
4.0 - ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This chapter provides an analysis of the environmental consequences from implementation of the Proposed Action (Alternative A) and Alternative B (the No Action Alternative). Best Management Practices that would avoid or reduce impacts under Alternative A have been included in Chapter 2 of this EA, and the analyses in this chapter assume that those measures would be implemented.

Direct impacts to resources, those caused by the action and occur at the same time and/or place (40 CFR 1508.8), in the following analyses are described in terms of initial impacts from construction and development activities. In areas where interim reclamation is implemented, ground cover by herbaceous and woody species could re-establish within 7 to 8 years following seeding of plant species adapted to the region and diligent weed control efforts. However, it is important to note that recent BLM monitoring has documented that reclamation efforts on BLM-administered public lands in the Basin have largely been unsuccessful at reestablishing soil stability, vegetation, and subsequent forage for wildlife and livestock due to poor soils and drought. BLM field inspections show that initial impacts may be more accurately portrayed as long-term impacts. All surface disturbance proposed under the alternatives, therefore, could remain as long-term (or even permanent) impacts on the landscape if reclamation efforts are not successful.

4.2 AIR QUALITY

4.2.1 ALTERNATIVE A – PROPOSED ACTION

Project-related emissions have the potential to affect air quality on both a local and a regional scale. The VFO FEIS and Proposed RMP (BLM 2008c) included a detailed air quality analysis covering the Uinta Basin. The summary conclusions for impacts resulting from land and realty management decisions, such as the Proposed Action, “are projected to have no significant effect on air quality except as they impact other management decisions.” (p. 4-33).

The results of screening visibility analyses conducted for the RMP exercise indicated that potential BLM sources, including a project such as upgrading the Seep Ridge Road, would not result in a perceptible impact on visibility at any of the PSD Class I and Class II areas within and/or adjacent to the Vernal Planning Area. Due to the relatively small scale of the Proposed Action, a regional-based model run specific to the Proposed Action would not have the resolution needed to reveal a discernible difference between the current air quality conditions and air quality conditions during and after completion of the proposed improvements. Thus, the fugitive dust created during the 6-year construction period associated with the Proposed Action would result in unquantified short-term impacts that would exceed air quality standards for visibility. Paving the Seep Ridge Road would result in a positive, long-term improvement to air quality as the current levels of fugitive dust created from vehicles using the road would be eliminated.

In summary, while an emissions increase of both criteria and hazardous air pollutants is expected as a result of the construction activities of the Proposed Action, these emissions are not likely to result in a violation of an ambient air quality standard or hazardous pollutant threshold.

4.2.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, construction to improve and pave the Seep Ridge Road would not occur. Dust from primarily energy-development related vehicle traffic on the native material surface of the Seep Ridge Road would continue. Short- and long-term impacts to environmental elements from fugitive dust would continue, with long-term impacts likely to increase in severity due to the expected increase in energy-development activities in areas accessed by the Seep Ridge Road. The continued dust levels produced by vehicle traffic along the unpaved Seep Ridge Road would not result in an exceedance of current air quality standards.

4.2.3 MITIGATION MEASURES

No additional mitigation measures proposed.

4.3 CULTURAL RESOURCES

Ground-disturbing activities, such as road construction, and secondary surface activities, such as vehicular traffic, and relocating the Monument Ridge Pasture Corral and the Buck Canyon Kiosk, can directly and irreversibly damage or destroy sensitive cultural resources. Many of the known archaeological sites, both prehistoric and historic, in the Uinta Basin are shallow and therefore vulnerable to the direct impacts of vegetation clearing, ROW blading, and excavation of soils.

Indirect impacts could include damage or destruction of cultural resources as a result of increased visitation of otherwise remote areas and as a result of improved public access to these areas provided by Project Area access roads.

4.3.1 ALTERNATIVE A – PROPOSED ACTION

The Proposed Action would include potential new disturbance to approximately 813 acres in the Project Area. One site that has been recommended but not determined eligible for the NRHP, and two sites that have been recommended but not determined not eligible for the NRHP, will be directly impacted by construction (Table 4.3-1) The BLM, in consultation with the Utah State Historic Preservation Office (SHPO), SITLA, and other consulting parties, has determined that the impacts on these sites from the Proposed Action would be adverse. As such, mitigation to resolve those adverse effects would be necessary.

Under the Proposed Action impacts to archaeological resources all into four separate categories. Direct impacts to Eligible sites include sites determined eligible to the NRHP that would be partially or completely destroyed by the construction efforts. Indirect impacts to eligible sites include sites determined eligible to the NRHP that are outside the actual construction footprint, but within the 300-foot cultural resource APE and may be impacted by equipment and construction traffic across the site. Direct and indirect impacts to sites recommended not eligible, but not yet determined would include both partial or complete destruction, or inadvertent impacts from equipment and construction traffic across the site. Since an agency determination has not been made regarding these sites, the direct and indirect impacts to the sites should be considered as significant as the impacts to previously determined eligible sites. Sites determined not eligible are not considered for adverse impacts, and therefore do not need to be evaluated for impacts by the Proposed Action. The Monument Ridge Pasture Corral is located outside of the APE for the road footprint; however, because of its proximity to the edge of the roadway, it is proposed to be removed and relocated to another area.

There is a chance that additional subsurface cultural resource sites could be unearthed during ground-disturbing activities associated with the Proposed Action. The County’s commitment to immediately stop work and consult with the SMA at a site where cultural materials are exposed would minimize, but not eliminate impacts to cultural resources.

The Proposed Action would result in increased human presence in the Project Area. Upgrades to the Seep Ridge Road would provide improved access to areas that may contain cultural resources. Opportunities for looting and vandalism of cultural resources could increase as an indirect effect of the Proposed Action; however, the potential risk cannot be quantified at this time.

