to wildfire.*
- *Increased Overhead on Ranching Operations. The mitigation processes outlined in this chapter and the some of the specific mitigation actions listed in Table 7-2 will result in a great deal of time and money expenditure from livestock operators. Ranching is a 24-hour, 7 day a week, 365 day a year profession that allows little time away from the operation. Ranchers are working on profit margins that are slim to none as it is. The increased time and overhead costs associated with the items listed in this chapter have not been taken into consideration anywhere within the FEIS document. Ranchers should be allowed to hire representatives that can attend meetings and work through the outlined mitigation processes at the DOE's expense. The rancher's involvement in this process is essential, but the time and cost associated is likely more than can be committed. These impacts would not be realized without the installation of the rail.*
- *Fencing, gates and cattle guards. The DOE has not addressed how it will maintain the integrity of allotment and pasture fencing during construction and operations of the rail. Cattle guards and gates are required any time the rail and access road cross an existing fence.*

N-4 Grazing

FEIS Comments

August 7, 2008

Section 8.1, Page 8-1:

An **irreversible commitment** of resources represents a loss of future options. It applies primarily to nonrenewable resources, such as minerals or cultural resources, and to those factors that are renewable only over long time spans, such as soil productivity.

An **irretrievable commitment** of resources represents opportunities that are foregone for the period of the proposed action. Examples include the loss of production, harvest, or use of renewable resources. The decision to commit the resources is reversible, but the utilization opportunities foregone are irretrievable.

Section 8.1.1: Unavoidable Adverse Impacts

Section 8.1.1.2, Pages 8-3 and 4: Land Use

Use of land along the Caliente rail alignment for construction and operation of the proposed railroad and railroad construction and operations support facilities would involve some long-term changes in land use. Approximately 99 percent of the land DOE would use for this project would be public land, which would be managed as a right-of-way grant obtained from the U.S. Department of the Interior, Bureau of Land Management (BLM). While the proposed railroad would generally conform to BLM resource management plans, DOE would need to implement best management practices and mitigation measures to avoid, minimize, or mitigate adverse impacts to Areas of Critical Environmental Concern along Caliente common segment 1 and the Eccles alternative segment, as well as impacts to active grazing allotments along the alignment. The BLM manages public land to provide for multiple use. The multiple-use mandate set forth in the Federal Land Policy and Management Act would continue to apply to the *public lands* within the right-of-way, but railroad construction and operations could limit certain future land uses that pose operational or safety conflicts, such as large-scale surface mining. Construction and operation of the proposed railroad along the Caliente rail alignment would directly impact grazing allotments by transecting pastures and potentially hindering livestock access to forage and water resources. DOE and the BLM would work with allotment permittees to implement revised allotment management plans and other mitigation measures to minimize adverse impacts on grazing operations. Even with mitigation, some adverse impacts to the use of grazing land could be unavoidable, such as loss of grazing areas immediately adjacent to the rail line.

DOE would need to gain access to some private lands. Assuming a *nominal* 61-meter (200-foot) operations right-of-way on either side of the centerline of the rail line, private land would make up about 1 percent of private land compared to the total amount of land that would be required for the project, although there would be long-term changes to land use on that private land. Implementation of the Caliente alternative segment would require the demolition or relocation of three structures/residences along the former Prince and Pioche railroad right-of-way, and would remove some parking area from the Caliente Hot Springs Motel. Private land along common segment 1, the Goldfield alternative segments, and Oasis Valley alternative segment 1 would also be accessed. All private landholders that are identified as directly affected parties would be invited to take part in the process outlined in Chapter 7.

Construction and operation of the proposed railroad along the Caliente rail alignment would not displace existing or planned land uses over a large area nor conflict with county or local land-use plans or goals. Therefore, any impacts to land use and ownership, although unavoidable, would be small overall, although the long-term impacts to private land could be perceived as high by individual landowners affected by the proposed railroad. Tables 4-23 to 4-30 in Section 4.2.2 summarize potential impacts to land use and ownership for each alternative segment, common segment, and railroad construction and operations support facility.

