

4.0 Environmental Consequences

4.1 Introduction

This chapter evaluates the environmental impacts that would occur from implementing each alternative described in Chapter 2.0. While the RMP Amendment Planning Area addresses a nominally 30-mile buffer from the CCSM project (discussed in Section 1.4), the alternatives address VRM management within the smaller Decision Area (discussed in Section 1.5) (**Figure 1-1**). With the influences on visual resources in the Planning Area (including overhead utility corridors, areas visible from the CCSM Project, and jurisdictional considerations), the BLM determined that the Decision Area for this analysis should focus on those areas that were most likely to be influenced by the CCSM Wind Energy Project proposal. The remaining area outside the Decision Area boundary (but within the Planning Area boundary) will be addressed in the upcoming RFO area-wide VRM Plan Amendment.

The purpose of this chapter is to disclose the impacts of the alternatives and evaluate the potential for significant impacts of the “federal action” on the “human environment.” The CEQ regulations for implementing the NEPA state that the “human environment” shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment (40 CFR §1508.14). The “federal action” is the BLM selection of an alternative plan for VRM that would guide future land use authorizations. The baseline used for determining the potential impacts is the current resource condition described in Chapter 3.0. The organization of this chapter parallels that of Chapter 3.0; the same resource topics are presented in alphabetical order.

4.1.1 Types of Impacts

The following impact analysis focuses on identifying types of impacts and estimating their potential significance. This chapter uses the terms “impacts” and “effects” interchangeably, and the terms “increase” and “decrease” are used for comparison purposes. **Table 4-1** lists other terms used to describe impacts.

Table 4-1 Types of Impacts

Type	Description
Direct Impacts	Effects that are caused by the action and occur at the same time and place. Examples include elimination of original land use through erection of a structure. Direct impacts could cause indirect impacts, such as ground disturbance resulting in re-suspension of dust.
Indirect Impacts	Effects that are caused by the action but occur later in time or are farther removed in distance, but are still reasonably foreseeable and related to the action by a chain of cause-and-effect. Indirect impacts could extend beyond the natural and physical environment (e.g., environmental impact) to include growth-inducing effects and other effects related to induced changes to resource users (e.g., social impact).
Cumulative Impacts	Effects that result from the incremental impact of the action when it is added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts could result from individually minor, but collectively significant, actions that take place over time.

4.1.2 Region of Influence

Regions of influence (ROI) are the potential areas that an alternative may reasonably affect. ROIs can vary by resource topic. Limits of ROI may be natural features (such as a watershed), political boundaries (such as a county), or industry-accepted norms of the resource (such as used in one aspect of air quality). The ROI for all resource topics includes all public lands and minerals administered by the BLM within the Decision Area (as discussed in Section 1.5).

4.1.3 Methods and Assumptions

The analysis of VRM-targeted plan amendment alternatives focuses on impacts from BLM's management of visual resources on public lands (shown in **Table 4-2**). The comparative analysis discussed in this section will be based on the acreages depicted in **Table 4-2**. Other resource-specific tables are included in the analysis where appropriate. Other resource decisions as described in the 2008 Rawlins RMP (2008b) would remain and visual resource management actions would be amended only within the Decision Area. Therefore, the VRM-targeted plan amendment alternatives focus on decisions that allow or limit resource uses and development for the sake of visual resources. These visual resource-based decisions would apply to all resource uses and development activities in the Decision Area. Resource uses and developments may be allowed or limited by other resource management decisions in the Rawlins RMP (2008b).

The visual resource management actions proposed in Chapter 2.0 are planning-level decisions and do not result in direct impacts; however, the analysis focuses on impacts that would eventually result in indirect impacts by planning for uses on public lands. The analysis is based on the assumption that VRM classes would influence resource uses and resources indirectly.

Table 4-2 Acreage of Proposed VRM Classes on Public Lands in the Decision Area by Alternative

VRM Class	Alternative 1: No Action		Alternative 2: Development		Alternative 3 Protection		Alternative 4: Preferred	
	Acres	%	Acres	%	Acres	%	Acres	%
I	5,613	1	5,613	1	5,613	1	5,613	1
II	124,207	17	1,445	0	318,792	43	78,044	11
III	573,612	77	160,395	22	340,589	46	228,223	31
IV	39,180	5	575,159	77	77,618	10	430,732	58

The BLM manages public lands for multiple uses in accordance with the FLPMA. Land use decisions are made that protect the resources while allowing for multiple-use of those resources, such as livestock grazing, energy development, and recreation. Where there are conflicts between resource uses, or a land use activity may result in irreversible or irretrievable commitment of resources, the BLM may restrict or prohibit some land uses in specific areas. To ensure that the BLM meets its mandate of multiple-use in land use planning actions, the impacts of the alternatives on resources and resource uses are identified and assessed as part of the planning process. The projected impacts on land use activities and the associated environmental impacts of land uses are characterized and evaluated for each of the alternatives. It is important to note that all management prescriptions for each resource and resource use directly or indirectly relate to each other; therefore, impacts of other prescriptions and guidance may apply to each resource management activity.

Geographic information system (GIS) analyses and data from field investigations were used to quantify effects where possible; however, in the absence of quantitative data, best professional judgment was used. Acreage calculations and other numbers used in this analysis are approximate projections for comparison and analytic purposes only. They do not reflect exact measures of on-the-ground situations. At times, impacts are described using ranges of potential impacts or in qualitative terms.

Impact analysis is a cause-and-effect process. In evaluating the context of an impact, an affected resource is compared to the available area or quantity of that resource. The analysis identified resources that would be altered based on management actions and then predicted changes to these resources. The magnitude or scale of the resource change was defined, and a judgment as to the significance of that change was made based on the significance criteria threshold.

Certain assumptions are made regarding level of land use activity, resource condition, and resource response on which to determine potential impacts. In addition to the analytical assumptions in the Rawlins RMP Final EIS (2008a), the following assumptions were used in this Plan Amendment:

- VRM classes only apply to public lands in the Decision Area.
- Resource development trends for energy and mineral development would continue to increase in the Planning Area in areas with moderate to high potential for occurrence of the resources.
- The checkerboard landownership pattern along the original UPRR ROW is not conducive to VRM Class II because the BLM has no control over actions on private surface ownership. The BLM will mitigate developments on public lands in the VRM Class II checkerboard landownership pattern as best it can and encourage proponents to apply comparable mitigation to adjacent private surface ownership.
- Any action will have an effect on visual resources if it is so dominant on the landscape that it overwhelms the casual observer to the point that they are displaced from the area. Likewise, actions in VRM Class IV areas could affect visual resources even if it does not dominate the landscape.
- In most cases, with the whole Planning Area within the Foreground/Midground Distance Zone, wind energy development projects would primarily be compatible with VRM Class IV designations only, as wind turbine height and prominence on the largely open landscapes could not be adequately mitigated.
- Oil and gas development activities would primarily be compatible in VRM Class III and IV, but some projects that can be adequately mitigated could occur in VRM Class II.
- Transmission line ROWs would primarily be compatible in VRM Class IV, would likely be compatible with VRM Class III with adequate separation from KOPs and selection of low visual contrasting transmission towers with appropriate color treatment, and with minimal vegetation removal within the ROW; could potentially be compatible with VRM Class II with full or partially concealing transmission line within topography, coupled with adequate separation from KOPs and selection of low visual contrasting transmission towers with appropriate color treatment; and with minimal vegetation removal within ROW.
- Projects and activities would implement best management practices to reduce impacts to VRM Class II and III areas, as well as VRM Class IV, as noted in Appendix 15 of the RMP (BLM 2008b).

The following resources would not be directly impacted by VRM class alternatives: vegetation and surface water. However, these resources are indirectly influenced by the VRM class alternatives. The indirect impact is included in the resource specific analysis found in each subsequent resource heading.

