

## 3.3 Wildlife Resources

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### 3.3.1 Introduction

Forest roads and motorized trails have the potential to affect wildlife and their habitat depending on the mode of motorized travel, type (width and surfacing) and location of the road, traffic volume and speed of travel, and the season of use by both animal and vehicle (Forman and Alexander 1998, Trombulak and Frissell 2000, Wisdom et al. 2000). Roads influence wildlife in numerous ways including a direct loss of habitat, changes in the quality and or effectiveness of the adjacent habitats, increasing habitat fragmentation, alteration of wildlife movements, and direct mortality from vehicle collisions (ibid). Travel-management-related impacts on wildlife vary with the volume, timing, and type of travel; the species of wildlife in the area; the habitats involved; time of day or season of year; and a myriad of other factors. However, not all species respond negatively to an increase in roads. Roads may increase prey for aerial predators such as hawks (Forman and Alexander 1998).

Wisdom et al. (2000, pp 112-123) offered a summary of 13 road-associated factors that negatively affect habitats or populations of terrestrial vertebrates. The following Road-associated Factors and Effects are condensed and summarized from his review:

- **Habitat Loss and Fragmentation Including Negative Edge Effects** – Roads can have the direct impact of converting large areas of habitat into non-habitat, while the indirect impacts of noise and exhaust can further reduce habitat quality and create avoidance of additional habitat in the surrounding area. In addition, species that respond negatively to openings or linear edges, such as habitat-interior species, avoid areas near roads.
- **Disturbance, Displacement, Avoidance, Harassment (i.e., chronic negative interactions with humans)** – Roads can directly interfere with life functions at specific use sites (e.g., increased disturbance of nest sites, breeding leks, or communal roost sites). This can result in spatial shifts of individuals and populations away from a road in relation to human activities on or near a road.
- **Collisions** – Death or injury resulting from a motorized vehicle running over or hitting an animal on a road.
- **Over-hunting, Over-trapping, Poaching, and Collection** – Roads can facilitate greater access into areas used for hunting and trapping and result in legal and illegal over-harvest of wildlife resources.
- **Snag and Downed Log Reduction** – Roads facilitate firewood collection which can result in a loss of snags and downed logs. Larger snags are typically desired by woodcutters and are also the most beneficial to many wildlife species such as flammulated owls.
- **Barriers to Travel or Movement** – Preclusion of dispersal, migration, or other movements as posed by a road itself or by human activities on or near a road or road network

### 3.3.2 Issues and Indicators

**Wildlife Issue 1 (Disturbance):** Motorized travel on roads and trails may adversely affect threatened, endangered, and Forest Service Sensitive Species (TES) through displacement due to disturbance.

**Indicators:**

- Miles motorized roads and trails in known TE or S species habitat.
- Acres of TE or S habitat affected by designated roads and trails.

**Wildlife Issue 2 (Habitat Loss, Fragmentation):** Designating new or unauthorized routes for motor vehicle use may result in changes to, or loss, of habitat due to construction or maintenance needs (widening the track, surfacing the route) of these routes.

**Indicators:**

- Miles of designated routes within known TE or S habitat.
- Acres of TE or S habitat affected by roads and motorized trails.

**Wildlife Issue 3 (Big Game Habitat and Disturbance):** Motorized travel may affect summer and winter big game (elk and deer) habitat and increase vulnerability during hunting season. Roads left open to vehicular traffic may adversely affect use of the area by elk, and to a lesser extent, by deer.

**Indicators:**

- Density (mile/mile<sup>2</sup>) of open NFS roads and motorized trails by District within critical habitat (winter range and critical summer range).
- Acres of critical elk and deer winter range affected by motorized travel.

**Assumptions:**

Assumptions were made concerning the effects of the travel management plan as it relates to species analyzed. Some of those assumptions include:

- There will be changes to the category of uses among motorized, mechanized, and non-motorized/non-mechanized uses that will result in various levels of impacts on individual species across the forest.
- There will be two types of impacts on species: (1) impacts related to the actual footprint of the road or trail affecting habitat and (2) disturbance activities resulting from the use of the routes.
- Decommissioning of identified routes may take years to be fully rehabilitated and resemble surrounding habitats.
- Alternative A is the current, existing situation on the forest and thus considered to be the baseline for comparison for all action alternatives (alternatives B, C, D, and E).
- Many of the tables displayed in this document standardize the changes in routes for comparison purposes. To make comparisons of differing types of habitats and differing sizes of habitats for the various species considered, most analyses for terrestrial species use the amount of change in acres of the species habitat in the routes for each alternative or the use density of miles of routes per square mile of habitat.

### 3.3.3 Forest Plan Direction

The Forest Plan provides some direction to travel management as it relates to wildlife and wildlife habitat. This direction is as follows: (USDA Forest Service 1986)

- Page IV-14 and IV-15, I. – Recreation
- Roads or trails maintained on the Forest transportation system may be restricted seasonally to protect wildlife species and habitat.
- Page IV-16, II. – Recreation
- Obliterate road or trail and exclude it from the Forest's transportation system if: b) the road or trail and its associated use is causing resource damage by: 3) displacing wildlife.
- Page IV-16, III. – Recreation
- Areas may be closed or restricted c) to protect natural resources and prevent damage to the natural values or functions of the ecosystems.

- Page IV-29, 2. – Wildlife and Fish
- Establish and maintain thermal and security needs to meet the Forest’s big game and Management Indicator Species habitat objectives.
- Page IV-30, 3. – Wildlife and Fish
- Resource management activities will be allowed if they will not adversely affect any T and E or sensitive species.

Forest Plan direction will be followed under all action alternatives as it relates to travel management and wildlife.

Standard and guidelines from the Goshawk Amendment to the Forest Plan that apply to the Travel Plan are as follows:

- Standard (r) - Prohibit forest manipulation within active nest areas (30 acres) during the active nesting period. For non-vegetative activities adjacent to a new nest site or a new activity adjacent to an established nest, Guideline (s) applies.
- Guideline (s) – In active nest areas (approximately 30 acres) restrict Forest Service management activities and human uses for which Forests issue permits during the active nesting period, unless it is determined that the disturbance is not likely to result in nest abandonment. If the disturbance is likely to result in nest abandonment, a biological evaluation (BE) must be completed. To implement the action the BE must conclude that the action is consistent with the intent of the Conservation Strategy and Agreement for the Management of the Northern Goshawk.
- Guideline (v) Forest vegetative manipulation within PFA’s (ii) – Management activities should be restricted during the active nesting period. The active nesting period will normally occur between March 1<sup>st</sup> and September 30<sup>th</sup>.

### **Area and Method of Analysis**

**Project Area:** The project area comprises the entire Ashley National Forest. However, the Environmental Consequences section was broken up and analyzed according to the district boundaries.

***Life History and Habitat Requirements:*** The white papers “Life Histories and Population Analysis for Management Indicator Species of the Ashley National Forest” (USDA Forest Service 2006) and “Life History and Analysis of Endangered, Threatened, Candidate, and Sensitive Species of the Ashley National Forest.” are a comprehensive description of life histories and habitat requirements for species that occur or have habitat within the Forest. “Life Histories and Population Analysis for Management Indicator Species of the Ashley National Forest” document provides estimates on population trends for Management Indicator Species (MIS). Principle habitats described in these papers were used to assess the habitat conditions for the Motorized Travel Plan project. Habitat coverage’s used in this document were developed by identifying habitat requirements for each species, with Forest GIS vegetation data used to map potentially suitable habitat across the Forest. It is recognized that the number of acres discussed as potentially suitable habitat may be higher than actual or occupied habitat. These possible differences in acres could occur due to the resolution of the Forest vegetation data used for the analysis, which were based at the Forest scale. These data are continually being refined at the project level.