Table 4.3-1. Cultural Resources Recorded or Updated within the Are of Proposed Effect (APE)

Site No.	Description	National Register Eligibility	Nature of Impact and Mitigation Measures
42UN000646	Prehistoric lithic scatter composed of debitage (flakes) with tools in a 29 meter x 31 meter area.	*Recommended Not Eligible	Direct Impact: Site Specific MOA, unless determination is made
42UN001782	Prehistoric campsite composed of hearth features and debitage in a 90 meter x 20 meter area.	Determined Eligible	Monitor: Site is outside of direct impact construction area
42UN002487	Historic Buck Canyon Road with no associated historic artifacts.	Determined Eligible	Monitor: Intact major portions are outside construction area
42UN005506	Historic campsite composed of tin cans, glass, several diagnostic artifacts, and modern debris in a 56 meter x 30 meter area.	Determined Not Eligible	No monitoring necessary, since site is not eligible
42UN007040	Multi-component site consisting of an historic debris scatter and small prehistoric flake scatter. Several diagnostic historic artifacts and historic features with one historic and prehistoric artifact concentration are present. Total site area is approximately 50 by 50 meters.	Determined Eligible	Monitor: Site is outside of direct impact construction area
42UN007041	Historic debris scatter with several diagnostic artifacts in an approximate 25 meter squared area.	Determined Not Eligible	No monitoring necessary since site is not eligible
42UN007633	Prehistoric flake and ceramic sherd scatter with chipped stone tools in an approximate 57 meters by 42 meter area.	*Recommended Eligible	Direct Impact: Site-specific MOA, unless determination is made

Site No.	Description	National Register Eligibility	Nature of Impact and Mitigation Measures
42UN007634	Multi-component site consisting of an historic debris scatter and prehistoric flake scatter. Several diagnostic historic artifacts and one prehistoric flake concentration are present. Total site area is approximately 79 by 67 meters.	*Recommended Not Eligible	Direct Impact: Site-specific MOA, unless determination is made
42UN007635	Historic Monument Ridge Road Corral with no associated artifacts. Corral measures 154 feet x 109 feet	*Recommended Not Eligible	Direct Impact: Existing structure would be removed. Develop site specific MOA, unless determination is made.

*Sites will be treated as Eligible during mitigation efforts because their eligibility recommendation would not be reviewed by the Utah State Historic Preservation Office prior to implementation of the Proposed Action.

4.3.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, the proposed construction activities and paving actions would not occur. Although regular maintenance activities would continue on the Seep Ridge Road, such work would be confined to the existing ROW, thus greatly reducing the possibility of disturbing cultural material buried adjacent to the existing ROW. The opportunity for vandalism of cultural materials would remain unchanged from current conditions. Continued road widening due to ongoing maintenance, however, could affect known cultural resources.

4.3.3 MITIGATION MEASURES

Under the Proposed Action mitigation measures would include for eligible sites that are located outside of the direct impact of construction, but within the 300-foot cultural resources APE, monitoring would be required by the BLM to ensure the sites remain intact and are protected during construction. Sites that have been determined not eligible would require no monitoring or change in the construction corridor. Sites that are recommended not eligible, but have not yet been determined by the agency will require the same treatment as already determined for eligible sites. The Monument Ridge Pasture Corral was thoroughly documented because it would be removed as part of the Proposed Action.

One site that has been recommended but not determined eligible for the NRHP, and two sites that have been recommended but not determined not eligible for the NRHP, cannot be avoided by the Proposed Action (Table 3.3-1). These sites have not yet been reviewed for eligibility by the BLM and will therefore be treated as if they have been determined eligible. Many options are available for mitigating the adverse impacts to these three sites, including detailed documentation of surface artifacts, test excavations or full-scale excavations, monitoring of construction activities through the site and addressing any artifacts or features that may be uncovered. For each of these sites, the BLM, SITLA, SHPO, and other consulting parties, such as the County or local tribal governments, as appropriate, will enter into a site-specific Memorandum of Agreement (MOA) that outlines the actions to be carried out to mitigate the adverse effects to the site. A copy of each MOA will be released at the time of the release of the Finding of No Significant Impact (FONSI).

In order to address the potential impacts to subsurface cultural resources that could be discovered during ground disturbing activities related to construction, the BLM, SITLA, SHPO and other consulting parties will coordinate on a site-specific basis..

4.4 PALEONTOLOGY

4.4.1 ALTERNATIVE A – PROPOSED ACTION

Potential impacts to paleontological resources include the loss of scientifically important fossils due to excavation activities. The loss of fossils could result from crushing by construction equipment as well as increased theft and vandalism of exposed fossils. Alternatively, construction of the project facilities may uncover scientifically important fossils, which could be considered a positive (beneficial) impact.

The Project Area has a fairly high potential for producing significant fossil material. The County has committed to a BMP (Section 2.1.5.2) that if fossil resources are unearthed during ground-disturbing activity, work would be suspended until the SMA determines what mitigation is needed.

As with cultural resources, an improved roadway increases the opportunity for possible vandalism of significant fossil material.

4.4.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, potential impacts to paleontological resources would be lower compared to the Proposed Action since less surface disturbance would occur. Conversely, the potential for discovering new localities would also be decreased.

4.4.3 MITIGATION MEASURES

No additional mitigation measures are recommended.

4.5 SOILS

4.5.1 ALTERNATIVE A – PROPOSED ACTION

The primary effect of surface disturbance is increased wind and water erosion from removal of established vegetation and soil compaction. A secondary effect is loss of site productivity from mixing soil horizons following disturbance.

The Proposed Action would involve a total of about 813 acres, of which about 658 acres (within and outside of the ROW) would be disturbed during the 6 years of construction, about 110 acres/year. The remaining 151 acres within the ROW would involve the running, paved surface of the proposed road. The current average baseline (or naturally occurring) erosion rate for the Project Area is approximately 1.45 tons/acre/year (BLM 1984). Two studies conducted on sediment yield from disturbed surfaces provide insight into the amount of increased erosion that could be expected from the Project Area. Lusby and Toy (1976) reported that yields from reclaimed surface mines were initially 300 to 600 percent higher than from undisturbed surfaces. Frickel et al. (1975) found that yields increased to about 2.9 tons/acre/year in the Piceance Basin of Colorado after construction of oil shale project facilities. Using these studies as examples, it is assumed that average erosion rates for disturbed soils in the Project Area would increase to about 4.35 tons/acre/year. Based on these estimates the Proposed Action would produce an additional 480 tons of sediment annually during the years of construction and 2 years

following final reclamation (110 acres disturbed/year x 4.35 tons/acre/yr). After reclamation the amount of sediment would decrease to the baseline level of about 960 tons annually (662 acres x 1.45 tons/ac/year).

The analysis described above represents a conservative estimate of the amount of erosion expected to be produced from naturally occurring conditions as well as from disturbed areas within the Project Area. The actual current erosion rate is likely less than estimates used above due to the specific soils, aspects, topography, and vegetation cover involved with the Project Area.

The success of reclamation and reseeding action would be affected by the degree of mixing of the topsoil with subsoil horizons. Subsoil horizons do not have the biomaterial and biochemical structure to support vegetation germination and production. Thus, the long-term productivity of the reclaimed sites using mixed soil materials would be reduced. Careful removal of topsoil, segregating it from other cut material and replacing it as the top layer during reclamation would maximize the proper soil medium for successful reseeding.