4.2 Cultural Resources

This section presents potential impacts to cultural resources from VRM classifications. Existing conditions concerning cultural resources are described in Section 3.3.

4.2.1 Impacts under Alternative 1: Continuation of Existing Management

Cultural properties located in the existing VRM Class I areas would be protected because opportunities for visual intrusions and landscape alteration that modify the form, line, color, and texture of the landscape character would be prohibited in Class I areas. The integrity of the setting of cultural resources located in the existing VRM Class II areas also would receive protection from management actions that would require structures to blend into the landscape when possible, thus minimizing the potential for adverse effects from cultural modifications that detract from the scenery. Cultural properties located in VRM Class III and IV areas would be subject to a higher level of activities that introduce visual intrusions, as these VRM classes allow for moderate and high levels of landscape alteration, respectively, through placement of structures and facilities. Cultural resources dependent on setting as an aspect of their integrity would continue to be at risk from potential development within VRM Class III and IV areas in the Decision Area.

Alternative 1 provides protection of cultural resource settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations and Class B scenery with VRM Class II and III designations. Although this alternative provides more protective VRM management in the northern portion of the Decision Area, the cultural resource setting in the checkerboard ownership areas and other fractured landownership patterns is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.2.2 Impacts under Alternative 2: Emphasis on Development of Resources

Under Alternative 2, an increase in VRM Class III and Class IV areas from Alternative 1 would allow for more areas of moderate and high levels of landscape alteration that modify the form, line, color, and texture of the landscape character to occur in the Decision Area. This alternative would allow for the most landscape alteration that would affect the visual settings of cultural resource sites. Fewer cultural resource sites, including Native American sacred sites, traditional cultural properties, historic trails, and other cultural resource properties where the setting contributes to their NRHP eligibility would be protected as a result of VRM classifications.

Alternative 2 provides the greatest potential for alteration of cultural resource settings in areas determined to contain Class A and B scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class III and IV designations. Although this alternative allows for a higher degree of alteration of cultural resource settings in the northern portion of the Decision Area, the cultural resource setting in the checkerboard ownership areas and other fractured landownership patterns is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.2.3 Impacts under Alternative 3: Emphasis on Protection of Resources

Impacts to cultural resources from VRM management decisions would be similar to those identified under Alternative 1, except a greater number of Native American sensitive sites, traditional cultural properties, historic trails, and other cultural resource properties where setting is an aspect of integrity to the NRHP eligibility would be protected. These protections would come in the form of measures to retain the natural setting of the landscape by requiring additional measures on development activities.

Alternative 3 provides protection of cultural resource settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II and III designations and provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV

designations. Although this alternative allows for a moderate to high degree of alteration of cultural resource settings in the northern portion of the Decision Area, the cultural resource setting in the checkerboard ownership areas and other fractured landownership patterns is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.2.4 Impacts under Alternative 4: Preferred Alternative

Under Alternative 4, there would be more potential for areas of visual intrusions and high levels of landscape alteration than Alternatives 1 and 3 as a result of increased VRM Class IV areas. If more visual intrusions and landscape alteration that modify the form, line, color, and texture of the landscape character take place as a result of the revised VRM designations, this alternative would lead to an increased potential for visual impacts to cultural resource sites. This alternative would be more restrictive on potential future visual intrusions and landscape alteration that would affect cultural resources than Alternative 2, but less restrictive than Alternatives 1 and 3.

Alternative 4 provides protection of cultural resource settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations, except for the Elk Mountain area, which would allow for alteration of the cultural resource setting with a VRM Class IV designation. This alternative provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV designations. Although this alternative allows for a higher degree of alteration of cultural resource settings in the northern portion of the Decision Area, the cultural resource setting in the checkerboard ownership areas and other fractured landownership patterns is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.3 Wildland Fire and Fuels Management

This section presents potential impacts to wildland fire and fuels from VRM classifications. Existing conditions concerning wildland fire and fuels are described in Section 3.4.

4.3.1 Impacts under Alternative 1: Continuation of Existing Management

Retaining existing VRM Classes I and II would potentially restrict hazardous fuels reduction techniques available to the BLM, such as straight-line fire breaks, which would lead to an increase in fire size. VRM Class III and IV areas that allow for the use of a wider range of hazardous fuel reduction treatments would experience a reduction in the size and spread of wildland fires. VRM Class III and IV areas would allow for activities that alter the landscape, which would introduce more ignition sources and lead to more fire starts. Conversely, VRM Class III and IV areas would lead to a better road network, which would provide for faster fire suppression response times, reducing the extent of the area burned.

4.3.2 Impacts under Alternative 2: Emphasis on Development of Resources

This alternative would increase the VRM Class III and IV areas from Alternative 1, allowing for the use of a wider range of hazardous fuel reduction treatments that reduce the size and spread of wildland fires. Compared to Alternative 1, more area would be available for activities that alter the landscape, which would introduce more ignition sources and lead to more fire starts as large portions of the Decision Area would be changed from Class II and III to Class III and IV. In the process of altering the landscape in Class III and IV areas, fuel loads would potentially be decreased resulting in less severe fire size and intensity. The addition of roads also would facilitate firefighting efforts. This may have an effect on the WUI area near the North Platte drainage as a portion of that area would change from Class II to Class III and IV. If additional landscape altering activities were to occur in VRM Class III and IV areas, the additional human presence, vehicles, and equipment would eliminate the ability to use wildland fire for beneficial vegetation treatment and may increase the frequency of fire events from ignition sources.

4.3.3 Impacts under Alternative 3: Emphasis on Protection of Resources

This alternative would decrease the area available for landscape altering activities (compared to Alternative 1) as large portions of the Decision Area would be changed from Class III and IV to Class II and III. Two areas of exception would be in the northern and central portion of the Decision Area that would change from Class III to Class IV. Effects to these two isolated areas would be similar in nature to Alternative 2. The remainder of the Decision Area would potentially see increasing fuel loads that would increase fire size and intensity. Less ground clearing for industrial development and fewer roads to assist firefighting efforts would result in greater fuel loads and fires that are more difficult to control. This may have an effect on the WUI area near the North Platte drainage and the WUI area near the town of Baggs, as reclassification would involve surrounding areas changing from Class III to Class II. In unpopulated areas, wildland fire would be allowed to return to the fire-dependent ecosystems and used beneficially as a vegetation management tool due to the relative lack of industrial infrastructure and human presence. Fire frequency may be reduced due to a decrease in human presence and ignition sources.

4.3.4 Impacts under Alternative 4: Preferred Alternative

This alternative would increase the area available for landscape altering activities (compared to Alternative 1), but not as much as Alternative 2. Large portions of the Decision Area would be changed from Class II and III to Class III and IV. There are some smaller portions that would be changed from Class III to Class II. For areas where classes are being changed from II to III or III to IV, the effects would be similar in nature to Alternative 2. For the portions that would change from Class III to Class II, the effects would be similar in nature to Alternative 3. Overall, wildland fire size and intensity would potentially be reduced. A portion of the WUI area near Baggs would change from a Class III to Class IV, and a portion of the area near the North Platte drainage would change from Class III to Class II. There would potentially be an increase in human presence and ignition sources that increase fire frequency.

4.4 Forest Management

This section presents potential impacts to forest management from VRM classifications. Existing conditions concerning forest management are described in Section 3.5.

4.4.1 Impacts under Alternative 1: Continuation of Existing Management

Forested land with potential for commercial harvest on Elk Mountain and along the USFS boundary in the Decision Area would remain in the VRM Class II and III designation. Commercial forest product removals conducted within VRM Class II areas would be regulated and restricted by rules and guidelines associated with the VRM Class II designation. This would influence the size or visibility of a harvest or treatment unit and size of a buffer zone between an existing road and/or vehicle route and a treatment or harvest area as well as influence the method of harvest and location and method of construction of temporary access roads.