**Species Presence and Habitat Availability:** Species presence data was compiled from District and Forest-wide survey information, and survey data from the Utah Division of Wildlife Resources (Ashley National Forest Unpub. data). Habitat availability was derived by using a GIS vegetation layer generated from aerial photo and ground interpretation.

**General Method of Analysis-Road Impacts on Habitat Availability:** The effects of roads have had many analyzed by many researchers. Some of these researchers have attempted to quantify a “road effect zone” based on changes in stream and wetland drainage, the impact of salt reaching water bodies, habitat invasion by exotic species planted on roadsides, and changes in animal habitat and movement patterns for large mammals, forest and grassland birds, and amphibians (Forman and Deblinger 2000, pp36-46). The degree of impacts on these types of resources is influenced by the type of road (size, surfacing) and the associated volume and speed of motorized traffic and noise generated by such traffic (ibid, Tombalak and Frissell 2000, p19).

Currently, the Forest does not have this detailed site specific information. Lacking this information, this analysis focuses on quantifying the direct effects of roads on habitat availability for most species by multiplying the miles of road by average road width based on the engineering classification type (i.e., Operational Maintenance Levels 1-5). To simplify the analysis, several classification types were lumped into the same zone of influence (the highest zone of influence for the classification types were used for the analysis). The following Zone of Influence (ZOI) was used for this analysis: motorized trails under 50 inches wide = 6 feet wide; Operational Maintenance Level 1 and 2 (Unimproved and 4WD) = 14 feet wide; Operational Maintenance level 3, 4, and 5 (Improved and Paved Roads) = 30 feet wide (Mortenson 2008). A length of road bisecting potentially suitable habitat was multiplied by the ZOI to arrive at a direct impact on potentially habitat availability in acres.

Other analysis using road density, habitat effectiveness, and road buffers are described in individual species accounts (i.e., mule deer, and Rocky Mountain elk). This includes general Forest Plan guidelines and general road management guidance for the Northern Goshawk.

Analysis summaries and conclusions will be presented in this document, and species may be grouped by effect. Detailed, species specific information including existing condition, methods of analysis, effected environment, and determination of proposed actions by species can be found in the Wildlife Specialist Report available in the project record.

**Wildlife Resource:** Wildlife species selected for this analysis are composed of:

- Species that are listed as Threatened, Endangered, Proposed, or Candidate under the Endangered Species Act (USDI 2007 and 2008),
- Sensitive Species listed on the Regional Forester’s Sensitive Species List (USDA 2003),
- Management Indicator Species as designated by the Forest Plan (USDA 1986),
- Other Species of Concern. This category includes neotropical migratory birds from the Birds of Conservation Concern list (USDI FWS 2002), priority species from the Utah Partners in Flight List (Parrish et al. 2002).

### 3.3.4 Affected Environment

Motorized forest roads and trails have the potential to affect wildlife and their habitat depending on the mode of motorized travel, type (width and surfacing) and location of the road, traffic volume and speed of travel, and the season of use by both animal and vehicle (Forman and Sperling 2003, Forman and Alexander 1998, Trombulak and Frissell 2000, Wisdom et al. 2000). Roads influence wildlife in numerous ways, including a direct loss of habitat, changes in the quality and/or effectiveness of the adjacent habitats, increasing habitat fragmentation, alteration of wildlife movements, and direct mortality from vehicle collisions (ibid).

Table 3.3.1 summarizes the current condition, findings, and detailed information available in the Wildlife Report.

Table 3.3.1 Species Analyzed, Existing Condition and Whether Further Analysis was Completed		
Species (Status)	Wildlife Species Existing Condition	Carried Forward for Analysis
<b>Threatened and Endangered Species</b>		
Black-footed Ferret (E)	Sixteen records of black-footed ferrets (specimens and sightings) are known from Sweetwater County. An experimental population was established in Uintah County southeast of Vernal, UT on lands managed by the BLM. Suitable habitat may exist on the Flaming Gorge National Recreation Area (NRA). Although there is potential habitat for Black-footed ferrets on the Flaming Gorge Ranger District, there is no critical habitat designated on the Forest, and there are no black-footed ferret populations near the Forest. Therefore there would be “no effect” to the Black-footed ferret from implementation of the Travel Plan and the black-footed ferret will not be discussed in the analysis section of this report.	No
Canada Lynx (T)	Approximately 645,741 acres of habitat has been designated within lynx analysis units (LAUs) on the Forest, except the South Unit of the Roosevelt/Duchesne RD. Of these 1,499 acres (0.2%) of habitat is directly impacted by approximately 731 miles of designated routes.	Yes
Mexican Spotted Owl (T) <sup>a</sup>	Mexican spotted owls have been found in Dinosaur National Monument. No nesting Mexican spotted owls have been located anywhere on the Forest and no critical habitat has been designated on Forest Service lands within the project areas. There is approximately 289,035 acres of marginal MSO habitat of which 275 acres (0.1% is directly impacted the 107 miles of designated routes.	Yes
Yellow-billed Cuckoo (C) <sup>d</sup>	There have been no detections of the Yellow-billed Cuckoo within the Forest. Because habitat within the project area would be considered marginal and not large enough to sustain breeding Yellow-billed Cuckoos it is determined that there will be “no effect” to the yellow-billed cuckoo from implementation of the travel plan and this species will not be discussed in the analysis section of this report	No
<b>Intermountain Regional Forester’s Sensitive Species</b>		
Bald eagle (S)	Bald eagles are known to occur on the Forest, primarily near Flaming Gorge Reservoir and the Green River corridor during the winter months. Although there are no known nests on the Forest there is one nest within a mile of the NRA. There are approximately 140576 acres of habitat on the Forest of which 250 acres (0.2%) is marginal and is directly impacted by 65 miles of NFS routes.	Yes
Northern Goshawk <sup>c e</sup> (S)	62 known territories have been located within the project area, of which less than half are occupied any given year. Of the approximately 35,694 acres of designated post-fledgling area (PFA) habitat in the project area, 175 acres has been directly impacted from 68 miles of NFS routes.	Yes