4.5.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, regular maintenance operations of the native material road would continue within the existing 66-foot ROW. The existing Seep Ridge Road ROW involves a total of about 363 acres, of which about 143 acres are disturbed areas (including the unpaved road surface) and about 220 acres are in an undisturbed condition. Assuming the 143 disturbed acres produce an estimated 4.35 tons of sediment/ac/yr, approximately 319 tons of sediment are produced annually; and, assuming the 220 acres of undisturbed ROW generate a baseline sediment level of 662 tons/year (220 acres x 1.45 tons/ac/yr), a total of approximately 941 tons of sediment are produced annually from the existing Seep Ridge Road.

4.5.3 MITIGATION MEASURES

To enhance successful reclamation associated with the Proposed Action, topsoil from newly disturbed areas should be removed and stored separately from subsoil horizons until needed for reclamation. During reclamation actions, the topsoil should be respread over the reclaimed subsoil material. No mitigation measures are proposed for the No Action Alternative.

4.6 WATER QUALITY (SURFACE/GROUND)

4.6.1 ALTERNATIVE A – PROPOSED ACTION

The potential impacts to surface water include increased sedimentation and turbidity of surface waters via increased runoff during construction activities and depletion of water flow in the Green and White Rivers due to project-related water consumption.

The potential for impacts would be greatest shortly after the start of construction activities and would decrease in time due to natural stabilization, reclamation, and revegetation efforts. The magnitude of these potential impacts to surface water resources depends on several factors, including the proximity of the disturbance to the water influence zone (WIZ) of surface water drainages or ponds, slope, aspect and gradient, soil type, the duration and timing of the construction activity, and the success or failure of reclamation and mitigation measures. The WIZ is defined as the buffer zone that includes the floodplain, riparian vegetation, inner gorge, unstable areas, or highly erodible soils located adjacent to a stream or other water body.

Sedimentation and Turbidity

Increased erosion and subsequent increased sedimentation of ephemeral drainages within the Project Area is possible, especially during the construction of project facilities. Using the sediment production figures from Section 4.5.1 above, approximately 480 tons of sediment/year could be generated until disturbed areas are successfully reclaimed (6 years of construction, plus 2 years for reclamation), the Proposed Action would produce a total of about 3,840 tons of additional sediment. Following paving of the road and successful reclamation, the annual production would be reduced to 960 tons/year. The increased erosion could also potentially lead to an increase in sedimentation in major ephemeral drainages including Cottonwood Wash, Sand Wash, Seep Canyon, PR Canyon, etc., increasing turbidity of perennial streams including Willow Creek and Bitter Creek and ultimately both the White and Green Rivers.

This erosion estimate is subject to considerable uncertainty. Over time, short-duration precipitation events and snowmelt could cause soil lost from the proposed facilities in the Project Area to reach the drainages of adjacent ephemeral watersheds. This sediment could then eventually be transported down the ephemeral drainages larger ephemeral and perennial drainages and on to the White and Green Rivers. In sufficient amounts, the additional sediment from construction activities could clog stream channels, cause accelerated siltation of livestock ponds, degrade aquatic habitat downstream by covering stream substrates with fine sediment, and increase the turbidity within the streams during the short-term.

With the proper application and maintenance of planned erosion control measures, the actual amount of sediment that could potentially be transported to the White and Green Rivers would be much less than the estimates outlined above. Annual sediment loading in the White River at Ouray, Utah is about 1,680,000 tons and in the Green River at Ouray is about 6,789,000 tons (Lentsch, et al 2000). The highest sediment loading occurs during the months of May and June from snowmelt runoff. Assuming 100% of the estimated maximum additional sediment produced in the Project Area reaches the White and Green Rivers, the Proposed Action could increase the annual sediment loading of the White and Green Rivers over the 8 years of construction and reclamation by approximately 0.029 and 0.007 percent, respectively.

Stream Flow Regimes

As previously discussed, approximately 424 acre-feet of water would be used over the 6-year construction period to control fugitive dust construction activities. Water needed would be obtained from sources that are actively permitted with the Utah Division of Water Resources. Water would be trucked from the permitted sources to drilling locations. The anticipated water use is not expected to alter stream flow regimes. The engineering and design as proposed in the construction elements (Section 2.1.1) would adequately mitigate the affects to the floodplains.

4.6.2 ALTERNATIVE B – NO ACTION

Sedimentation and Turbidity

Under the No Action Alternative, the existing roadway would not be paved, but would remain in its existing native material roadbase. Regular maintenance activities would be completed as needed. Some amount of the estimated 941 tons of sediment produced annually could enter the ephemeral drainages and could increase sedimentation in the major ephemeral and increased turbidity of perennial streams and ultimately the White and Green Rivers downstream from the Seep Ridge Road. Assuming 100% of the estimated maximum sediment produced in the existing ROW reaches the White and Green Rivers, the No Action Alternative could annually increase the sediment loading of the White and Green Rivers by approximately 0.0005 and 0.00001 percent, respectively.

Stream Flow Regimes

Approximately 40 acre-feet of water could be needed annually for fugitive dust control associated with annual maintenance activities of the existing roadway. As with the Proposed Action water needed would be obtained from sources that are actively permitted with the Utah Division of Water Resources. Water would be trucked from the permitted sources to drilling locations. The anticipated water use is not expected to alter stream flow regimes.

4.6.3 MITIGATION MEASURES

No mitigation measures are proposed.

4.7 FLOODPLAINS

4.7.1 ALTERNATIVE A – PROPOSED ACTION

Road construction within floodplains potentially increases the risk of erosion and sediment production. Increased sediment could impact water quality and wildlife resources.

Sixteen (16) ephemeral drainage crossings of Seep Ridge Road were identified during the on-site investigation. Each of the existing drainage crossings has existing culverts in place to convey water underneath Seep Ridge Road. It is anticipated that proposed project construction could require lengthening and/or increasing the size of these existing culverts to withstand 100-year storm events. It is expected that impacts to existing ephemeral drainages within the Project Area would be limited to increasing the footprint of culverts and associated road fill. Adherence to established road design standards and implementation of BMPs in the use and placement of culverts, including: appropriate size culvert for the drainage, proper angle of culvert to reduce water's energy within the drainage, and rock armament on the downstream side, would minimize the direct impacts to the floodplains associated with the West and East Forks of Cottonwood Wash and the ephemeral drainages in the Project Area. These actions and successful reclamation would also reduce the amount of erosion and sediment carried by these drainages. The engineering and design as proposed in the construction elements of the Proposed Action (Section 2.1.1) would adequately mitigate the affects to the floodplains.

4.7.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, surface disturbance and extensive construction activities as outlined in the Proposed Action would not occur. Regular maintenance activities of the existing road would continue and proper drainage from the roadway would be maintained in accordance with the existing terms and conditions of the county's ROW. As such impacts to floodplains associated with the West and East Forks of Cottonwood Wash and the ephemeral drainages that are crossed by the existing roadway would remain at current levels.

4.7.3 MITIGATION MEASURES

No additional mitigation measures are recommended.