4.4.2 Impacts under Alternative 2: Emphasis on Development of Resources

Forested land with potential for commercial harvest on Elk Mountain and along the USFS boundary would change from Class II and III to Class III and IV. Timber harvesting restrictions would be reduced as would viewshed protection, providing opportunities to maximize forest product harvests. Harvest sites may be more visible from roads and scenic areas. There also would be a greater emphasis on fire suppression in an effort to protect commercial timber stands.

4.4.3 Impacts under Alternative 3: Emphasis on Protection of Resources

Forested land with potential for commercial harvest on Elk Mountain would change from Class II and III to Class III. This would reduce restrictions, but not as much as Alternative 2. Compared to Alternative 2,

there would be more emphasis on the protection of resources and natural processes. Management actions would be conducted to enhance forest and ecosystem health while still providing commercial forest products. Techniques may include strategic harvesting in stands that would create a mosaic and distributed age class structure. Areas along the USFS boundary would remain VRM Class II and impacts would be similar to Alternative 1.

4.4.4 Impacts under Alternative 4: Preferred Alternative

Similar to Alternative 2, forested lands on Elk Mountain would change from Class II and III to Class IV. The effect on timber harvesting would be similar in nature as Alternative 2. Areas along the USFS boundary would remain VRM Class II and impacts would be similar to Alternative 1.

4.5 Lands and Realty

This section presents potential impacts to Lands and Realty from VRM classifications. Existing conditions concerning Lands and Realty are described in Section 3.6. A summary of VRM classifications on public lands with high wind potential by alternative is provided in **Table 4-3**.

Table 4-3 Acreage of VRM Classifications on Public Lands with High Wind Potential in the Decision Area

VRM Class	Alternative 1: No Action	Alternative 2: Development	Alternative 3: Protection	Alternative 4: Preferred
I	1,284	1,284	1,284	1,284
II	60,221	0	84,062	15,287
III	215,684	5,181	131,911	85,523
IV	3,233	273,957	63,165	178,328
Total	280,422	280,422	280,422	280,422

4.5.1 Impacts under Alternative 1: Continuation of Existing Management

VRM Class II areas would potentially limit opportunities for lands and realty development projects, such as wind energy development, utility transmission, and communication towers. To maintain the visual settings, lands and realty development projects would require mitigation measures, including reducing the height of structures, painting structures to match the existing environment, and/or redesigning or relocating facilities that would allow facilities to blend better into the surrounding landscape, and, in rare cases, would prohibit lands and realty actions. Class II and III VRM designations in the Decision Area may restrict the ability to develop wind energy. Other lands and realty development projects, such as transmission lines or communication sites, may be permitted in VRM Class IV areas and potentially VRM Class II and III areas, if mitigation measures limit impacts. Opportunities for wind energy development would potentially be limited on nearly 100 percent of areas classified as having high wind potential within the Decision Area if adequate mitigation measures could not be employed to ensure that developments conformed to VRM class objectives (**Table 4-3**).

Since large areas of high wind potential may not be available for development, Alternative 1 would not provide a balanced approach to meeting BLM's multiple use mission on public lands as well as the goals of the Carbon County land use plan in achieving a sustainable balance between energy development, ranching, scenic areas, and wildlife habitat on private lands.

4.5.2 Impacts under Alternative 2: Emphasis on Development of Resources

In this alternative, there would be an increase in VRM Class III and Class IV areas from Alternative 1 areas. The increase in VRM Class IV areas would allow for more opportunities for wind energy and utility developments to occur. Lands and realty development projects such as transmission lines or communication sites would be consistent with the objectives for VRM Class IV and potentially II and III, if mitigation measures that limit impacts are available. Opportunities for wind energy development would be limited on only 2 percent of areas with high wind potential if adequate mitigation measures were not developed (**Table 4-3**). In rare cases, development would restrict other lands and realty development opportunities for the same area.

Since most of the Decision Area would favor development opportunities, Alternative 2 would not provide a balanced approach to meeting BLM's multiple use mission on public lands as well as the goals of the Carbon County land use plan in achieving a sustainable balance between energy development, ranching, scenic areas, and wildlife habitat on private lands.

4.5.3 Impacts under Alternative 3: Emphasis on Protection of Resources

In this alternative, a decrease in VRM Class III and an increase in VRM Class IV areas from Alternative 1 levels is proposed. VRM Class II acreage would increase. Lands and realty development projects such as transmission lines or communication sites would be authorized in VRM Class IV and potentially II and III, if adequate mitigation measures reduce impacts to levels commiserate with the allowed level of change for each VRM Class. Class II and potentially Class III areas would likely limit opportunities for wind development and other lands and realty development projects such as transmission lines or communication sites if mitigation measures for large vertical structures are not available. Opportunities for wind energy development would be limited on approximately 77 percent of areas with high wind potential if adequate mitigation measures were not developed (**Table 4-3**).

Since VRM Classes would provide protection and allow for less opportunity for development, Alternative 3 would not provide a balanced approach to meeting BLM's multiple use mission on public lands as well as the goals of the Carbon County land use plan in achieving a sustainable balance between energy development, ranching, scenic areas, and wildlife habitat on private lands.

4.5.4 Impacts under Alternative 4: Preferred Alternative

In this alternative, there would be fewer restrictions on development than Alternative 1 as a result of increased VRM Class IV areas and decreased VRM Class III areas. Lands and realty development projects such as transmission lines or communication sites would be authorized in VRM Class IV areas and potentially II and III areas, if adequate mitigation measures reduce impacts to levels commiserate with the allowed level of change for each VRM Class. The change in VRM Class designations would provide more opportunities for lands and realty developments than Alternatives 1 and 3, but fewer areas than Alternative 2. Opportunities for wind energy development would be limited on approximately 36 percent of areas with high wind potential if adequate mitigation measures were not developed (**Table 4-3**).

Since VRM classes would provide a balance of development and protection, Alternative 4 would provide a balanced approach to meeting BLM's multiple use mission on public lands as well as the goals of the Carbon County land use plan in achieving a sustainable balance between energy development, ranching, scenic areas, and wildlife habitat on private lands.

4.6 Livestock Grazing

This section presents potential impacts to livestock grazing from VRM classifications. Existing conditions concerning livestock grazing are described in Section 3.7.

4.6.1 Impacts under Alternative 1: Continuation of Existing Management

VRM classifications that restrict landscape altering activities (VRM Class I in WSAs) or influence the size, design, or location of landscape altering activities (VRM Class II and III elsewhere) would indirectly help to maintain forage production, reduce the potential for noxious and invasive weeds, and meet the standards for rangeland health. Consideration of visual quality in VRM Class II or Class III areas would potentially influence the type, design, and/or location of proposed range improvements. This would rarely limit range improvements, but would affect the complexity of construction and/or maintenance to be consistent with the VRM standards.

4.6.2 Impacts under Alternative 2: Emphasis on Development of Resources

Alternative 2 would increase opportunities for landscape altering activities (compared to Alternative 1) as a large percentage of the Decision Area would be changed from Class II and III to Class III and IV. The increase in opportunities for landscape altering activities would likely have both short- and long-term impacts to grazing forage production. Livestock would either be temporarily displaced during landscape alteration or permanently displaced due to loss of forage resulting from installation of project facilities. Dust generated from landscape alteration also would decrease the palatability of vegetation and potentially cause health complications (Bovine Respiratory Disease) to livestock.