Table 3.3.1 Species Analyzed, Existing Condition and Whether Further Analysis was Completed		
Species (Status)	Wildlife Species Existing Condition	Carried Forward for Analysis
Peregrine Falcon <sup>b</sup> (S)	There are 2 peregrine falcon nests that have been documented on the Forest. One along the Green River on the Flaming Gorge Ranger District and the other on the Vernal Ranger District. There are no roads within ¼ mile of either nest. Of the approximately 115,331 acres of habitat on the Forest 206 acres (0.2%) is directly impacted by approximately 91 miles of NFS routes.	Yes
Boreal Owl (S)	There have been four detections of boreal owls on the Forest, but no nests have been found. Of the approximately 440,492 acres of habitat of the Forest, 487 (0.1%) is directly impacted by 214 miles of NFS routes.	Yes
Great Gray Owl (S)	Though occurrence of this species in the Uinta Mountains is considered “rare” or “outside its normal range”, there have been three great gray owls detected during calling surveys on the Ashley NF. Of the approximately 486,563 acres of habitat on the Forest 1,165 acres (0.3%) is directly impacted by 496 miles of NFS routes.	Yes
Flammulated Owl (S)	This species has been detected at several locations across the Forest. Of the approximately 237,647 acres of habitat on the Forest 809 acres (0.4%) of habitat is directly impacted by 342 miles of NFS routes.	Yes
Three-toed Woodpecker <sup>c</sup> (S)	This species has been found across the Forest in many locations. Of the approximately 737,474 acres of habitat on the Forest, 1,891 acres (0.3%) is directly impacted by 795 miles of NFS routes.	Yes
Greater Sage-grouse <sup>c e</sup> (S)	This species are well distributed throughout its limited range on the forest and surveys indicate populations are viable, stable and in a slight upward trend. Of the approximately 66,910 acres of habitat on the Forest, 320 acres (0.5%) is directly impacted by 149 miles of NFS routes.	Yes
Trumpeter Swan (S) and Common Loon (S)	Although, these species typically do not occur on the Forest these species have been known to occasionally occur on Flaming Gorge Reservoir during migration. Of the approximately 59,744 acres of habitat on the Forest, 14 acres (0.04%) is directly impacted by 6 miles of NFS routes. Since these species only occasionally visit Flaming Gorge Reservoir during migration and because the potential for the proposed changes to the travel plan to effect these species is very low, it is determined that there would be “no impact” to these species.	No
Spotted Bat <sup>c</sup> (S) and Townsend’s Big-eared Bat <sup>c</sup> (S)	Bat surveys conducted on the Forest have detected both spotted bats and Townsend’s big-eared bats. Of the approximately 443,268 acres of habitat on the Forest 2,071 acres (0.5%) is directly impacted by 877 miles of NFS routes.	Yes
Pygmy Rabbit (S)	Modeled distribution and habitat of the pygmy rabbit does not include the Ashley NF, except for the Wyoming portion of the NRA where this species is known to occur. Of the approximately 57,788 acres of habitat, 332 acres (0.6%) is directly impacted by 150 miles of NFS routes.	Yes
Wolverine (S)	There has been no documented sighting of wolverines in the Uinta Mountains and in Utah. However, wolverine habitat does occur on the Forest. Of the approximately 794,588 acres of habitat on the Forest, 1,301 acres (0.2%) is directly impacted by 502 miles of NFS routes.	Yes

Table 3.3.1 Species Analyzed, Existing Condition and Whether Further Analysis was Completed		
Species (Status)	Wildlife Species Existing Condition	Carried Forward for Analysis
Management indicator Species		
Rocky Mountain elk (MIS)	The Utah Division of Wildlife Resources (UDWR) has set elk population objectives for each of the elk subunits in the state. The elk populations for these subunits have nearly met or exceed the population objectives set by Utah Division of Wildlife Resources within the five wildlife management subunits in which the Forest occurs. Suitable habitat (nearly all vegetation types on the Forest) for elk, including calving areas, occurs within the Forest. Critical elk habitat occurs on all Districts and is characterized by either its importance to elk in the winter or its importance to elk in the summer. Elk populations on the Forest appear to be stable, sustain an annual harvest, and habitat is well distributed across the Forest and is sufficient to sustain a viable elk population. Of the approximately 261,557 acres of habitat, 915 acres (0.4%) of critical habitat is directly impacted by 355 miles of NFS routes.	Yes
Mule deer (MIS)	The Utah Division of Wildlife Resources has set mule deer population objectives for each of the mule deer subunits in the state. The mule deer populations for the five subunits in which the Forest occurs are below the population objectives. Suitable habitat (nearly all vegetation types on the Forest) for deer, including fawning areas, occurs within the Forest. Critical deer habitat occurs on all Districts and is characterized by either its importance to deer in the winter or its importance to deer in the summer. Based on the data described in the MIS Report, mule deer population on the Forest is stable to slightly decreasing, but sustains an annual harvest and remains viable. Based on these same data, it also appears that the Forest provides mule deer habitat that is well distributed across the Forest and is sufficient to sustain a viable mule deer population. Of the 165,147 acres of critical habitat on the Forest 566 acres (0.4%) is directly impacted by 212 miles of NFS routes.	Yes
Northern Goshawk (MIS)	Habitat acres available and currently impacted are in the Sensitive Species section of this table.  Based on statistical analysis, the goshawk population trend across the Forest appears to be stable. It also appears that the Forest supports a viable goshawk population and continues to provide well-distributed habitat across the Forest for this species.	Yes
Greater Sage-Grouse	Based on the data described in the MIS Report, the sage grouse population on the Forest is viable, stable, and in the last five to ten years there appears to be a slight upward trend. It also appears that sage grouse are well distributed throughout its limited range on the Forest.	Yes

Table 3.3.1 Species Analyzed, Existing Condition and Whether Further Analysis was Completed (continued)		
Species (Status)	Species (Status)	Species (Status)
<b>Management indicator Species</b>		
Golden Eagle (MIS)	There are three known golden eagle nest locations on the Ashley NF. Based on the data described in the MIS Report, the golden eagle population trend on the Forest is stable but at low numbers. It is also believed that the Forest provides golden eagle habitat that is well distributed across the Forest and is sufficient to sustain a viable population of golden eagles. Of the approximately 604,983 acres of habitat on the Forest, 1,995 acres (0.4%) is directly impacted by 856 miles of NFS routes.	Yes
Warbling Vireo and Red-naped Sapsucker (MIS)	Based on the data described in the MIS Report, the red-naped sapsucker and warbling vireo population trends on the Forest are stable. Habitat that is well distributed across the Forest and is sufficient to sustain viable populations of the red-naped sapsucker and warbling vireo. Of the approximately 160,714 acres of habitat on the Forest 607 (0.4%) is directly impacted by 254 miles of NFS routes.	Yes
Lincoln’s Sparrow and Song Sparrow (MIS)	Based on the data described in the MIS Report, the Lincoln’s sparrow and song sparrow population trends on the Forest are stable. The Forest provides habitat that is well distributed across the Forest and is sufficient to sustain viable populations of the Lincoln’s sparrow and song sparrow. Of the approximate 17,971 acres of habitat on the Forest 120 acres (0.7%) is directly impacted by 57 miles of NFS routes.	Yes
White-tailed Ptarmigan (MIS)	Habitat for the white-tailed ptarmigan occurs on all Districts of the Forest, except for the South Unit portion of the Roosevelt/Duchesne RD. Based on the data described in the MIS Report, the white-tailed ptarmigan population on the Forest is viable, stable, and is well distributed throughout its limited range on the Forest. Of the approximate 168,391 acres of habitat on the Forest 8 acres (0.007%) is directly impacted by 5 miles of NFS routes.	Yes

- <sup>a</sup> State of Utah Threatened Species
- <sup>b</sup> State of Utah Endangered Species
- <sup>c</sup> State of Utah Species with special concern due to substantial decrease in population, distribution, or habitat availability OR limited distribution or specialized habitat use.
- <sup>d</sup> Candidate for Federal Listing
- <sup>e</sup> Also an Ashley NF Management Indicator Species.
- <sup>f</sup> On the Utah Partners in Flight List (UPIF)
- <sup>g</sup> On the Birds of Conservation Concern List (BCC)
- <sup>h</sup> On both the UPIF and BCC lists

**Other Species of Concern**

**Uinta Mountain Snail**

This snail is known to occur in only two locations on the Forest and neither location would be affected by any of the proposed roads. Furthermore, the US Fish and Wildlife Service 90-Day Finding determined that there is insufficient evidence that supports the Uinta Mountain snail as a separate species, and further determined that this snail does not merit federal listing (USDIF and WS 2005). Therefore, effects from the proposed travel plan to this snail will not be analyzed in this document.