4.8 VEGETATION, INCLUDING INVASIVE PLANTS AND NOXIOUS WEEDS, SPECIAL STATUS PLANT SPECIES AND FORESTRY/ WOODLANDS

4.8.1 ALTERNATIVE A – PROPOSED ACTION

4.8.1.1 General Vegetation

Surface disturbance associated with the Proposed Action’s road re-construction and upgrades would involve a total of approximately 813 acres, of which approximately 151 acres would be involved with the paved road. Thus, approximately 662 acres would be involved with reclamation, stormwater and erosion control structures, etc. Table 4.8-1 summarizes estimated maximum new surface disturbance by vegetation community, associated with the Proposed Action.

Table 4.8-1 Proposed Surface Disturbance, by Vegetation Community, for the Proposed Action

Vegetation Community	Estimated New Disturbance within Project Area (Acres)	Percent of Project Area
Mixed Desert Shrub	139	21
Wyoming Sagebrush	238	36
Pinyon-Juniper-Sage/Woodland	232 ¹	35
Montane Brush/Woodland	53	8
Estimated Total	662²	100

¹Includes 3 acres outside of the proposed ROW for the two proposed watering ponds (reservoirs), and 2 acres outside of the proposed ROW for relocation of the Monument Ridge Pasture Corral.

²Calculation does not include the existing roadway surface (142.9 acres).

The Proposed Action would have both direct and indirect impacts on vegetation resources. Direct effects would include removal of vegetation, modification of species composition and structure, and fragmentation of vegetation communities. Indirect impacts may include increased potential for weed invasion, effects of fugitive dust on plants, increased exposure of soils to accelerated erosion, and degradation and loss of topsoil and soil microorganisms.

Specific actions set out under the Proposed Action, including reclamation of disturbed areas outside the running surface of the paved road, control of soil erosion, minimizing vegetation disturbance, dust abatement measures, and control of noxious weeds, would reduce impacts to vegetation communities in the Project Area. The ability of each vegetation community to successfully recover to pre-disturbance production levels would depend on the disturbed site’s specific characteristics. Assuming revegetation actions are successful, the anticipated impacts to vegetation resources would be minimized and relatively short-term in nature (i.e., approximately 8 years).

4.8.1.2 Invasive Plants and Noxious Weeds

The introduction and/or spread of invasive plants and noxious weeds in the Project Area would occur under the Proposed Action. However, the county’s proposed BMPs concerning such species would minimize the spread of weeds in the Project Area. Successful reclamation would further reduce the spread of weeds in the Project Area.

4.8.1.3 Special Status Plant Species

Federally-protected plant species could be affected by loss or modification of occupied and/or suitable habitat, an increase in the spread of invasive and noxious weed species and an increase in fugitive dust levels during construction activities.

Clay Reed-mustard

Clay reed-mustard habitat is located approximately 1,325 feet west of the proposed ROW and occurrences of plant individuals/groups are located 3,400 feet west of the proposed ROW (BLM 2008a). As such, the topographic location of the known habitat eliminates the potential for project-related impacts.”

Based on the above information, implementation of the Proposed Action would result in a *no effect* determination for the federally-listed clay reed-mustard.

Graham beardtongue

BLM data identifies Graham beardtongue habitat and individual plants/plant groups as being located adjacent to the existing Seep Ridge Road (BLM 2008a). Implementation of the Proposed Action may result in the loss of a limited number of plants and known suitable/potential habitat (approximately 2.5 acres). Fugitive dust created during road construction activities could be detrimental to individual plants; however, the paving of Seep Ridge Road would result in long-term reduction in fugitive dust, creating a positive effect for the beardtongue.

Increased roadway infrastructure and vehicle traffic in the Project Area could lead to indirect impacts to the Graham beardtongue. These indirect impacts include loss or modification of potential or suitable habitat and an increase spread of invasive plants and noxious weeds. Weed species may compete with individual special status plants, potentially resulting in loss of individuals and degradation of suitable special status plant habitat. Specific actions set out in Section 2.1 under the Proposed Action that would reduce indirect impacts to special status plant species include: Treatment and control of noxious weeds and invasive plant species, paving the roadway, dust abatement actions during construction activities, and successful reclamation of disturbed areas.

Adherence to the above-mentioned measures would reduce impacts to the Graham beardtongue such that the Proposed Action may affect, but would not likely lead towards federal listing of the Graham beardtongue.

4.8.1.4 Forestry/Woodlands

Construction activities set out in the Proposed Action could likely involve approximately 284 acres of pinyon-juniper and 65 acres of montane brush/woodland communities. These lands may have areas of suitable woodland and/or forestry products. Surface disturbing activities in these communities would result in the direct removal of the woodlands and timber trees. This could result in a negligible loss of revenue to the federal government from wood cutting permits. To offset potential lost federal revenue from commercial trees being removed in the construction areas of the Proposed Action, any marketable forestry products would be cut down in such a manner to allow utilization and the public notified that such forestry products are available.

4.8.2 ALTERNATIVE B – NO ACTION

4.8.2.1 General Vegetation

Under the No Action Alternative no new surface disturbance is anticipated within the existing ROW. Thus, the No Action Alternative would not result in direct impacts to vegetation resources. Fugitive dust control during regular maintenance activities would minimize impacts to roadside vegetation. Expected increases in vehicle traffic along the Seep Ridge Road would result in increased fugitive dust levels over the long-term, thus affecting the long-term health and viability of roadside vegetation.

4.8.2.2 Invasive Plants and Noxious Weeds

Under the No Action Alternative, the increased surface disturbance and opportunity for new infestations of invasive, non-native species would not occur. The county would be required to continue regular monitoring and treatment to control weeds within the existing ROW thus minimizing the presence of invasive and noxious weeds within the ROW corridor.

4.8.2.3 Special Status Plant Species

Clay Reed-mustard

The current road alignment does not involve any occupied clay reed-mustard habitat, thus continued maintenance activities of the existing Seep Ridge Road would not result in direct or indirect impacts to this species. Based on this information, implementation of the No Action Alternative would result in a *no effect* determination for the federally-listed clay reed-mustard.

Graham Beardtongue

Under the No Action Alternative, direct impacts to Graham beardtongue habitat would not occur. Indirect impacts would be greater than those proposed under Alternative A. Anticipated increases in vehicle traffic along the Seep Ridge Road from continued energy development operations, coupled with regular maintenance operations of the existing roadway would increase fugitive dust levels over the long-term. Indirect impacts to the Graham beardtongue from fugitive dust are discussed above. The No Action Alternative would result in fewer acres of habitat and individuals being directly affected, but over the long-term indirect impacts from fugitive dust would increase. Thus, actions in this alternative may affect, but would not likely lead towards federal listing of the Graham beardtongue.