4.6.3 Impacts under Alternative 3: Emphasis on Protection of Resources

Alternative 3 would decrease opportunities for landscape altering activities (compared to Alternative 1) as large portions of the Decision Area would be changed from Class III and IV to Class II and III. Two areas of exception would be a northern and central portion of the Decision Area that would change from Class III to Class IV. Effects to these two isolated areas would be similar in nature to Alternative 2. An overall decrease in opportunities for landscape altering activities would result in less disturbance to grazing forage. Grazing forage production rates (and quality) would increase, as would the relative amount of shade created by woody plant growth in riparian areas. Flexibility of placement or type of rangeland improvement projects may be limited due to increased visual mitigation standards. Livestock management facilities (reservoirs and pipelines) would only be allowed if they are compatible with VRM class objectives. BMPs and mitigation measures for improvement projects would potentially become more complex and expensive.

4.6.4 Impacts under Alternative 4: Preferred Alternative

This alternative would increase opportunities for landscape altering activities (compared to Alternative 1), but not as much as Alternative 2. Large portions of the Decision Area would be changed from Class II and III to Class III and IV. There are some smaller portions that would be changed from Class III to Class II. For areas where VRM classes change from II to III or III to IV, the effects to livestock grazing would be similar in nature to Alternative 2. For those areas that would change from Class III to II, the effects to livestock grazing would be similar in nature to Alternative 3.

4.7 Minerals, Geology and Topography

This section presents potential impacts to mineral resources from VRM classifications. There would be no impact on geology and topography from VRM Class designations. Existing conditions concerning mineral resources are described in Section 3.8. A summary of VRM classes on public lands with high and moderate oil and gas potential is provided in **Table 4-4**.

4.7.1 Impacts under Alternative 1: Continuation of Existing Management

The majority of the Decision Area would remain VRM Class III and the entire Decision Area is open to oil and gas leasing. VRM Class III areas affect the placement of facilities associated with minerals exploration and development activities on public lands and would exert a definite influence on finding

acceptable locations where development might occur as well as the size and coloration of facilities depending on the visual class and location. Areas designated as VRM Class I (5,613 acres) would restrict landscape alterations associated with oil and gas development. The majority of areas with high and moderate oil and gas potential are within VRM Class III and IV areas, which would produce few if any conflicts between mineral extraction activities and VRM objectives (**Table 4-4**).

Table 4-4 VRM Classes on Public Lands with High and Moderate Oil and Gas Potential in the Decision Area

VRM Class	Alternative 1: No Action	Alternative 2: Development	Alternative 3: Protection	Alternative 4: Preferred
Leased Areas with High and Moderate Potential	235, 897	235,897	235,897	235,897
VRM Class I	0	0	0	0
VRM Class II	1,693	1,076	146,074	2,798
VRM Class III	208,999	4,254	89,823	49,083
VRM Class IV	25,205	230,567	0	184,016
Unleased Areas with High and Moderate Potential	19,924	19,924	19,924	19,924
VRM Class I	0	0	0	0
VRM Class II	631	370	9,618	1,769
VRM Class III	17,950	1,305	10,306	2,689
VRM Class IV	1,343	18,249	0	15,466
Total Leased and Unleased Areas with High and Moderate Potential	255,821	255,821	255,821	255,821

4.7.2 Impacts under Alternative 2: Emphasis on Development of Resources

Compared to Alternative 1, there would be an increase in area designated as VRM Class IV, resulting in few if any conflicts between oil and gas development and VRM class objectives. Potential coal developments (China Butte, Atlantic Rim, and Red Rim) located in the northwest portion of the Decision Area, would be designated as VRM Class IV. In the western portion of the Decision Area, existing CBNG projects and moderate and high potential oil, gas, and CBNG areas would be designated as Class IV. Areas designated as VRM Class I (5,613 acres) would continue to restrict landscape alteration associated with oil and gas development. More areas with high and moderate oil and gas potential would occur in VRM Class II compared to Alternative 1, which would potentially change the location or design of oil and gas facilities, and in rare cases restrict development activities (**Table 4-4**).

4.7.3 Impacts under Alternative 3: Emphasis on Protection of Resources

Compared to Alternative 1, there would be a decrease in Class III areas and increase in Class II and IV areas. The increase in Class IV acreage would be due to two areas in the northern and central portion of the Decision Area that would change from Class III to Class IV. Effects to these two isolated areas would be similar in nature to Alternative 2. For areas where the VRM Class would change from III and IV to II

and III, there would be an overall decrease in opportunities for minerals exploration and development activities if adequate mitigation measures were not developed. The potential for coal development in the northwest portion of the Decision Area would remain as Class III; however, existing CBNG projects and moderate and high potential oil, gas, and CBNG areas in the western portion of the Decision Area would be changed from Class III to Class II resulting in new mineral extraction projects being mitigated so as to ensure development projects conform with the VRM objectives in this area. Approximately 39 percent of areas with high and moderate oil and gas potential would occur in VRM Class III and none would occur in VRM Class IV areas (**Table 4-4**).

4.7.4 Impacts under Alternative 4: Preferred Alternative

Compared to Alternative 1, there would be a decrease in areas designated as VRM Class II and Class III and increase in VRM Class IV areas. For areas where VRM classes would be changed from II to III or III to IV, the effects to mineral resources would be similar in nature to Alternative 2. For those areas that would change from Class III to II, the effects to mineral resources would be similar in nature to Alternative 3. Although more areas with high and moderate oil and gas potential would occur in VRM Class II compared to Alternatives 1 and 2, approximately 98 percent of areas with high and moderate oil and gas potential would occur in VRM Class III and IV areas (**Table 4-4**). This would result in fewer mitigation measures necessary to meet VRM class objectives.

4.8 Off-highway Vehicles

This section presents potential impacts to OHV management from VRM classifications. Existing conditions concerning OHV are described in Section 3.9.

4.8.1 Impacts under Alternative 1: Continuation of Existing Management

Visual resources are an important determinant of the quality of OHV settings that would protect the scenic qualities of the OHV settings within the areas managed as Class I, Class II, and, in some instances, Class III. Some OHV users seek natural landscape settings and would be displaced from areas managed as Class III and IV, whereas other users seek the experience and opportunities for OHV activity regardless of setting. Opportunities for landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character in Class III and IV areas may result in degradation of the OHV setting desired by most OHV users, as well as potential displacement of OHV users. Alternative 1 provides protection of OHV settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations and Class B scenery with VRM Class II and III designations. Although this alternative provides more protective VRM management in the northern portion of the Decision Area, opportunities for OHV activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.8.2 Impacts under Alternative 2: Emphasis on Development of Resources

In this alternative, an increase in VRM Class IV areas from Alternative 1 would allow for more landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character to occur in the Decision Area. OHV users seeking natural landscape settings may be displaced from areas managed as VRM Class III and IV if increased landscape altering activities and visual intrusions were to occur. This alternative would allow for the most level of change that would affect OHV users. Alternative 2 provides the greatest potential for alteration of OHV settings in areas determined to contain Class A and B scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class III and IV designations. Although this alternative allows for a higher degree of alteration of OHV settings in the northern portion of the Decision Area, opportunities for OHV activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In

addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.8.3 Impacts under Alternative 3: Emphasis on Protection of Resources

In this alternative, a decrease in VRM Class IV areas from Alternative 2 would reduce opportunities for landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character in the Decision Area. Additional restrictions on landscape altering activities and visual intrusions would preserve the visual quality of OHV settings and OHV users would not be displaced. This alternative would be the most restrictive on potential future landscape altering activities and visual intrusions that would affect OHV users. Alternative 3 provides protection of OHV settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II and III designations and provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV designations. Although this alternative allows for a moderate to high degree of alteration of OHV settings in the northern portion of the Decision Area, opportunities for OHV activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.8.4 Impacts under Alternative 4: Preferred Alternative

In this alternative, there would be fewer restrictions on opportunities for landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character than Alternatives 1 and 3 as a result of increased VRM Class IV areas. More acreage designated VRM Class III and IV may result in degradation of the OHV setting desired by most OHV users and the displacement of OHV users by landscape altering activities and visual intrusions. This alternative would be more restrictive on potential future landscape altering activities and visual intrusions that would affect OHV users than Alternative 2, but less restrictive than Alternatives 1 and 3. Alternative 4 provides protection of OHV settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations, except for the Elk Mountain area, which would allow for alteration of the visual setting with a VRM Class IV designation. This alternative provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV designations. Although this alternative allows for a higher degree of alteration of OHV settings in the northern portion of the Decision Area, opportunities for OHV activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas are influenced by uses on private and state lands beyond BLM's jurisdiction.