**Birds of Conservation Concern (Migratory Birds) and Utah Partners in Flight (PFI) Priority Species**

A complete list of birds from both these lists that are known to occur or are suspected to occur on the Ashley National Forest can be found in the project record (available upon request). Several species on the Birds of Conservation Concern and PFI Priority Species lists occur or have habitats

within the Forest. These species are the black rosy-finch, black-throated gray warbler, sage sparrow, Brewer's sparrow, greater sage grouse, broad-tailed hummingbird, flammulated owl, golden eagle, peregrine falcon, three-toed woodpecker, Williamson's sapsucker, Lewis's woodpecker, red-naped sapsucker, Virginia's warbler, pinyon jay, pygmy nuthatch, and gray vireo.

*Existing Condition:* The flammulated owl, bald eagle, peregrine falcon, and three-toed woodpecker are sensitive species and are discussed in detail in the Sensitive Species section of this report. The greater sage grouse is both a sensitive species and an MIS and is discussed in the Sensitive Species section of this report. The red-naped sapsucker and golden eagle are MIS and are discussed in the MIS section of this report. Refer to those sections in this report for analysis on those species.

The black rosy-finch is associated with alpine habitat and the broad-tailed humming bird is associated with riparian habitat. The Williamson's sapsucker is associated with conifer forests and aspen habitat types. The Lewis's woodpecker is associated with the ponderosa pine conifer type. The pygmy nuthatch and the Virginia's warbler are associated with ponderosa pine and pinyon/juniper habitat types. The black-throated gray warbler, pinyon jay, and gray vireo are associated with the pinyon/juniper and desert shrub habitat types. The Brewer's sparrow, sage sparrow, burrowing owl, northern harrier, prairie falcon, and loggerhead shrike are associated with sagebrush, desert shrub, and grasslands (Nature Serve 2003, DeGraaf et.al. 1991). Effects to these species will be analyzed and compared with those species in the sensitive species list and/or MIS list that have similar habitat requirements. All species will be analyzed by Districts.

### 3.3.5 Environmental Consequences

#### Introduction

The tables in this section indicate the change in the amount of "designated routes" on the Forest/District. Impacts will be assessed from the corresponding change in acres of the affected habitat for these species. However, nearly all the increase of designated routes in the Action Alternatives currently exist on the ground as existing undesignated or unauthorized routes. Therefore, because these routes already exist on the ground, the actual impacts to wildlife habitat from changing the status of the road ("existing undesignated" to "designated" or "unauthorized" to "designated") would be less than what is shown in the tables. Because motorized travel on undesignated routes would be prohibited with the implementation of an action alternative, current effects to wildlife would be largely reduced in the hatched area. Effects to wildlife from the action alternatives will be analyzed in four ways; 1) the amount of habitat affected from the new designations of routes (change of designated routes from Alternative A) and the percent of habitat it would affect; 2) putting this change in context with what actually exists on the ground; 3) the amount of reduction of affected habitat in the hatched travel area of the Vernal RD; and 4) effects of disturbance to wildlife from noise associated with motorized routes.

#### Alternative A

Potential impacts from Alternative A were discussed above. These impacts are common to wildlife species within the Forest and all Districts. In short, some routes ("designated", "existing undesignated", and "unauthorized") are currently causing resource degradation as they continue to be used. Under this Alternative these routes would likely continue to slowly degrade the resource, which may incrementally degrade and fragment wildlife habitat. This would incrementally displace wildlife over time and space, and may make some habitats on the Forest less attractive to wildlife. In all action alternatives, dispersed camping is reduced from 300 feet off roads to 150 feet off roads. Leaving dispersed camping at 300 feet could incrementally over time displace wildlife further from roads as dispersed camping expands.

These effects would occur at the Districts level as well, but may be greater on the Vernal Ranger District. The hatched area on this District may continue to increase in road density as users establish new routes. Many of the routes in this area were not created by the Forest Service and some were created in areas that receive resource damage. An increase in density of these routes may further displace wildlife over time and space.

Changes discussed below reflect the change in miles and acres from Alternative A.

### **Effects common to all action alternatives**

Unauthorized and undesignated routes that are not designated under any alternative would no longer be allowed for travel. Many of these routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Not allowing motorized travel on these routes would reduce disturbance to the wildlife and reduce the amount of wildlife habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

Mixed use (street legal vehicles and ATV's) would be allowed on some roads that are not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by wildlife. However, if displacement does occur, there is ample habitat for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur.

Generally increased roads would mean increased habitat fragmentation on the Forest. However, since, the majority of these routes already exist as undesignated or unauthorized routes there would be little increase in habitat fragmentation among these alternatives.

Under these alternatives dispersed camping would be reduced from 300 feet off roads to 150 feet off designated roads. This reduction in distance from roads may reduce potential disturbance to habitat, however because dispersed camping only occurs at isolated locations along roads, this reduction in potential disturbance from dispersed camping may only be minimal in some locations.

Continued use of designated routes would have the same affects to the wildlife species discussed below that currently exist. These species have likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further affects to these species. Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by peregrine falcons in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

## Threatened and Endangered Wildlife Species

### Canada Lynx

#### *Direct and Indirect Effects*

The Northern Rockies Lynx Management Direction (NRLMD) states several guidelines as roads relate to lynx habitat. The main concerns are roads increasing accessibility of competing predators in the winter (by compacting snow) to areas where they would otherwise be excluded, and maintaining habitat connectivity and minimizing impacts to lynx habitat near roads. Neither of the Alternatives, propose an increase of over the snow travel, and therefore those guidelines pertaining to over the snow activities would be met in each Alternative. The LCAS guidelines are comparably the same as the NRLMD, but places more emphasis on restricting over the snow travel.

To determine the direct effects to lynx from the action alternatives, the change in miles of designated roads within lynx habitat and change in acres of lynx habitat were calculated for each of the action alternatives. A table illustrating the amount of lynx habitat within LAU's on the Forest as well as a map of the LAU's can be found in the project record and in the Biological Assessment.

#### *Alternative B, C, and E*

Within LAU's on the Forest there would be a net increase in miles of designated routes and acres of affected lynx habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 49 miles of designated routes and 80 acres of affected lynx habitat. Alternative E would have the next largest change in affected habitat acres and Alternative B would have the least (60 acres affected). The affected acres are far less than 1% of the amount of lynx habitat within any of the LAU's or habitat on the Forest. There is a decrease in the amount improved/paved roads (high traffic roads) under this alternative, but an increase in unimproved roads (low traffic roads). The majority of increase in roads among these alternatives comes from the increased miles of the low traffic roads. Since lynx are less likely to be disturbed, by low traffic roads than high traffic roads, the overall change in disturbance effects would be low (Reudigar et. al. 2000).

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. However, studies have found that lynx do not show avoidance of forest back country roads or roads with low traffic volumes (USDA Forest Service 2007, 2007a, & 2007c). Additionally, the increase use and noise is not likely to be enough to impede movement of lynx within or between LAU's. Continued use of designated routes would continue to have the same effects to lynx habitat that currently exists. This species, if individuals travel across the Forest or linger for a period of time, would likely habituate to the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by lynx, if they are in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance. Additionally, the likelihood of individual lynx being exposed to human activities

facilitated by roads is very low given that there are probably very few, if any lynx, on the Ashley (other than the occasional wandering transplanted from Colorado at this point in time).