4.8.2.4 Forestry/Woodlands

Under the No Action Alternative, the expanded ROW and proposed upgrades would not be completed. Thus, no direct impact to woodlands and forestry resources would occur.

4.8.3 MITIGATION MEASURES

- Recommended conservation measures for the Graham beardtongue have been set out in Appendix F. Implementation of these measures to the Proposed Action would further minimize direct and indirect impacts to this species.
- To offset potential lost federal revenue from commercial trees being removed in the construction areas of the Proposed Action, any marketable forestry products would be cut down in such a manner to allow utilization.

4.9 WILDLIFE AND FISHERIES, INCLUDING SPECIAL STATUS ANIMAL SPECIES

4.9.1 ALTERNATIVE A – PROPOSED ACTION

Principal impacts to wildlife from the Proposed Action include: direct loss, degradation and/or fragmentation of wildlife habitats, displacement of wildlife species in traditional use areas and along historic migration routes, and an increase in the potential for collision between wildlife and motor vehicles due to an increase in speed and traffic.

4.9.1.1 General Wildlife

Estimated total maximum surface disturbance from the Proposed Action within the proposed Seep Ridge Road ROW would be approximately 813 acres. This development would reduce habitat available for a variety of common wildlife species until successful reclamation occurs on approximately 662 acres. Habitat disturbance would be expected to have a minor to moderate impacts on general wildlife species because many of the species (e.g., cottontails, jackrabbits, coyotes, etc.) are habitat generalists, meaning they are not tightly restricted to specific habitat types; and, many of the wildlife populations within the Project Area have likely adapted to the existing road and its associated traffic.

Project implementation would increase habitat loss and habitat fragmentation in the Project Area. Disturbances from improvements to the existing roadway could displace wildlife from habitats in construction areas. Construction activities could last as long as 6 years; concentrating on specific segments of the roadway, and would not involve the entire roadway. When displaced, individuals could move into less suitable habitats or into habitats where inter- and intra-specific competition for resources may occur, resulting in subsequent adverse effects and general distress.

4.9.1.2 Big Game

The impacts from the Proposed Action would be similar for all big game species in the Project Area. Species-specific habitat losses for UDWR-designated big game ranges associated with the Proposed Action are listed in Section 3.9.2.2 for mule deer and Section 3.9.2.3 for elk. A total of 403 acres of mule deer habitat and 397 acres of elk habitat would be involved with the Proposed Action.

Habitat loss and displacement are not limited to actual areas of vegetation removed by surface-disturbing activities. Studies have shown that mule deer will generally avoid human-related activities, and therefore, the amount of suitable habitat loss will be greater than the acreage that is eventually developed (D'Eon and Serrouya 2005; Sawyer et al. 2006). Such studies, while useful, are not necessarily characteristic of all populations. For example, Easterly et al. (1991) found some evidence that mule deer acclimated to human activity associated with energy development. The conflicting results of the studies described above show that habitat selection varies based on factors such as species, topography, landscape, climate, season, and intensity of development. As such, impacts related to habitat loss and animal displacement in the Project Area cannot easily be predicted or quantified, but for the purposes of analysis, it is assumed that habitat loss would exceed those acreages listed above.

As multiple big game herds are currently below UDWR population objectives, the above-mentioned impacts could potentially contribute to other factors already affecting big game populations in the Project Area. However, as surface disturbance associated with the Proposed Action would be localized and would be minimal in relation to the extent of similar habitats across the Book Cliffs area, impacts

associated with the Proposed Action would not likely alter current big game population levels within the Project Area.

Other direct impacts to big game wildlife include a potential for injury or mortality caused by the potential for collisions between wildlife and motor vehicles on the Seep Ridge Road. Although there is no data on reported collisions on the road, it is reasonable to expect the Proposed Action would increase the possibility of such collisions due to changing the speed from 35 to 55 mph. The number and severity of these impacts would depend on the availability of habitats within and outside the Project Area; the sensitivity of the wildlife species to human activities; seasonal and daily timing of construction activities and site-specific topography (e.g., visually-obscured construction sites may affect nearby wildlife less than construction sites in full view). Relocation of water reservoirs and removing existing water sources presently near the road would reduce the numbers of wildlife drawn to the road in search of water; however, migrating big game species would continue to cross the road to reach their seasonal ranges. The county's commitment to study and gather traffic data, discussed in Section 2.1.3, including accidents along the roadway would identify potential problems that may need further discussion and assessment to resolve. As multiple big game herds are currently below UDWR population objectives, the above-mentioned impacts could potentially contribute to other factors already affecting big game populations in the Project Area, including the existing roadway.

Seasonal timing restrictions outlined in the VFO Approved RMP would apply to portions of mule deer and elk habitat in the Project Area to minimize potential impacts resulting from project activities. Specifically, no surface disturbance activities that could result in adverse impacts to deer or elk would be allowed within crucial time periods for specific habitats (BLM 2008a). Construction timing restrictions are described in detail in Section 4.9.2, Mitigation Measures.

4.9.1.3 Raptors

Implementation of the Proposed Action could affect nesting and breeding raptors that utilize the Project Area. Direct and indirect impacts to raptors may include temporary displacement from suitable habitats during the breeding season due to increased noise levels and visual disturbances on the landscape and a reduction in habitat for prey species due to habitat loss.

Surface-disturbing activities in close proximity (e.g., ½-mile) of an active raptor nest could lead to temporary displacement from nesting sites, avoidance of affected areas, and deterrence from establishing other nesting sites. Displacement could lead to nest failure or nest abandonment, thereby affecting the breeding pair and their annual productivity. Steidl and Anthony (2000) suggest that the greatest energetic costs from disturbance occur in nestlings, potentially decreasing overall reproductive success. Displacement could also lead to increased use of adjacent habitats, which could lead to increased inter- and intra-specific competitions for resources. Surface-disturbing activities in the proximity of an active golden eagle nest could potentially disturb breeding and nesting activities. However, as increased noise levels and visual disturbances associated with construction would be localized and short-term, displacement to adjacent habitats would likely be temporary in nature and would not likely alter the productivity of current raptor populations within the Project Area. In addition, although human activity has been shown to adversely impact breeding raptors, some evidence of raptor habituation to human-induced disturbances has also been documented (Anderson et al. 1989; Steidl and Anthony 2000; Rodriguez-Estrella et al. 1998). In addition, construction activities may discourage utilization of or directly impact the two red-tailed hawk nests located within the Project Area, and the two red-tailed hawk nests and the one golden eagle nest that were identified within 0.5 miles of the Project Area boundary.