4.9 Recreation and Visitor Services

This section presents potential impacts to recreation and visitor services from VRM classifications. Existing conditions concerning recreation resources are described in Section 3.11. **Table 4-5** summarizes changes to VRM Classes near recreation sites by alternative.

4.9.1 Impacts under Alternative 1: Continuation of Existing Management

VRM actions would maintain the overall integrity of the scenic qualities while allowing for opportunities for development. These designations would limit visual impacts associated with management actions in VRM Class I and Class II areas, whereas VRM Class III and Class IV would allow more modification of the natural environment. Strict mitigation associated with VRM Class I and Class II would prevent projects from contrasting with the existing elements, which would retain or improve the recreational settings. Mitigation associated with VRM Class III and Class IV would allow more contrasts to the natural setting, which in turn would detract from the recreational setting. Altering the recreational setting would influence recreational activities, by displacing some recreationists seeking back country to middle country recreation settings. The Continental Divide Scenic Trail and North Platte River SRMAs would

continue to be within VRM Class II and III areas where most development activities are greatly mitigated to reduce visual impacts. Developed and undeveloped recreation sites would remain VRM Class II and III as shown in **Table 4-5**.

Table 4-5 VRM Classes of Recreation Sites in the Decision Area by Alternative

Recreation Site Name	Alternative 1: No Action	Alternative 2: Development	Alternative 3: Protection	Alternative 4: Preferred
Developed Sites				
Red Rim	III	IV	III	IV
Teton Reservoir	III	IV	III	IV
Encampment River Campground	II	III	II	II
Bennet Peak Campground	III	III	II	II
Corral Peak Campground	III	III	II	II
Undeveloped Sites				
Big Creek	II	III	II	II
Little Sage Reservoir	III	IV	III	IV
Prospect Creek	II	III	II	II

Alternative 1 provides protection of recreation settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations and Class B scenery with VRM Class II and III designations. Although this alternative provides more protective VRM management in the northern portion of the Decision Area, opportunities for recreation activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.9.2 Impacts under Alternative 2: Emphasis on Development of Resources

This alternative would designate the most acreage within the Decision Area as VRM Class IV. VRM Classes I and II would protect to a greater extent the recreational setting, relative to VRM Classes III and IV. Existing VRM Class I acreage in WSAs and the Class II area at the JO Ranch would remain. Landscape altering activities and visual intrusions, such as wind energy and mineral development, are allowed within VRM Class III and IV areas, and to a lesser extent VRM Class II areas, possibly degrading the quality of the recreational setting. Developed and undeveloped recreation sites would become VRM Class III and IV as shown in **Table 4-5**. While aboveground facilities would not be allowed within 0.25 mile of recreation sites, the viewsheds of these sites beyond 0.25 mile would be open to development, potentially reducing the quality of the recreational setting. Under this alternative, all of the North Platte River SRMA and the Continental Divide National Scenic Trail SRMA would be within areas designated VRM Class III and IV, resulting in greater potential impacts to the setting by resource development activities than Alternative 1. The Continental Divide Trail is in a Middle Country setting, typically 0.5 mile from improved roads in largely natural surroundings. Visitor uses on the Continental Divide Trail often include camping, hiking, and mountain biking. If more development were allowed, recreationists seeking a more natural setting may be displaced. River parcels in the North Platte River SRMA would be managed to meet Middle Country guidelines, preserving the natural landscape. Additionally, surface disturbing activities within 0.25 mile of the river would be intensively managed to

maintain visual resource quality. The river is in a valley and would likely be shielded from most development unless it were to occur within or near the river floodplain. This alternative would allow for the most opportunities for potential future landscape altering activities and visual intrusions that would affect recreational setting and use.

Alternative 2 provides the greatest potential for alteration of recreation settings in areas determined to contain Class A and B scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class III and IV designations. Although this alternative allows for a higher degree of alteration of recreation settings in the northern portion of the Decision Area, opportunities for recreation activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.9.3 Impacts under Alternative 3: Emphasis on Protection of Resources

This alternative would designate the most amount of acreage as VRM Class II. Most of the North Platte River SRMA and approximately half of the Continental Divide National Scenic Trail SRMA would be within designated VRM Class II areas, resulting in minimal disturbance to the recreational setting and disruption of recreation use. Surface disturbance stipulations associated with Middle Country settings would be the same as in Alternative 2. More developed recreation sites would become VRM Class II as depicted in **Table 4-5**, which would protect the recreation setting at these sites.

Alternative 3 provides protection of recreation settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II and III designations and provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV designations. Although this alternative allows for a moderate to high degree of alteration of recreation settings in the northern portion of the Decision Area, opportunities for recreation activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction. This alternative would be the most restrictive on opportunities for potential future landscape altering activities and visual intrusions that would affect recreational use and setting.

4.9.4 Impacts under Alternative 4: Preferred Alternative

Under this alternative, more acreage would be designated VRM Class IV than Alternative 1 and 3, but less acreage would be designated VRM Class IV than Alternative 2. This alternative would be more restrictive on potential future landscape altering activities and visual intrusions that would impact recreational use and setting than Alternative 2, but less restrictive than Alternatives 1 and 3. All of the Continental Divide National Scenic Trail SRMA would be within designated VRM Class III and IV areas, possibly allowing for more landscape altering activities and visual intrusions that would disrupt recreation uses and the recreational setting. Most of the North Platte River SRMA would be within designated VRM Class II areas, resulting in minimal disturbance to the recreational setting and disruptions to recreation use. Surface disturbance stipulations associated with Middle Country settings would be the same as in Alternative 2. The setting of developed and undeveloped recreation sites in the checkerboard landownership pattern would not be protected with VRM Class IV whereas the setting of recreation sites in the Saratoga Valley would become more protected with VRM Class II as shown in **Table 4-5**.

Alternative 4 provides protection of recreation settings in areas determined to contain Class A scenery as depicted in the VRI (shown on **Figure 3-4**) with VRM Class II designations, except for the Elk Mountain area, which would allow for alteration of the visual setting with a VRM Class IV designation. This alternative provides varying levels of protection and alteration of Class B scenery with VRM Class II, III, and IV designations. Although this alternative allows for a higher degree of alteration of recreation settings in the northern portion of the Decision Area, opportunities for recreation activities are limited in the checkerboard ownership areas and other fractured landownership patterns because of reduced

public access. In addition, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.10 Special Designations and Management Areas

This section presents potential impacts to SD/MAs from VRM classifications. Existing conditions concerning special designations and management areas are described in Section 3.13.

4.10.1 Impacts under Alternative 1: Continuation of Existing Management

The Encampment River Canyon and Prospect Mountain WSAs would continue to be managed as VRM Class I, while the surrounding land would be managed as VRM Class II, preserving the natural character of both the WSAs and the adjacent landscape. The Sand Hills/JO Ranch ACEC would continue to be managed as VRM Class II, with an associated VRM Class II boundary extending two miles or the visual horizon from the ACEC perimeter, providing some protection to the setting of the NRHP listed property.