Nearly all the increases in designated roads are routes that currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to lynx habitat from this alternative are likely less than the tables in the Specialist report indicate, because the direct habitat loss already exists.

Although, the NRLMD is the primary guiding direction for lynx management on the Ashley NF, the LCAS is still considered in analysis. LCAS guidelines state that wherever road densities are greater than two miles per square mile, then roads should be considered for seasonal closures and or reclamation. Alternative A has road densities in lynx habitat for the Districts and the Forest considerably lower than the 2.0 guideline. Road densities among Alternatives B, C, and E only slightly increase, and would stay around 1.0 or lower. There is little difference in road densities between alternatives.

Guidelines in both the NRLMD and LCAS encourage minimizing brushing along roadsides, locating roads away from forested stringers, and locating roads away from ridge tops. New roads and trails proposed under these alternatives are few, and have been located where possible away from forested stringers and ridge tops. General maintenance of roads and trails on the Forest usually does not include brushing the roadsides, unless it poses a hazard. Therefore, the alternatives would comply with the intent of the standards and guidelines in the LCAS and the NRLMD. In the event that location of these new routes and reconstruction changes, the following mitigations should be followed to help in maintaining habitat connectivity for lynx. These mitigations are guidelines within the both the NRLMD and the LCAS.

#### Determination

It is determined that the changes to the Travel Plan proposed under these Alternatives, would meet the intent of the standards and guidelines outlined in the NRLMD as well as the LCAS. There will be “no effect” to critical lynx habitat from Alternatives B, C, & E, since there has been no critical habitat identified on or near the Forest. It is further determined that the changes to the Travel Plan proposed under these Alternatives “may affect, but is not likely to adversely affect” Canada lynx. This determination is based on the following rationale. The amount of lynx habitat directly affected by the proposed changes to the Travel Plan would affect far less than 1% of available habitat within any LAU, within any of the Districts, and within the Forest. Studies have not shown lynx to avoid low traffic roads and it is likely that lynx would behave the same on the Ashley (USDA Forest Service 2007, 2007a, & 2007b). The likelihood of individual lynx being exposed to human activities facilitated by routes is very low given that there are likely very few, if any lynx, on the Ashley NF other than the occasional wandering transplanted from Colorado at this point in time. Even if an individual were on the Forest and thus ‘exposed’ to elements of Alternatives B, C, & E, the effects to an individual lynx via habitat loss or disturbance are expected to be negligible based on the following: 1) the very limited physical habitat loss due to new routes is unlikely to impede movement of lynx within and through LAU’s, or the ability of a lynx to procure sufficient food, often a limiting factor; and 2) a lynx disturbed by human activity on the designated roads may temporarily be displaced or may habituate to the activity, neither outcome of which is likely to alter the likelihood this individual will procure prey.

#### ***Alternative D***

Under this alternative there would be a decrease of approximately 9 miles in the amount of designated routes and a net change of approximately 19 acres of lynx habitat. This is far less than 1% of lynx habitat on the Forest or in any LAU. Therefore, the effects to lynx habitat under this alternative would be negligible. Road density in lynx habitat under this alternative would slightly decrease and remain under the 2.0 mile guideline.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of lynx habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to lynx habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected lynx habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E. Road density within lynx habitat in this District would stay below the 2.0 mile guideline under this alternative.

#### Determination

It is determined that the changes to the Travel Plan proposed under this Alternative, would meet the intent of the standards and guidelines outlined in the NRLMD as well as the LCAS. There will be “no effect” to critical lynx habitat from this Alternative, since there has been no critical habitat identified on or near the Forest. It is further determined that the changes to the Travel Plan proposed under this Alternative “may affect, but is not likely to adversely affect” Canada lynx. This determination is based on the same rationale discussed under Alternatives B, C, & E.

### **Mexican Spotted Owl**

#### Direct and Indirect Effects

The change in designated miles/trails and acres of affected MSO habitat within the 2000 model is a relatively small amount. A larger amount of MSO habitat is affected within the 1997 model. The affects to MSO habitat would be similar regardless of which model is being used in the discussion below, except for the amount of acres of MSO habitat affected. Therefore, the discussion below will focus on the 1997 model since the proposed changes to the Travel Plan affect a greater amount of MSO habitat in this model. To determine the effects to MSO habitat the change in miles of designated roads within MSO habitat and change in acres of MSO habitat were calculated for each of the action alternatives. Tables identifying the change in miles of designated routes and acres of affected habitat are available in the Wildlife Resource report found in the project record.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected MSO habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 64 miles of designated routes and 68 acres of affected MSO habitat. Alternative B would have the lowest increase of designated routes (approximately 47) and affected MSO habitat (approximately 52). Alternative E would be nearly the same as Alternative B, but with a slightly higher amount of affected acres of MSO habitat.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to MSO habitat from this alternative are likely less than the model indicates, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use (street legal vehicles & ATV's) on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by MSO's and may disturb them during nesting. However, since no MSO's have been detected on the Forest, it is unlikely that nesting or foraging MSO's would be disturbed by noise associated

with the routes. If displacement does occur, there is ample habitat for displaced individuals away from routes. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to MSO habitat that currently exists. If individuals of this species have been affected by these routes, they have likely since habituated to the disturbance or moved to areas of suitable habitat, where the disturbance does not occur. Therefore, the continued use of these routes is not likely to have any further effects to this species. Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by MSO's, if they are in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Not allowing these routes for travel would reduce the amount of bald eagle habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of MSO habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of MSO habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to MSO habitat.

### ***Alternative D***

Under this alternative there would be a decrease of nearly 3 miles in the amount of designated routes and a net change of approximately 13 acres of MSO habitat. This is far less than 1% of MSO habitat on the Forest. Therefore, the effects to MSO habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of MSO habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to MSO habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected MSO habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Since there is no critical Mexican spotted owl habitat on the Forest, there will be "no effect" to critical habitat from any Alternative. Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, "may affect, but is not likely to adversely affect" the Mexican spotted owl or its habitat. This determination is based on the following rationale. There have been no detections of Mexican spotted owls on the Forest, and thus no Protected Activity Centers would be affected by the alternatives, and it is unlikely that any individuals would be affected by any elements of the alternatives. Even if an individual were on the Forest, effects would be minimal due to the low amount of habitat directly affected by the alternatives and the amount of habitat available for displacement.

### **Sensitive Wildlife Species**

#### **Bald Eagle**

### Direct and Indirect Effects

To determine the effects to bald eagle habitat from the action alternatives, the change in miles of designated roads within bald eagle habitat and change in acres of bald eagle habitat were calculated for each of the action alternatives and are shown in the Table 57 of the Wildlife Report (available from the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

The bald eagle guidelines specify vehicle use type activities should not occur within 660 feet from nests (USF&WS 2007b). There is a bald eagle nest located near the NRA, but none are located on the NRA or on the Forest. This bald eagle nest is located more than 660 feet from the NRA and nearly a mile from the nearest road that is on the NRA. Therefore, the distance of any road or trail on the NRA from this nest is far greater than the recommended distance. This guideline would therefore be met under these alternatives and there would be little effect to these nesting bald eagles from these alternatives, because of the distance between the nest and any road/trail on the NRA.