- **Comment:** *There is no discussion regarding the loss of overhead that will undoubtedly be lost by public land users who have to adapt to construction and operations of the rail. Unless the DOE intends to compensate for this cost, it would have to be considered an unavoidable adverse impact.*

Section 8.1.1.7, Pages 8-6 to 7: Biological Resources

There could be unavoidable, short-term, construction-related adverse impacts to wildlife, special status species, protected game species, and wild horses and burros. There would be the potential for unavoidable impacts to *threatened* or *endangered species* during rail line construction. Potential impacts to desert tortoise would be small from minor losses of habitat from the footprint of the rail line and fragmentation from the bisection of the tracks through connected habitat. There could be localized and minor losses of potential roosting and foraging habitat for the southwestern willow flycatcher and western yellow-billed cuckoo.

DOE determined that there would be unavoidable impacts to *riparian* and water-related habitats from construction of the Caliente alternative segment and either of the potential Staging Yard locations (Indian Cove and Upland), and the Eccles alternative segment. Unavoidable impacts to wildlife and wild horses and burros from the operation of the rail line could result in collisions of wildlife with trains and short-term disruption of activities (such as foraging, nesting, and roosting). Although such impacts would be unavoidable, these long-term impacts would be considered small. Other unavoidable impacts could include possible changes to predator/prey interactions due to the construction of towers and other structures that would provide new perch habitat for raptors and other predatory birds. There could be some unavoidable impacts to special status wildlife or plant species. For example, project activities could result in small but unavoidable adverse impacts to:

- Non-critical habitat for the federally threatened Mojave population of the desert tortoise (*Gopherus agassizii*)
- Habitat for the BLM-designated sensitive southwestern toad (*Bufo microscaphus*) near the Caliente and Eccles alternative segments
- Individual BLM-designated sensitive plants and their habitats, including the Schlessler pincushion (*Sclerocactus schlessleri*) and the Schlessler Pincushion Area of Critical Environmental Concern along Caliente common segment 1; the White River catseye (*Cryptantha welshii*) along the Caliente and Eccles alternative segments, and Garden Valley 1, 2, 3, and 8 alternative segments; the Eastwood milkweed (*Asclepias eastwoodiana*) near Caliente common segment 3 and along Goldfield alternative segments 1, 3, and 4; and the Nevada dune beardtongue (*Penstemon arenarius*) near Caliente common segment 3 and along common segment 5
- Habit for the Chuckwalla lizard (*Sauromalus ater*) documented in the southeastern foothills of Yucca Mountain, adjacent to common segment 6

Nevertheless, DOE has concluded that there would be a small loss of habitats, and potential loss of individual species from trains and construction traffic. Although such impacts would be unavoidable, long-term impacts would be small.

- *Comment: There will be an increased risk of wildfire ignition, establishment of invasion and noxious species and disturbance of wildlife migration and distribution patterns. All of these factors have the potential to, or directly, degrade wildlife habitat at a high level. Yet the FEIS does not acknowledge these potential impacts.*

Section 8.1.2, Pages 8-11 and 8-12: RELATIONSHIP BETWEEN SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

Council on Environmental Quality regulations that implement the procedural requirements of the National Environmental Policy Act (NEPA) require consideration of “the relationship between short-term uses of man's *environment* and the maintenance and enhancement of long-term productivity” (40 CFR 1502.16). This includes using “... all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generation of Americans” (NEPA, Section 101, 42 U.S.C. 4331).

This section discusses the short-term use of the environment and the maintenance of its long-term productivity. Chapter 4 provides more detailed discussions of the impacts and resource utilization associated with the Proposed Action and the Shared-Use Option. Construction and operation of the proposed railroad would require short-term uses of land and other resources. Any long-term loss of productivity in disturbed areas would be small. The land-cover types along the proposed rail alignment are widely distributed throughout the region of influence and any loss of vegetation in the disturbed area along the rail alignment would have little impact on the regional productivity of plants and animals. Future long-term land uses such as grazing or mining would not be precluded by the short-term use of the land for the proposed rail line. The relationships between short-term uses and long-term productivity would not be meaningfully altered if either the Proposed Action or Shared-Use Option were implemented, or by the selection of alternative segments within the Caliente rail alignment *implementing alternative*.

Wetlands or waters that would be filled would not recover in the short term and long-term productivity would be lost permanently. To the extent practicable, DOE would minimize such fill by optimizing final engineering and design and use a minimum-width construction right-of-way whenever possible. Approximately 0.035 square kilometer (8.7 acres) would be permanently filled to construct the rail roadbed and the Upland Staging Yard option. Approximately 0.22 square kilometer (54.1 acres) of wetlands would be filled to construct the rail roadbed and the Indian Cove Staging Yard option. The Eccles alternative segment Interchange Yard would require approximately 0.033 to 0.043 square kilometer (8.2 to 11 acres) of Clover Creek to be filled to elevate the site out of the floodplain, and 560 square meters (0.14 acre) of waters of the United States would be filled to construct the Eccles alternative segment Staging Yard.