4.10.2 Impacts under Alternative 2: Emphasis on Development of Resources

In this alternative, an increase in VRM Class IV areas from Alternative 1 would allow for additional opportunities for landscape altering activities and visual intrusions to occur in the Decision Area with fewer restrictions. The Encampment River Canyon and Prospect Mountain WSAs would retain the VRM Class I designation. The Sand Hills/JO Ranch ACEC, known for its unique vegetation, wildlife habitat, and recreational opportunities, would retain a VRM Class II designation. Increased VRM Class III and IV acreage would allow for more landscape altering activities and visual intrusions and corresponding impacts to the area surrounding the three SD/MAs in the Decision Area. This alternative would allow for the greatest level of change that would affect the visual setting of SD/MAs.

4.10.3 Impacts under Alternative 3: Emphasis on Protection of Resources

In this alternative, a decrease in VRM Class IV areas from Alternative 2 would restrict opportunities for potential future landscape altering activities and visual intrusions in the Decision Area. The Encampment River Canyon and Prospect Mountain WSAs would retain the VRM Class I designation. The Sand Hills/JO Ranch ACEC would retain a VRM Class II designation. A decrease in VRM Class III and IV acreage would restrict landscape altering activities and visual intrusions and corresponding impacts to other SD/MAs in the Decision Area. This alternative would allow for the least level of change from future landscape altering activities and visual intrusions that would affect the visual setting of SD/MAs.

4.10.4 Impacts under Alternative 4: Preferred Alternative

In this alternative, there would be fewer restrictions on landscape altering activities and visual intrusions than Alternative 1 and 3 as a result of increased VRM Class IV areas. The Encampment River Canyon and Prospect Mountain WSAs would retain the VRM Class I designation. The Sand Hills/JO Ranch ACEC would retain a VRM Class II designation. Increased VRM Class III and IV acreage would allow for more landscape altering activities and visual intrusions and corresponding impacts to other SD/MAs in the Decision Area. This alternative would be more restrictive on opportunities for potential future landscape altering activities and visual intrusions that would affect the visual setting of SD/MAs than Alternative 2, but less than Alternatives 1 and 3.

4.11 Transportation and Access

This section presents potential impacts to transportation and access from VRM classifications. Existing conditions concerning transportation and access are described in Section 3.14.

4.11.1 Impacts under Alternative 1: Continuation of Existing Management

Existing VRM Class II designations (124,207 acres) would potentially restrict transportation-related projects. To maintain the visual settings, mitigation measures would modify the location of the road, road surface color, and design and would potentially prohibit transportation and access actions.

4.11.2 Impacts under Alternative 2: Emphasis on Development of Resources

Impacts resulting from VRM management classes would be the same as those described in Alternative 1, except there would be a reduction in VRM Class II acreage to 1,445 acres. This alternative would increase opportunities for placement of transportation and access actions.

4.11.3 Impacts under Alternative 3: Emphasis on Protection of Resources

Impacts resulting from VRM management classes would be the same as those described in Alternative 1, except there would be an increase in VRM Class II acreage to 318,792 acres. This alternative would decrease opportunities for placement of transportation and access actions.

4.11.4 Impacts under Alternative 4: Preferred Alternative

Impacts resulting from VRM management classes would be the same as those described in Alternative 1, except there would be an increase in VRM Class II acreage to 78,044 acres. This alternative would increase opportunities for placement of transportation and access actions.

4.12 Vegetation

Existing conditions concerning vegetation are described in Section 3.15. There would be little impacts on vegetation resources from VRM decisions. VRM decisions would influence the ability to locate development facilities including oil and gas facilities, wind energy development, communication sites, and utilities. These actions in turn have direct impacts on vegetation including sensitive plants, weeds, and livestock forage. For a full discussion of these impacts, please refer to the respective sections in the Rawlins RMP (2008a).

4.13 Visual Resources

This section presents potential impacts to visual resources from VRM classifications. Existing conditions concerning visual resources are described in Section 3.16. **Table 4-6**, **Table 4-7**, and **Table 4-8** show protections afforded to visual resource values defined in the VRI by the VRM Classes for each alternative. Visual resource values that are managed at lower VRM Classes (i.e., VRI Class II managed as VRM Class III or areas of high scenic quality/sensitivity levels managed for major level landscape modifications in VRM Class IV) would directly impact the visual resource.

4.13.1 Impacts under Alternative 1: Continuation of Existing Management

Visual resource management classifications would have indirect impacts to the scenic qualities of the natural landscapes. Visual resource management classifications determine the allowable level of visual impact in specific areas while maintaining the effectiveness of land use allocations for activities based on other resources. Limitations on visual contrasts in VRM Class I and II areas are intended to retain or improve the quality of visual resources, whereas Class III and IV would allow more visual contrasts associated with landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character. Because VRM Class IV objectives are to allow for a high level of contrast to the natural setting, management actions would allow for opportunities for landscape altering activities and visual contrasts to impact the scenic qualities of the natural landscapes so that some natural settings would eventually trend towards an industrialized setting.

Table 4-6 Comparison of VRI and VRM Classes on Public Lands in the Decision Area by Alternative

Alternatives – VRM Management Class Designations		VRI Class I (acres)		VRI Class II (acres)		VRI Class III (acres)		VRI Class IV (acres)*	
		0	%	352,677	%	163,366	%	226,569	%
Alt 1: No Action	Acres								
VRM I	5,613	0	0	5,613	2	0	0	0	0
VRM II	124,207	0	0	102,028	29	11,835	7	10,344	5
VRM III	573,612	0	0	239,555	68	141,289	86	192,768	85
VRM IV	39,180	0	0	5,481	2	10,241	6	23,457	10
Sum	742,612	0	0	352,677	100	163,366	100	226,569	100
Alt 2: Development									
VRM I	5,613	0	0	5,613	2	0	0	0	0
VRM II	1,445	0	0	1,331	0	0	0	115	0
VRM III	160,395	0	0	82,137	23	16,881	10	61,377	27
VRM IV	575,159	0	0	263,596	75	146,485	90	165,078	73
Sum	742,612	0	0	352,677	100	163,366	100	226,570	100
Alt 3: Protection									
VRM I	5,613	0	0	5,613	2	0	0	0	0
VRM II	318,792	0	0	250,728	71	24,149	15	43,914	19
VRM III	340,589	0	0	95,870	27	132,294	81	112,425	50
VRM IV	77,618	0	0	466	0	6,922	4	70,230	31
Sum	742,612	0	0	352,677	100	163,366	100	226,569	100
Alt 4: Preferred									
VRM I	5,613	0	0	5,613	2	0	0	0	0
VRM II	78,044	0	0	74,696	21	387	0	2,961	1
VRM III	228,223	0	0	114,156	32	27,328	17	86,740	38
VRM IV	430,732	0	0	158,212	45	135,651	83	136,869	60
Sum	742,613	0	0	352,677	100	163,366	100	226,569	100

* VRI Class IV includes 430 acres of public lands not inventoried.