There would be a net increase in miles of designated routes and acres of effected bald eagle habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 35 miles of designated routes and 62 acres of affected bald eagle habitat. Alternative E would have the lowest increase of designated routes (approximately 17) and affected bald eagle habitat (approximately 32). Alternative B would be nearly the same as Alternative C, but with a slightly lower amount of affected acres of bald eagle habitat.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to bald eagle habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use (street legal vehicles & ATV's) on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by bald eagles. However, if displacement does occur, there is ample habitat for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. The bald eagle guidelines recommend minimizing disruptive activities in bald eagles direct flight path to important foraging (USF&WS 2007b). Bald eagles from the nest located near the NRA likely forage along Flaming Gorge Reservoir, however there would be no changes to the Travel Plan that would affect the flight path of these bald eagles to the Reservoir. There are some currently designated roads on the NRA that may be near the foraging areas for these eagles. However, continued use of these designated roads is unlikely to have any more effects to the bald eagles than currently exist. These eagles have likely habituated to the disturbance and are tolerant of current activities.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Not allowing these routes for travel would reduce the amount of bald eagle habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of bald eagle habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of bald eagle habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to bald eagle habitat.

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under these Alternatives, may impact individual bald eagles, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### ***Alternative D***

Under this alternative there would be a decrease of nearly four miles in the amount of designated routes and a net change of approximately 13 acres of bald eagle habitat. This is far less than 1% of bald eagle habitat on the Forest. Therefore, the effects to bald eagle habitat under this alternative would be negligible.

At the District level, the overall effects to bald eagle habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected bald eagle habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual bald eagles, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Northern Goshawk**

#### **Direct and Indirect Effects**

To determine the effects to goshawk habitat within PFA's from the action alternatives, the change in miles of designated roads within PFA's and change in acres of affected goshawk habitat were calculated for each of the action alternatives and are shown in the Table 58 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected goshawk habitat within PFA's under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of seven miles of designated routes and 10 acres of affected goshawk habitat (within PFA's). Alternatives B and E are nearly the same affecting approximately nine acres goshawk habitat and an additional increase of approximately six miles of routes. Overall there is not much change in improved roads (high traffic roads), but there is an increase in unimproved roads and ATV trails (low traffic roads). The overall increase in roads among these alternatives comes from the increased miles of the low traffic roads. Since goshawks are less likely to be disturbed, by low traffic roads than high traffic roads, the overall change in disturbance effects would be low. The subtle decrease in high traffic roads and ATV trails would

likely reduce the disturbance within goshawk habitat. In time, these areas would rejuvenate, which would likely provide habitat for goshawks over time. However, the benefit may be offset by the increase of low traffic roads.

Noise created from use of these routes in Alternatives B, C, and E would extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. This may potentially increase disturbance to goshawks of the immediate area around those roads within PFA's. However, it is likely that goshawks using these areas for foraging are habituated to noise around these roads and it is unlikely that a slight increase in use would displace goshawks out of the PFA. Furthermore, the amount of habitat that may be potentially affected would be far less than 1% of the amount of goshawk habitat within any District or on the Forest.

New trail construction and route reconstruction proposed under these alternatives are limited and may cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. Construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. However, to comply with the guidelines in the Goshawk Amendment to the Forest Plan and to minimize effects to goshawks within the PFA, the following mitigation should be applied for any new road/trail construction or reconstruction within the PFA of an occupied goshawk territory.

- Construction of new trails or reconstruction of existing trails within the PFA of an occupied goshawk territory should be restricted between March 1<sup>st</sup> and September 30<sup>th</sup>, unless the biologist determines that there would be no adverse effects to goshawks. The biologist will be consulted prior to construction or reconstruction of any road or trail proposed under the action alternatives.

Proposal 2015 would designate an existing undesignated route as an ATV trail. The trail crosses through the 30 acre nest buffer of two goshawk nests (Dyer Park Territory Nest B and Snow Pole Nest C). This proposal is incorporated within Alternatives B, C, and E. The Dyer Park Territory was last active in 2005, but Nest "B" has not been active since 1991 and the nest was documented to have fallen from the tree in 2001. The Snow Pole territory was last active in 2004 and in 2007 the nest had fallen out of the tree. Therefore, there would be no disturbance to nesting goshawks at Dyer Park nest "B", or Snow Pole nest "C" since these nests no longer exist. There would be some disturbance within the PFA's of these territories, however this trail has been used by ATV's for a period of time, and therefore would not represent any additional disturbance in the area (USDA Forest Service 2008c)

Proposal 2028 would designate non-motorized trail 128 as an ATV trail in Alternative C. The trail crosses through the 30 acre nest buffer of two nests (A and B) of the Horse Shoe Park territory. This territory was last active in 1993 and both these nest trees have been down since 2001. Therefore, there would be no disturbance to goshawks at these nests. If this territory becomes active, there would be an additional disturbance within the PFA that was not there previously. However, since this territory has not been active for 15 years, it is unlikely that this disturbance would affect any nesting goshawks (USDA Forest Service 2008c)

The amount of goshawk habitat within PFA's affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of goshawk habitat (within PFA's) that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to goshawk habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a decrease of approximately one mile in the amount of designated routes and a net change of less than one acre of goshawk habitat within PFA's, the effects to goshawk habitat within PFA's under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of goshawk habitat within PFA's affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to goshawk habitat within PFA's would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected goshawk habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### Determination

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under the Action Alternatives, may impact individual goshawks, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Peregrine Falcon**

#### Direct and Indirect Effects

To determine the effects to peregrine falcon habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of peregrine falcon habitat affected were calculated for each of the action alternatives and are shown in the Table 59 in the Wildlife Report (available in the Project Record). The current system of routes does not affect any known peregrine falcon nests and none of the proposed changes would affect peregrine falcon nesting habitat, therefore the discussion of the effects below only pertain to foraging habitat.

### ***Alternatives B, C, and E***

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to peregrine falcon habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use (street legal vehicles & ATV's) on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by peregrine falcons. However, peregrine falcons are known to habituate to human activity and therefore, may habituate to the increase in noise within foraging habitat (White et. al. 2002). Furthermore, if displacement does occur, there is ample habitat for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to peregrine falcons that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these

areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Not allowing these routes for travel would reduce the amount of peregrine falcon habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of peregrine falcon habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of peregrine falcon habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to peregrine falcon habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a decrease of one mile in the amount of designated routes and a net change of less than two acres of peregrine falcon habitat. This is far less than 1% of peregrine falcon habitat on the Forest. Therefore, the effects to peregrine falcon habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of peregrine falcon habitat affected than discussed under Alternatives B, C, and E. Therefore, the overall effects to peregrine falcon habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected peregrine falcon habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual peregrine falcons, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Boreal Owl**

#### **Direct and Indirect Effects**

To determine the effects to boreal owl habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of boreal owl habitat were calculated for each of the action alternatives and are shown in the Table 60 in the Wildlife Report (available from the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected boreal owl habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 14 miles of designated routes and 39 acres of affected boreal owl habitat. Alternative E would have the next largest increase and Alternative B would have the least (eight miles of increase and 21 acres affected).