In addition, paving of the road would result in the direct loss of approximately 151 acres of habitat for raptor prey species such as mammals, songbirds, and reptiles and would temporarily affect approximately

662 acres of such habitat due to construction related activities. These impacts would last until successful reclamation is achieved. Rodriguez-Estrella et al. (1998) identified loss or fragmentation of habitat of prey species as a contributor to raptor population declines. The reduction in prey habitat in the Project Area would be compounded by prey base losses that are already occurring in the Uinta Basin due to drought.

4.9.1.4 Migratory Birds

Impacts to migratory birds in the Project Area from the Proposed Action would be similar for all migratory bird species, but would vary depending on loss of habitat types and the species' sensitivity to disturbance. For the purposes of impact analyses in this EA, impacts to migratory birds within the Project Area are discussed together. The Proposed Action would involve a total of approximately 813 acres. Successful reclamation in the vegetation communities not immediately associated with the running surface of the road and its associated ditches and stormwater control devices, as well as control of noxious weeds and invasive species, would reduce the loss of nesting and foraging habitats for migratory birds over time.

Other impacts associated with the implementation of the Proposed Action would be dependent upon seasonal timing of construction activities. Construction activities, including visual and noise intrusions during the spring and early summer months would have the greatest disruption to migratory bird breeding and nesting activities. These impacts include displacement and possible abandonment of nest sites, thus reducing overall species productivity (Renfrew et al. 2005). If construction activities were conducted in the fall months, impacts to migratory birds would be reduced due to the likelihood that such species would have left the Project Area for their southern wintering areas.

4.9.1.5 Special Status Wildlife and Fish Species

Special Status Mammals Species

White-tailed Prairie Dog

Implementation of the Proposed Action could result in direct adverse impacts to the white-tailed prairie dog colonies located in or adjacent to the Project Area. These impacts include: construction activities and increased human presence during the period April – July 15, when females and pups are most vulnerable (Seglund 2004) and habitat modification/fragmentation due to loss of vegetation. However, due to the scattered burrows and poorly developed colonies involved with the Proposed Action, the proposed surface disturbance could result in minimal loss of white-tailed prairie dogs, and minimal impacts to their habitat.

Potential indirect effects to the white-tailed prairie dog include potential increased hunting pressure from increased human visitation to the habitat areas resulting from paving the roadway. Gordon et al. (2003) found that shooting pressure was greatest at prairie dog colonies within easy road access as compared to more remote colonies.

As such, the Proposed Action may affect white-tailed prairie dogs, but would not likely result in a trend towards federal listing of the species.

Bats

Implementation of the Proposed Action could disturb potential foraging habitat for bat species that may utilize the Project Area. As traffic within the Project Area is expected to continue to increase, roosting sites associated with nearby Willow Creek and other cliff areas adjacent to the ROW could be impacted

and potentially abandoned. In addition, the loss of potential prey species and decreased availability and use of certain habitats through displacement, habitat fragmentation, and habitat modification could occur. However, as extensive suitable prey habitat occurs outside the Project Area, these impacts would likely be minimal.

Special Status Bird Species

Greater Sage Grouse

Implementation of the Proposed Action could impact sage grouse by disrupting historical bird movement across the Seep Ridge Road, depending on the location of surface-disturbing activities and surface facilities relative to these historical seasonal crossing areas. Surface-disturbing activities, increased human activities and traffic noise in the proximity of these crossing sites could potentially disrupt sage grouse movement across the ROW. There is a reasonable likelihood that proposed road improvements would increase the traffic levels on the road, thus increasing the potential for vehicle collisions with sage grouse crossing the road.

Vegetation removal within sagebrush communities of the Project Area would result in the direct loss of sage grouse habitat. Under the Proposed Action, reclamation efforts, in conjunction with implementation of a weed control plan, could reduce the loss of habitat for sage grouse. The Proposed Action may affect individual sage grouse, but would not likely result in a trend towards federal listing of the species.

Golden Eagle

Implementation of the Proposed Action could impact both breeding and wintering golden eagles, depending on the location of surface-disturbing activities and surface facilities relative to occupied territories, active or inactive nest sites, or wintering areas. Surface-disturbing activities in the proximity of an active golden eagle nest could potentially disturb breeding and nesting activities. Temporary displacement of eagles or avoidance of nesting sites would be caused by increased human activity, traffic, and traffic levels. Since golden eagles often alternate between nest sites within a breeding territory, any surface facilities where ongoing traffic or human presence occurs could prevent inactive nests from being used in the future. Potential long-term negative effects due to loss of raptor and prey habitat area anticipated to be minimal due to the majority of the construction activities taking place within the existing road ROW. As previously stated, no golden eagle nests were identified within the Project Area, and a single nest occurring within 0.5 mile of the Project Area was documented by the BLM. Golden eagles are known to forage within the vicinity of the Project Area. Potential increased animal:vehicle collisions could result in increased carrion along the roadway. The increased carrion could attract a higher number of golden eagles to the roadway which could then elevate the existing threat of golden eagle:vehicle collisions. Impacts to golden eagles would be reduced or fully negated with the implementation for the county's commitments set out in Section 2.1.5.5.

Vegetation removal associated with the Proposed Action would result in the indirect loss of about 813 acres of prey species habitat (e.g., ground squirrels, prairie dogs, and rabbits). The loss of some prey species may limit foraging opportunities for individual eagles. In addition, golden eagles may avoid hunting grounds where construction activities are taking place. Under the Proposed Action, reclamation efforts, in conjunction with implementation of a weed control plan, could somewhat restore prey habitat losses for golden eagles over time.

Burrowing Owl

As previously stated, burrowing owl surveys have not been completed for the Project Area. Suitable nesting habitat has been identified within the Project Area and immediate vicinity (northern portion of the Project Area, in prairie dog colonies). However, existing prairie dog habitat is limited and population numbers are low within the existing scattered colonies. If burrowing owls occur within the Project Area, impacts from the Proposed Action could result in temporary displacement of owls or their avoidance of ground nests in the vicinity of construction activities. Overall, the Proposed Action may affect individual burrowing owls through habitat loss, displacement, mortality, or loss of prey base, but would not likely result in a trend towards federal listing of the species. In addition, potential impacts to burrowing owls would be reduced or fully negated with the implementation of the county commitments in Section 2.1.5.5.

Special Status Fish Species

The Proposed Action would result in direct impacts to the Colorado River fish and their habitats from water depletions from the White and Green Rivers and increased sediment to these same rivers.

Implementation of the Proposed Action could result in direct impacts to the endangered Colorado River fish from increased sediment in the Green and White Rivers. An estimated total of approximately 480 tons of sediment could be produced annually during the 6 years of construction and 2 years following reclamation activities. An unquantifiable portion of that sediment volume could enter the White River, approximately 12 miles to the north of the Project Area. Indirect affects would also be realized from water depletions in the Colorado River Watershed.