Table 4-7 Comparison of VRM Classes and Sensitivity Level Rating Units (SLRU) on Public Lands in the Decision Area by Alternative

Alternatives – VRM Management Class Designations		SLRU Low (acres)		SLRU Moderate (acres)		SLRU High (acres)		Not Inventoried (acres)	
		140,449	%	157,130	%	444,587	%	446	%
Alt 1: No Action	Acres								
VRM I	5,613	0	0	0	0	5,613	1	0	0
VRM II	124,207	1,830	1	26,682	17	95,282	21	413	93
VRM III	573,612	126,208	90	110,530	70	336,841	76	33	7
VRM IV	39,180	12,411	9	19,918	13	6,851	2	0	0
Sum	742,612	140,449	100	157,130	100	444,587	100	446	100
Alt 2: Development									
VRM I	5,613	0	0	0	0	5,613	1	0	0
VRM II	1,445	0	0	115	0	1,331	0	0	0
VRM III	160,395	48,125	34	30,072	19	81,890	18	308	69
VRM IV	575,159	92,325	66	126,943	81	355,753	80	138	31
Sum	742,612	140,449	100	157,130	100	444,587	100	446	100
Alt 3: Protection									
VRM I	5,613	0	0	0	0	5,613	1	0	0
VRM II	318,792	10,091	7	64,184	41	244,105	55	413	93
VRM III	340,589	77,997	56	68,191	43	194,387	44	13	3
VRM IV	77,618	52,361	37	24,755	16	482	0	20	5
Sum	742,612	140,449	100	157,130	100	444,587	100	446	100
Alt 4: Preferred									
VRM I	5,613	0	0	0	0	5,613	1	0	0
VRM II	78,044	2,437	2	7,448	5	67,751	15	408	92
VRM III	228,223	59,674	42	45,267	29	123,278	28	5	1
VRM IV	430,732	78,338	56	104,416	66	247,945	56	33	7
Sum	742,613	140,449	100	157,130	100	444,587	100	446	100

Table 4-8 Comparison of VRM Classes and Scenic Quality Rating Units (SQRU) on Public Lands in the Decision Area by Alternative

Alternatives – VRM Management Class Designations		SQRU A (acres)		SQRU B (acres)		SQRU C (acres)		Not Inventoried (acres)	
		30,726	%	435,440	%	276,000	%	446	%
Alt 1: No Action	Acres								
VRM I	5,613	5,586	18	27	0	0	0	0	0
VRM II	124,207	21,784	71	93,839	22	8,172	3	413	93
VRM III	573,612	3,356	11	327,220	75	243,003	88	33	7
VRM IV	39,180	0	0	14,355	3	24,825	9	0	0
Sum	742,612	30,726	100	435,440	100	276,000	100	446	100
Alt 2: Development									
VRM I	5,613	5,586	18	27	0	0	0	0	0
VRM II	1,445	0	0	1,331	0	115	0	0	0
VRM III	160,395	18,745	61	76,842	18	64,500	23	308	69
VRM IV	575,159	6,395	21	357,241	82	211,385	77	138	31
Sum	742,612	30,726	100	435,440	100	276,000	100	446	100
Alt 3: Protection									
VRM I	5,613	5,586	18	27	0	0	0	0	0
VRM II	318,792	18,745	61	265,021	61	34,614	13	413	93
VRM III	340,589	6,395	21	123,314	28	210,866	76	13	3
VRM IV	77,618	0	0	47,078	11	30,520	11	20	5
Sum	742,612	30,726	100	435,440	100	276,000	100	446	100
Alt 4: Preferred									
VRM I	5,613	5,586	18	27	0	0	0	0	0
VRM II	78,043	18,719	61	58,796	14	119	0	408	92
VRM III	228,223	25	0	135,502	31	92,691	34	5	1
VRM IV	430,732	6,395	21	241,115	55	183,189	66	33	7
Sum	742,612	30,726	100	435,440	100	276,000	100	446	100

Adequate visual mitigation in the form of BMPs (noted in Appendix 15 of the RMP; BLM 2008b) would allow some landscape altering activities and visual intrusions that minimize the extent of modifications to the form, line, color, and texture of the landscape character and minimize visual contrast with the natural setting to be compatible with VRM Class III. Landscape altering activities and visual contrast in Class II areas would be mitigated so as to retain the objectives of the VRM class and not attract the attention of the casual observer. Landscape altering activities and visual contrast would not occur in VRM Class I areas, which are managed under the WSA non-impairment standard.

Mitigation for the designated VRM Classes would prevent significant impacts, except where facilities are at such a scale and location as to dominate the landscape, which would create visual distractions from the natural landscapes. The checkerboard landownership pattern along the original UPRR ROW is not conducive to VRM Class II due to lack of visual mitigation control over adjacent private surface ownership where development would potentially impair visual qualities. The majority of the checkerboard landownership pattern would be managed as Class III, which would allow landscape altering activities and visual contrast that modify the form, line, color, and texture of the landscape character to be noticed, but not dominate the landscape.

Compared to the VRI classes, Alternative 1 manages less area as VRM Class II, more area as VRM Class III, and less area as VRM Class IV (**Table 4-6**). Under Alternative 1, approximately 76 percent (336,841 acres) of areas with high sensitivity levels on public lands in the Decision Area would be managed for moderate change with VRM Class III (**Table 4-7**). Approximately 71 percent (21,784 acres) of areas with High Sensitive Scenic Quality A on public lands in the Decision Area would be managed for minor change with VRM Class II (**Table 4-8**). Although this alternative provides more protective VRM management in the northern portion of the Decision Area, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.13.2 Impacts under Alternative 2: Emphasis on Development of Resources

In this alternative, an increase in VRM Class IV areas from Alternative 1 would allow for more opportunities for landscape altering activities and visual contrast in the Decision Area. This alternative would provide the highest level of change to the natural elements of form, line, color and texture, resulting in the greatest alteration to the natural setting, potentially resulting in an industrial setting. Management actions associated with visual resources would provide protection measures to mitigate impacts from surface disturbing activities in VRM Class II and III areas, as discussed in Alternative 1. Compared to the VRI classes, Alternative 2 manages significantly less area as VRM Class II, less area as VRM Class III, and more area as VRM Class IV (**Table 4-6**). Under Alternative 2, approximately 80 percent (355,753 acres) of areas with high sensitivity levels on public lands in the Decision Area would be managed for major change with VRM Class IV (**Table 4-7**), which allows for more landscape altering activities and visual contrast in these areas than Alternative 1. Approximately 61 percent (18,745 acres) of areas with High Sensitive Scenic Quality A on public lands in the Decision Area would be managed for minor change with VRM Class II (**Table 4-8**), which allows for more landscape altering activities and visual contrast in these areas than Alternative 1. Although this alternative allows for a higher degree of alteration of visual resources in the northern portion of the Decision Area, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.13.3 Impacts under Alternative 3: Emphasis on Protection of Resources

This alternative would be the most restrictive on opportunities for potential future landscape altering activities and visual contrast that would affect visual resources. In this alternative, a decrease in VRM Class IV areas from Alternative 2 would require mitigation measures to ensure that visually contrasting elements did not dominate the landscape. If landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character were restricted, associated impacts to visual resources would not occur, and scenic quality would be maintained as a result of increased VRM Class II acreage. Management actions associated with visual resources would provide protection measures to

mitigate impacts from landscape altering activities and visual intrusions in VRM Class II and III areas, as discussed in Alternative 1. Compared to the VRI classes, Alternative 3 manages slightly less area as VRM Class II, more area as VRM Class III, and less area as VRM Class IV (**Table 4-6**). Under Alternative 3, approximately 55 percent (244,105 acres) of areas with high sensitivity levels on public lands in the Decision Area would be managed for minor change with VRM Class II and 44 percent (194,387 acres) would be managed for moderate change with VRM Class III (**Table 4-7**), which allows for fewer landscape altering activities and visual contrast in these areas than Alternatives 1 and 2. Approximately 61 percent (18,745 acres) of areas with High Sensitive Scenic Quality A on public lands in the Decision Area would be managed for minor change with VRM Class II (**Table 4-8**), which is reduced from Alternative 1 but the same as Alternative 2. Although this alternative allows for a moderate to high degree of alteration of visual resources in the northern portion of the Decision Area, the visual setting in these areas is influenced by uses on private and state lands beyond BLM's jurisdiction.