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to boreal owl habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use (street legal vehicles & ATV's) on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. Since fledging usually takes place by early July (USDA Forest Service 2006b) and the highest amount of recreational use of routes on the Forest occur July and later, disturbance to nesting boreal owls would be minimal. Additionally, nesting and foraging boreal owls have been documented to be tolerant of human and mechanical activities and their response to such activities seem indifferent (USDA Forest Service 1994). Therefore, boreal owls are not likely to be displaced as a result of increased noise from routes proposed for designation or construction. However, if displacement does occur, there is ample habitat for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to boreal owls that currently exist. This species has likely habituated to the disturbance to the current disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Prohibiting travel on these routes would reduce the amount of boreal owl habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

Under these alternatives dispersed camping would be reduced from 300 feet off roads to 150 feet off roads. This reduction in distance from roads may reduce potential disturbance in boreal owl habitat, however because dispersed camping only occurs at isolated locations along roads, this reduction in potential disturbance from dispersed camping may only be minimal in some locations.

The amount of boreal owl habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of boreal owl habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to boreal owl habitat on the Forest.

### ***Alternative D***

This alternative proposes a net decrease of approximately 9 miles of designated roads and trails from Alternative A. The affected acres (approximately 3) are far less than 1% of the amount of boreal owl habitat within either of the Districts or on the Forest.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of boreal owl habitat affected in each District, than in Alternative A. Therefore, the overall effects to boreal owl habitat would be lower under this alternative. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected boreal owl habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

### Determination

Based on the discussion above, and the fact that boreal owls are tolerant of human activities, it is determined that the changes to the Travel Plan proposed under these Alternatives, may impact individual boreal owls, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Great Gray Owl**

#### Direct and Indirect Effects

To determine the effects to great gray owl habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of great gray owl habitat affected were calculated for each of the action alternatives and are shown in the Table 61 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. There is no great gray owl habitat on the South Unit of the Roosevelt/Duchesne RD; therefore the analysis below will not include that portion of the District.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected great gray owl habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 35 miles of designated routes and 50 acres of affected great gray owl habitat. Alternatives B and E are nearly the same affecting approximately 35 acres great gray owl habitat and an additional increase of approximately 28 and 24 miles of routes respectively.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to great grey owl habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trails and reconstruction of designated routes proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the routes by great gray owls. Since fledging usually takes place by early July (USDA Forest Service 1994) and the highest amount of recreational use of routes on the Forest occurs July and later, disturbance to nesting great gray owls would be minimal. Additionally, since the Uintas are considered the southern most extent of their range and great gray owls are considered to be rare or migrants to the State, it is likely that there would be few individuals, if any, affected by the proposed changes to the Travel Plan under these alternatives. However, if displacement of an individual does occur, there is ample habitat on the Forest for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would have the same effects to great gray owls that currently exist. If any individuals occur on the Forest, they have likely habituated to the disturbance or have moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

With implementation of this project, motorized travel would be prohibited on routes that are not designated. Several undesignated routes were not carried forward in any alternative because they crossed riparian and meadow areas. Reduction in routes in these areas would improve habitat for

great gray owl prey species, and thus improve great gray owl foraging habitat. This habitat improvement would incrementally happen over time as these areas rejuvenate.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

The amount of great gray owl habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of great gray owl habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to great gray owl habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a decrease of nearly 13 miles in the amount of designated routes and a net change of less than 10 acres of great gray owl habitat. This is far less than 1% of great gray owl habitat on the Forest. Therefore, the effects to great gray owl habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of great gray owl habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to great gray owl habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected great gray owl habitat within the hatched area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual great gray owls, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Flammulated Owl**

#### **Direct and Indirect Effects**

To determine the effects to flammulated owl habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of flammulated owl habitat affected were calculated for each of the action alternatives and are shown in the Table 62 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of affected flammulated owl habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 34 miles of designated routes and 36 acres of affected flammulated owl habitat. Alternatives B and E are nearly the same, but affecting slightly less habitat than Alternative C.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to flammulated owl habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, and E extends beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. While trail construction and route reconstruction proposed under these alternatives is limited it may cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. However nesting flammulated owls have been documented to be tolerant of human and some mechanical activities and their response to such activities seem indifferent (USDA Forest Service 1994). Therefore, flammulated owls are not likely to abandon nests or be displaced as a result of increased noise from routes proposed for designation or construction. Construction and reconstruction activities would only be for a short duration, thus if displacement did occur it would only be temporary. Continued use of designated routes would continue to have the same effects flammulated owls that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Prohibiting travel on these routes would reduce the amount of flammulated owl habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of flammulated owl habitat affected at the Forest and District levels under these alternatives is far less than 1% of the flammulated owl habitat that occurs within the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to flammulated owl habitat on the Forest.

### ***Alternative D***

Under this alternative there would be an increase of nearly five miles in the amount of designated routes and a net change of approximately 10 acres of flammulated owl habitat. This is far less than 1% of flammulated owl habitat on the Forest. Therefore, the effects to three-toed woodpecker habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of flammulated owl habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to flammulated owl habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected flammulated owl habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### Determination

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternatives, may impact individual flammulated owls, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Three-toed Woodpecker**

#### Direct and Indirect Effects

To determine the effects to three-toed woodpecker habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of three-toed woodpecker habitat were calculated for each of the action alternatives and are shown in Table 63 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected three-toed woodpecker habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 59 miles of designated routes and 88 acres of affected three-toed woodpecker habitat. Alternative E would have the next largest increase and Alternative B would have the least (42 miles of increase and 60 acres affected).

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to tree-toed woodpecker habitat from these alternatives are likely less than mentioned above, because the direct habitat loss already exists.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use (street legal vehicles & ATV's) on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trails and reconstruction of roads and trails proposed for designation under these alternatives are limited and may cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. However three-toed woodpeckers have been documented to be very tolerant of human activities and human disturbance is not considered a threat to their populations (Leonard 2001). Therefore, nesting and foraging three-toed woodpeckers are not likely to be disturbed or displaced as a result of increased noise from routes proposed for designation or construction. Construction and reconstruction activities would only be for a short duration, so if in the unlikely event that displacement occurred it would only be temporary. Continued use of designated routes would continue to have the same effects to three-toed woodpeckers that currently exist. This species has likely habituated to the disturbance, remained tolerant, or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these

areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation. Prohibiting motorized travel on these routes would reduce the amount of three-toed woodpecker habitat that is currently being affected by the routes and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of three-toed woodpecker habitat affected at the Forest and District levels under these alternatives is far less than 1% of the amount of three-toed woodpecker habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to three-toed woodpecker habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a decrease of nearly 18 miles in the amount of designated routes and a net change of less than 10 acres of three-toed woodpecker habitat. This is far less than 1% of three-toed woodpecker habitat on the Forest. Therefore, the effects to three-toed woodpecker habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of three-toed woodpecker habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to three-toed woodpecker habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected three-toed woodpecker habitat within the hatched area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual three-toed woodpeckers, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Greater Sage-grouse**

#### **Direct and Indirect Effects**

To determine the effects to sage grouse habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of sage grouse habitat were calculated for each of the action alternatives and are shown in Table 64 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. Although, the North Unit portion of the Roosevelt/Duchesne RD does contain some habitat for sage grouse (some summer use), there is no winter habitat and no leks within two miles of this unit.

Therefore, there would be no critical sage grouse habitat (breeding, nesting, brood rearing, and winter habitat) affected by the action alternatives within this unit.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected sage grouse habitat associated with those routes under Alternatives B, C, and E. Alternative C would have the largest increase with approximate 12 miles of designated routes and 17 acres of affected sage grouse nesting/brood rearing habitat. Alternative E would have the next largest increase and Alternative B would have the least (eight miles of increase and 13 acres affected).