Paving the Seep Ridge Road and implementation of measures to ensure continued floodplain integrity associated with the West and East Forks of Cottonwood Wash, such as utilizing appropriate erosion control measures, diverting stormwater runoff via water dissipating devices (i.e., water turnouts) would reduce the amount of sediment entering the drainages and ultimate the White and Green Rivers (refer to Section 2.1.1).

Sediment loading has not yet been identified as an issue of concern within the existing roadway. However, due to the existing unpaved road surface and the lack of adequate sediment control features, there is currently a threat of future adverse impacts from sedimentation and erosion. Upgrading the existing road to a paved surface and including the sediment-controlling design features previously mentioned are anticipated to improve the existing conditions. Therefore, the Proposed Action would have minimal impacts to the federally-listed fish species occurring in Uintah County.

Fugitive dust suppression on the proposed upgrades to the road would require approximately 426 acre-ft of water over the 6 years of construction (or approximately 71 acre-ft per year). The use of this water would constitute a depletion. Needed water would be acquired from an existing historic source. Water depletions from the White and Green Rivers can reduce the rivers' ability to create and maintain the physical habitat (areas inhabited or potentially habitable for spawning, development of fish larvae, feeding, or serving as corridors between these areas) and the biological environment required by the endangered Colorado River fish. Water depletions can also contribute to alterations in flow regimes that favor non-native fish.

On January 21-22, 1988, the Secretary of the Interior, the Governors of Wyoming, Colorado, and Utah; and, the Administrator of the Western Area Power Administration were consingers of a Cooperative Agreement to implement the "Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin" (Recovery Program (Service 1987)). An objective of the Recovery Program

was to identify reasonable and prudent alternatives that would ensure the survival and recovery of the listed species while providing for new water development in the Upper Colorado River Drainage Basin.

The water used for this project will be obtained from the Uintah Water Conservancy District which is permitted as a historic depletion (permitted prior to January 1988). The Service addresses new and historic depletions differently under the Section 7 agreement of March 11, 1993. Historic depletions, regardless of size, do not pay a depletion fee to the Recovery Program.

Therefore, it has been determined that implementation of the Proposed Action “*may affect, and is likely to adversely affect*” the federally-listed fish species occurring in Uintah County due to utilization of a water source within the Green River Basin (Upper Colorado River Basin). In order to address depletion (and other) impacts on the endangered Colorado River fish, a Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) was initiated on January 22, 1988. Under the 1988 Recovery Program, any water depletions from tributary waters within the Colorado River drainage are considered to “*jeopardize the continued existence*” of these fish. In order to further define and clarify the recovery processes in the Recovery Program, a Section 7 agreement was implemented on October 15, 1993, by the Recovery Program participants. Because the water source for the Proposed Action is a historic source (i.e., existed prior to January 1988), consultation on the depletion was included in the 1993 agreement. Therefore, no further consultation is needed in terms of water depletion for this project.

4.9.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative the construction activities set out in the Proposed Action would not occur. Potential impacts to general wildlife species, including big game, raptors, and migratory birds from continued maintenance operations conducted on the Seep Ridge Road remain at current levels associated with the existing roadway.

Special Status Fish Species

Regular maintenance activities on the Seep Ridge would include installation of needed storm water control devices and normal maintenance actions to the road itself. To control fugitive dust during these annual activities, approximately 40 acre-ft of water could be needed. As with the Proposed Action needed water would be acquired from the Uintah Water Conservancy District, an historic source. Sediment produced from maintenance actions on the native material roadway would enter drainages associated with existing Seep Ridge Road ROW during flood events. This sediment would enter the ephemeral drainages in the Project Area and some quantity of this sediment would enter the larger ephemeral drainages, such as Cottonwood Wash, Sand Wash, Sweet Water Canyon and Bitter Creek on the east side of the road, and Sunday School Canyon on the west side of the road, and would ultimately be deposited into the White and Green Rivers. The county’s implementation of storm water control devices and road design features during regular maintenance activities would minimize sediment coming from the existing road.

As previously mentioned sediment loading has not yet been identified as an issue with the existing road. However, the existing road surface material, required annual maintenance activities, and the lack of adequate sediment control features increase the potential for sediment to enter the Green and White Rivers. In addition, the annual maintenance activities require the use of an historic water depletion. There is has been determined that the No Action Alternative “*may affect, is not likely to adversely affect*” the federally-listed fish species occurring in Uintah County.

4.9.3 MITIGATION MEASURES

The following mitigation measures are required to further reduce and/or minimize impacts to wildlife species:

The following timing restrictions would further reduce impacts to wildlife species from implementation of the Proposed Action:

- Surface-disturbing activities would be prohibited within the Monument Ridge mule deer migration corridor from April 15 to May 31.
- Road construction activities that would be prohibited within crucial deer and elk winter range between December 1 and April 30.
- Project construction activities would be prohibited within crucial elk calving and deer fawning habitats from May 15 through June 30.
- Surface disturbing activities would be prohibited within sage-grouse brooding habitat between March 1 – June 15 in Section 33, T15S R24E.
- In addition, BLM recommends that the March 1-June 15 timing restriction also be applied to brooding habitat located within state-administered lands.

4.10 LIVESTOCK GRAZING

4.10.1 ALTERNATIVE A – PROPOSED ACTION

The Proposed Action could result in direct impacts to livestock grazing, including loss of usable forage, loss of usability of existing rangeland improvement structures and increased likelihood of animal:vehicle collisions.

The Proposed Action would involve the removal of approximately 682 acres of usable vegetation in grazing allotments in the Project Area. As a result of this disturbance, approximately 52 AUMs would be lost. Table 4.10-1 provides a breakdown of estimated loss of livestock AUMs by grazing allotment. As shown, activities under the Proposed Action would result in less than 1 percent reduction of vegetation/forage in allotments within the Project Area.

Table 4.10-1 Estimated Loss of Livestock AUMs from the Proposed Action

Name	Total Active AUMs	Estimated Disturbance in Usable Acres of Project Area (Acres)	Active AUMs in Affected in Project Area	Percent AUMs Lost in Project Area
Olsen AMP	9,268	33	3	<.01
Sand Wash	8,176	223	25	<.01
Sunday School Canyon	4,106	162	13	<.01
Sweet Water	8,391	140	11	<.01
Total	29,941	558	52	<.01

*Usable acreage on slopes less than or equal to 40 percent slope and on BLM-administered lands only.