4.13.4 Impacts under Alternative 4: Preferred Alternative

This alternative would be more restrictive on potential future landscape altering activities and visual contrast than Alternative 2, but less restrictive on than Alternatives 1 and 3. In this alternative, more VRM Class IV areas than Alternative 1 and 3 would allow for more opportunities for landscape altering activities and visual intrusions that modify the form, line, color, and texture of the landscape character that dominate the viewshed in the Decision Area, which alter scenic quality and the natural setting. Management actions associated with visual resources would provide protection measures to mitigate impacts from landscape altering activities and visual contrast in VRM Class II and III areas, as discussed in Alternative 1. Compared to the VRI classes, Alternative 4 manages less area as VRM Class II, more area as VRM Class III, and more area as VRM Class IV (**Table 4-6**). Under Alternative 4, approximately 56 percent (247,945 acres) of areas with high sensitivity levels on public lands in the Decision Area would be managed for major change with VRM Class IV (**Table 4-7**), which allows for more landscape altering activities and visual contrast in these areas than Alternatives 1 and 3 but less than Alternative 2. Approximately 61 percent (18,719 acres) of areas with High Sensitive Scenic Quality A on public lands in the Decision Area would be managed for minor change with VRM Class II (**Table 4-8**), which is reduced from Alternative 1 and slightly reduced from Alternatives 2 and 3. Although this alternative allows for a higher degree of alteration of visual resources in the northern portion of the Decision Area, the visual setting in these areas are influenced by uses on private and state lands beyond BLM's jurisdiction.

4.14 Surface Water

Existing conditions concerning water quality, watershed, and soils are described in Section 3.17. There would be little or no impacts on water quality, watershed, and soils resources from VRM decisions. VRM decisions would influence the ability to locate development facilities including oil and gas facilities, wind energy development, communication sites, and utilities. These actions in turn have direct impacts on water quality, watershed and soils. For a full discussion of these impacts, please refer to the respective sections in the Rawlins RMP (2008a).

4.15 Cumulative Impacts

Cumulative impacts are the effects on the environment that result from the implementation of any of the alternatives in combination with other actions outside the scope of this plan, either within the Planning Area or outside it. The CEQ regulations for implementing NEPA define cumulative impacts as follows:

“...the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” (40 CFR 1508.7)

The cumulative impact analysis evaluates the potential impacts associated with the VRM RMP Plan Amendment alternatives as presented in Chapter 2.0, in combination with the potential impacts associated with other relevant activities that have occurred, are occurring, or are likely to occur in the vicinity of the Planning Area. The cumulative effects of past and present actions and activities on resources are manifested in the current condition of the resource, which is described in Chapter 3.0 (Affected Environment) for resources on lands administered by the BLM within the Planning Area.

4.15.1 Impact Assessment Methodology

Land use planning is the BLM's broadest level of decisionmaking. BLM planning-level decisions are programmatic decisions that tend to be allocations of resources and "zoning" of areas to emphasize certain management direction. Consequently, the cumulative impact analysis also is broad and general in nature. The planning level analyses present ranges and qualitative impact conclusions. BLM considers cumulative impacts in subsequent NEPA documents that analyze specific project or address specific program issues.

While the RMP Amendment alternatives address VRM management within the smaller Decision Area (discussed in Section 1.3), the cumulative impact analysis area addresses the Planning Area consisting of a nominally 30-mile buffer from the CCSM project (discussed in Section 1.2).

CEQ guidance directs cumulative impact analysis to focus on important issues of national, regional, or local significance. This analysis focuses on whether the VRM Plan Amendment actions would collectively be of potential significance when combined with other past, present, and reasonably foreseeable future actions. Specific significance criteria from the Rawlins RMP (2008a) were used in this Plan Amendment. The criteria provide thresholds beyond which impacts would be considered significant.

4.15.2 Projects and Activities Considered

The Planning Area consists of sparse populations, rural characteristics, and natural resource-based economies. Projects and activities in the northern portion of the Planning Area, including Rawlins, Sinclair, Wamsutter, and Hanna, are largely influenced by the presence of I-80 and the UPRR mainline and has centered on commercial development associated with oil and gas, mining, and ranching activities. Projects and activities in the southern portion of the Planning Area are largely influenced by the presence of agricultural and ranching activity, proximity to the National Forest, and the presence of scenery and outdoor recreation opportunities (e.g., fishing, boating, big game hunting, OHV use, and dispersed recreation). The towns of Elk Mountain, Saratoga, Riverside, Encampment, and Baggs as well as the Platte Valley have capitalized on these activities by centering their economies on ranching, seasonal recreation, tourist services, fishing and hunting, second homes and retirement homes, and some commercial timber activity.

Regional energy and mineral development activities in the Planning Area include oil and gas development, wind energy projects, and utility corridor projects. Current oil and gas development projects in the western portion of the Planning Area include Desolation Flats, Continental Divide/Wamsutter II, Creston Blue Gap, and Atlantic Rim. Current wind energy development occurs on private lands in the eastern portion of the Planning Area. Pending projects include the Continental Divide Creston oil and gas development; Gateway West, Gateway South, and TransWest Express transmission lines; and pending wind energy applications.

BLM's VRM management decisions analyzed in this Plan Amendment have the greatest likelihood to influence potential future projects and activities in the Planning Area (described above). Other BLM and federal, state, and local agency management decisions that influence the scope and location of future projects would result in cumulative impacts.

4.15.3 Cumulative Impact Analysis

VRM classifications that limit surface disturbing activities and developments (VRM Class I) or influence the size, design, or location of surface disturbing activities and developments (VRM Class II and III) in the Planning Area favor resources and uses that value a natural setting. VRM Class IV would allow for larger developments such as wind energy, utility developments, mineral developments, and other management activities that require major modifications of the existing character of the landscape. The approved plan for the Medicine Bow-Routt National Forest also provides management actions, stipulations, and environmental constraints for activities occurring on USFS lands. BLM and USFS management actions, stipulations, and environmental constraints would cumulatively favor resources and uses that value a natural setting in combination with VRM Class I, II, and to a lesser degree Class III. Other BLM and USFS management actions would cumulatively favor larger developments that require major modifications of the existing character of the landscape in combination with VRM Class IV.

Projects and activities of other jurisdictions are influenced by State of Wyoming authority to regulate large industrial development. For example, Wyoming's Sage-Grouse Core Management Areas Version 3 (finalized June 29, 2010) and sagebrush habitat as specified in WSEO 2010-4 (issued August 18, 2010) preclude wind energy development. State of Wyoming legislation in combination with VRM Class I, II, and to a lesser degree Class III on public lands would cumulatively influence siting of projects and activities in the Planning Area.

County planning and zoning also influence where projects and activities occur within their jurisdiction. In addition, the custom and culture of area communities that drive public sentiment in the federal, state, and local approval processes also influence where projects and activities occur in the Planning Area. Depending on the type and location of project activities, outside influences could cumulatively favor resources and uses that value a natural setting in combination with VRM Class I and II. Conversely, larger developments that require moderate to major modifications of the existing character of the landscape would be consistent with VRM Class III and IV.

Although BLM and USFS environmental constraints do not apply to private and state lands, development on private and state lands in the checkerboard landownership could result in cumulative effects to BLM management. Large-scale and high-profile developments, such as wind turbines and communication towers, on private and state lands could cumulatively alter the landscape from a natural setting to a more industrialized setting, increasing the difficulty for the BLM to manage the prescribed VRM objectives on the surrounding public lands.

Alternative 3 would have the most cumulative influence on how and where projects and activities on public lands occur because this alternative considers the most VRM Class II area. Conversely, Alternative 2 would have the least cumulative influence on how and where projects and activities on public lands occur because this alternative considers the most VRM Class IV area. The VRM classes in Alternative 1 have more cumulative influence on how and where projects and activities on public lands occur because of the large areas of VRM Class II and III, as opposed to Alternative 4, which provides a balance of VRM Class IV in the northern and western portions of the Planning Area associated with the checkerboard landownership patterns and VRM Class II and III in the southern and eastern portions of the Planning Area. Alternatives 2 and 4, which manage the most area of checkerboard landownership as VRM Class IV, would have the least potential for conflicts with BLM's manageability of prescribed VRM objectives from potential developments on private and state lands.