Productivity loss for soils should be limited to the disturbed areas affected by land clearing, grading, and construction. Most disturbed areas not permanently maintained for railroad operations would recover over time, although recovery and a return to natural productivity could be slow for disturbed biological communities in an *arid* environment. DOE would revegetate disturbed areas with appropriate native species. Potentially productive soils characterized as prime farmland along Caliente common segment 1 and the Caliente and Eccles alternative

segments are found only in isolated pockets and cannot support farming. Therefore, the minimal loss of these soils would not impact long-term productivity.

The areas used for temporary construction camps would likely recover in the short term because they would be unused after construction activities ceased. DOE would implement restoration activities to encourage natural vegetation to grow on these sites. The Department might eventually abandon the proposed railroad and its operations support facilities, although it is unlikely that the rail *roadbed* would ever be completely dismantled. The proposed railroad and these facilities could be turned over to commercial carriers, especially if the Shared-Use Option were selected, and could continue to aid economic productivity in the region. Under the Shared-Use Option, the proposed railroad could increase transportation opportunities and lower transportation costs in the region.

The short-term withdrawal of water from the temporary construction wells could have a small impact on groundwater availability. However, DOE has projected that drawdowns would be sufficiently small to preclude impacts on flow rates or discharge rates at existing productive water-supply wells or springs. There would be no long-term impacts to groundwater resource productivity because the construction wells would only be used for a short time.

- *Comment: It will be extremely difficult to restore disturbed areas back to native conditions without cost intensive long-term mitigation efforts. In addition, indirect impacts such as wildfire or establishment of noxious and invasive weeds due to rail construction and operations could greatly impact long-term productivity. DOE did not adequately address these issues in this section.*

Section 8.1.3: IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Section 8.1.3.2, Pages 8-13: Land Use

Construction and operation of the proposed railroad would require the commitment of land for placement of the rail line, support facilities, and access roads. If at a future date DOE were to abandon the railroad, although much of the construction material might be removed, it is not likely that all of the natural landscape would be restored. Areas requiring extensive earth movement or mineral extraction, such as project-related quarries and areas of large volumes of cut and fill, would likely be irreversibly altered. If DOE decided to abandon the railroad, it would relinquish its right-of-way and the BLM would continue to manage the land. Where DOE would need to gain access to private lands for the proposed railroad, the Department would dispose of purchased land pursuant to DOE Order O 430.1B, *Real Property Asset Management*, or would return leased land to the lessee.

- *Comment: The operational right-of-way will be for all intents and purposes lost to any future land uses including mining and grazing. The construction right-of-way may become marginally usable to such land uses. These impacts are not adequately addressed in this section.*

Section 8.1.3.7, Pages 8-14: Biological Resources

The areas that would be occupied by the rail line, railroad construction and operations support facilities, and access roads would be irreversibly removed from natural habitat for the life of the proposed railroad. In addition, the disturbances of the desert soil surfaces in areas of temporary construction activity could result in changes that would be irreversible over the long term. The permanent conversion of vegetation resources and wildlife habitat along the rail line and at

construction and operations support facilities could represent an irreversible commitment of biological resources for the life of the proposed railroad and beyond if, following abandonment, DOE did not restore these resources, or if former vegetation cover and composition did not recover. Losses of wildlife during railroad construction and operations would represent an irretrievable commitment of biological resources.

Impacts to riparian and water-related habitats from construction of the Caliente alternative segment and either of the potential Staging Yard locations (Indian Cove and Upland), the Eccles alternative segment, and the Interchange Yard could represent an irreversible rather than irretrievable commitment of resources if, following abandonment, DOE did not restore these resources. However, during rail line final design, DOE would make adjustments to minimize such impacts (see Appendix F).

- ***Comment:*** *The discussion of permanent conversion of vegetation resources in this section is appropriate. This also affects land use and the relationship between short-term use and long-term productivity; however, the DOE did not consider this key impact in those sections.*
- ***Comment:*** *This section still does not consider the potential indirect impacts of wildfire and invasive / noxious species invasion that could severely impact biological resources in a manner that is irreversible and irretrievable.*