The proposed Seep Ridge Road development has the potential to directly affect multiple livestock watering sources. Direct impacts include but are not limited to the removal and/or physical alteration of a

water reservoir site and/or the apron and drainage supplying the water. These impacts result in an alteration of livestock and wildlife grazing habitats and use patterns associated with reservoirs throughout the Project Area. Several sites (12 watering ponds/reservoirs) have been identified that may be impacted by the Proposed Action or serve as possible mitigation sites. However, it is very difficult to discern all of the potential impacts that may result to the water sources utilized by livestock and wildlife along the proposed road until construction occurs and animal habits and patterns of usage become apparent. Other existing rangeland improvement structures, including cattleguards and the Monument Ridge Pasture Corral, would be directly affected by the proposed widening of the ROW and the realignment of the roadway itself. Temporary disruption to these facilities during construction activities would disrupt ongoing grazing operations in the Project Area.

Specific best management practices and applicant-committed protection measures outlined in Section 2.1.5.6 under the Proposed Action would reduce impacts to livestock grazing. These actions include reclamation, replacement or repair of impacted existing range improvement structures (i.e., fences, cattleguards, water structures, corrals) and control of invasive species and noxious weeds.

The expected increase in traffic on the improved Seep Ridge Road and the increased speed could increase the potential for animal:vehicle collisions. Although limited traffic use data is available, animal:vehicle collision data for the roadway is unreliable. The county has committed to initiate a 5-year study to acquire baseline traffic use data, including accident reports, upon completion of construction activities. The county would then continue regular monitoring of traffic patterns, usage, and accidents (including animal:vehicle collisions). If monitoring reveals at least a 25 percent increase in the number of collisions over the established baseline, the county would then consider the need to fence the ROW (refer to Section 2.1.3).

Adherence to the best management practices and applicant-committed protection measures would reduce impacts to livestock and rangeland improvement facilities in the Project Area.

4.10.2 ALTERNATIVE B – NO ACTION

Impacts to livestock grazing and facilities under the No Action Alternative would remain unchanged from current conditions and trends. Because the proposed improvements would not be realized there would be no new temporary or long-term loss of AUMs from surface disturbance; traditional livestock operations would continue essentially unchanged from the current situation.

4.10.3 MITIGATION MEASURES

The county has committed to ensure the continued integrity of existing rangeland improvement structures and to replace structures that can not be avoided. Currently at least 12 watering ponds/reservoirs have been identified (12 sites identified, plus an additional 2 sites that may have been missed). The county, in coordination with the BLM and the affected grazing permittee, should monitor the proposed project's development to discern changes in animal movements and use of the watering ponds/reservoirs. Ponds that would be maintained or created to minimize impacts to livestock grazing would need to be evaluated under site-specific NEPA and should not be discussed further in this document.

4.11 RECREATION (INCLUDING TRAVEL MANAGEMENT)

4.11.1 ALTERNATIVE A – PROPOSED ACTION

Potential impacts to recreation and travel management from implementation of the Proposed Action include: Direct impacts to dispersed as well as planned/designated recreation facilities and recreationists/hunters using OHVs on and adjacent to the Seep Ridge Road and indirect impacts to visitors' expectations of the Book Cliffs area.

Under the Proposed Action, once completed, the proposed improvements to the Seep Ridge Road would improve overall access to the popular Book Cliffs area; however, it would invite increased visitation to the area, affecting the remote character of the area and reducing the recreational experience for some visitors and/or hunters to the area. Individuals that are attracted to backcountry recreation would encounter additional visitors, and its attendant noise and traffic, in an area where limited visitation has historically occurred. "New visitors" drawn to the area may have unmet expectations in the minimal and relatively primitive recreation developments in the area.

In the Book Cliffs area the highly desirous limited entry big game hunts extend from mid-August through mid-November. Construction activities along the Seep Ridge Road during these times would disrupt big game movement in the Book Cliffs area and hinder hunters attempting to reach their hunting and camping destinations. These impacts would lessen the hunting experience for some hunters and hinder the hunters' success. The largest number of hunters afield generally occur on the opening weekend of the hunt, thus the greatest impact to hunters is likely to occur during these periods. Construction activities could also temporarily affect the number of applications for UDWR's limited hunts. However, upon completion of the proposed improvements, the number of applications would return, if not increase, to their prior-construction level.

The two existing camp sites and dispersed camp sites along the Seep Ridge Road would be directly affected by construction activities with the ROW. Heavy truck traffic and construction activities would result in temporary increase in noise and fugitive dust situations that would be unacceptable conditions for visitors wishing to use these sites. Although the county would control fugitive dust by watering the roadway during construction activities, visitors would likely relocate to other recreation sites along the Book Cliff Divide road or to other dispersed camp sites in the area. These impacts would be temporary, i.e., not extending over the entire 6-year construction life of the project, and would be outweighed by the long-term positive benefit of eliminating fugitive dust from the Seep Ridge Road.

OHV users and slow-moving recreational vehicles entering and/or exiting the Seep Ridge Road from camp sites and existing roads and trails in the Book Cliffs area would be affected by the temporary increase in the number of construction-related vehicles and the expected increase in overall vehicle traffic on the Seep Ridge Road once the improvements are completed. These direct impacts would be minimized by the county's commitment to properly design the roadway in areas of congestion, install warning signs and post an advisory lowered speed limit of 40 mph in popular recreation areas along the Seep Ridge Road. Barricading closed abandoned and reclaimed segments of the existing Seep Ridge Road would minimize the likelihood of unauthorized vehicle traffic on these segments and enhance the opportunity for successful reclamation (refer to Sections 2.1; 2.1.1; 2.1.5.7; 2.1.5.8; and, the reclamation plan in Appendix C).

4.11.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, the existing Seep Ridge Road alignment and conditions would likely not change appreciably. As such the impacts to recreation, and travel management, from the no action alternative would be similar to but lower in magnitude than the Proposed Action due to reduced extent of road improvements.

4.11.3 MITIGATION MEASURES

To minimize impacts to hunters' expectations and to maintain access to hunting and camping areas during the big game hunting seasons, construction activities along the Seep Ridge Road should be halted during the opening weekend of each of the big game hunts in the Book Cliffs Management Area.

4.12 LANDS/ACCESS

4.12.1 ALTERNATIVE A – PROPOSED ACTION

The surface disturbing actions of the Proposed Action could affect other existing authorizations that are either currently co-located within the existing Seep Ridge Road ROW or that cross the ROW. These actions could affect the continued operations of the pipelines or damage to the pipelines. This impact would be minimized by the county's commitment to consult with any grantor before any surface disturbance is initiated that would compromise the integrity of a pipeline and to work with the operator to minimize disruptions to ongoing pipeline operations (refer to Section 2.1.5.7).

4.12.2 ALTERNATIVE B – NO ACTION

Under the No Action Alternative, the planned ROW expansion and subsequent upgrades would not occur and there would be no impacts to existing co-located pipelines that parallel or cross the existing Seep Ridge Road ROW.

4.12.3 MITIGATION MEASURES

No mitigation measures are recommended.