There are no new routes proposed within two miles of a lek under these alternatives, but there are a few routes that may need maintenance or reconstruction. Reconstruction of roads and trails proposed under these alternatives is limited, but may cause noise disturbance to sage grouse in the immediate vicinity of these areas. Reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. However, nesting birds could abandon nests and breeding may be disrupted if reconstruction occurs within breeding/nesting habitat during that critical time period. Therefore to avoid nest abandonment and disruption to breeding the following mitigation should be applied reconstruction activities of routes within sage grouse habitat that is within two miles of an active lek.

- Reconstruction activities of routes within sage grouse habitat that is within two miles of an active lek should not occur between March 1 and June 15, unless the biologist determines that there would be no adverse effects to sage grouse. The biologist will be consulted prior to reconstruction of any road or trail proposed under the action alternatives.

Increased miles of motorized routes would be expected to increase habitat fragmentation on the Forest. However all the increases in designated roads and trails in sage grouse habitat are routes that currently exist on the ground as unauthorized or undesignated. Since these routes already exist there would be no increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. This may potentially increase disturbance to sage grouse in the immediate area around those routes. However, it is likely that sage grouse using these areas are habituated to noise around these routes and it is unlikely that a slight increase in use would displace sage grouse. Continued use of designated routes would continue to have the same effects to sage grouse that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Prohibiting motorized travel on these routes would reduce the amount of sage grouse habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of sage grouse habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of sage grouse habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to sage grouse habitat on the Forest.

### ***Alternative D***

Under this alternative there would be little change in the amount of designated routes and in the amount of acres of affected sage grouse habitat. Therefore, the effects to sage grouse habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of sage grouse habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to sage grouse habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected sage grouse habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E. For the South Unit portion of the Roosevelt/Duchesne RD, there would be no change under this alternative in the miles of designated roads and affected sage grouse habitat.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual sage grouse, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Spotted Bat and Townsend's Big-eared Bat**

#### **Direct and Indirect Effects**

To determine the effects to spotted bat and Townsend's big-eared bat habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of spotted bat and Townsend's big-eared bat habitat were calculated for each of the action alternatives and are shown in Tables 65 and 66 in the Wildlife Report (available in the Project Record). The first table was derived from the Ashley NF Vegetation GIS layer (this model may over estimate the amount of habitat on the Forest) and the second table is derived from a bat predictability model that predicts the likelihood of the occurrence of bats within certain habitat criteria. Both methods will be used in comparing the changes of affected bat habitat by alternative. The changes reflect the change in miles and acres from Alternative A. As none of the increase or change of designated routes would affect caves or cliffs, there would be no effect to bat hibernacula or roosting in those areas. However, roosting habitat within forests may be affected and is evaluated below.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected spotted bat and Townsend's big-eared bat habitat under Alternatives B, C, and E using both the vegetation model and the predictability model. The vegetation model shows a greater increase in designated routes affecting these species habitat and a greater difference between alternatives than the bat the predictability model. Since the vegetation model shows greater effects to these species habitat, the discussion below will be focused on this model.

The largest increase in the vegetation model would be in Alternative C with an approximate increase of 82 miles of designated routes and 126 acres of affected spotted bat and Townsend's big-eared bat habitat. Alternative B would have the next largest increase and Alternative E would have the least (45 miles of increase and 73 acres affected).

Nearly all the proposed increase in designated routes currently exists on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Since, the majority

of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trail construction and routes reconstruction proposed under these alternatives are limited and may cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the routes by Townsend's big-eared bats and spotted bats. Disturbance to foraging bats during the evening hours would not be expected given most recreational use along routes is during the day. However, daytime use of these routes may disturb daytime roosting for bats. If displacement does occur, there is ample habitat for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to spotted bats and Townsend's big-eared bats that currently exist. These species have likely habituated to the disturbance or have moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation. Much of the resource damage was occurring in riparian areas and meadow areas. Since these bats forage near riparian areas, reduction in these routes would result in a reduction in resource damage in these areas, improve habitat for bat prey species, and thus improve bat foraging habitat. This habitat improvement would incrementally happen over time as these areas rejuvenate.

The amount of net increase in miles of designated routes habitat affected at the Forest and District levels under these alternatives is far less than 1% of the amount of spotted bat and Townsend's big-eared bat habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to spotted bat and Townsend's big-eared bat habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a net increase of approximately four miles in the amount of designated routes and a net change of approximately 15 acres of net spotted bat and Townsend's big-eared bat habitat. This is far less than 1% of spotted bat and Townsend's big-eared bat habitat on the Forest. Therefore, the effects to spotted bat and Townsend's big-eared bat habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of spotted bat and Townsend's big-eared bat habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to spotted bat and Townsend's big-eared bat habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and

the amount of affected spotted bat and Townsend's big-eared bat habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### Determination

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual spotted bats and Townsend's big-eared bats, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Pygmy Rabbit**

#### Direct and Indirect Effects

To determine the effects to pygmy rabbit habitat from the action alternatives, the change in miles of designated routes within habitat and change in acres of pygmy rabbit habitat were calculated for each of the action alternatives and are shown in Table 67 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. Pygmy rabbit habitat only occurs within the Wyoming portion of the Flaming Gorge RD, therefore the summary below will only discuss the effects to pygmy rabbit habitat on this District.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected pygmy rabbit habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 39 miles of designated routes and 69 acres of affected pygmy rabbit habitat. Alternative B would have the next largest increase and Alternative E would have the least (18 miles of increase and 31 acres affected).

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Since, the majority of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. This may potentially cause additional avoidance of the immediate area around the roads by pygmy rabbits. However, routes proposed for designation in pygmy rabbit habitat currently exist and are not likely to increase noise disturbance in pygmy rabbit habitat. If displacement does occur, there is ample habitat for any displaced individuals. There are no new routes proposed for construction in pygmy rabbit habitat and therefore would not affect pygmy rabbits. Continued use of designated routes would continue to have the same effects to pygmy rabbits that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species. Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by pygmy rabbits in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

The amount of pygmy rabbit habitat affected on the Forest/Flaming Gorge RD under these alternatives is far less than 1% of the amount of pygmy rabbit habitat on the Forest. This small

amount of directly affected habitat would have relatively little effect to pygmy rabbit habitat on the Forest/Flaming Gorge RD.

### ***Alternative D***

Under this alternative there would be a net increase of approximately 4 miles in the amount of designated routes and a net change seven acres of pygmy rabbit habitat. This is far less than 1% of pygmy rabbit habitat on the Forest/Flaming Gorge RD. Therefore, the effects to pygmy rabbit habitat under this alternative would be negligible. Effects to pygmy rabbit habitat under this alternative would be less than Alternatives B, C, and E.

#### Determination

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under these Alternatives, may impact individual pygmy rabbits, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Wolverine**

#### Direct and Indirect Effects

To determine the effects to wolverine habitat from the action alternatives, the change in miles of designated routes within habitat and change in acres of wolverine habitat were calculated for each of the action alternatives and are shown in Table 68 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected wolverine habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 39 miles of designated routes and 70 acres of affected wolverine habitat. Alternative E would have the next largest increase and Alternative B would have the least (24 miles of increase and 45 acres affected).

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Since, the majority of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by wolverines. However, since wolverine generally occur in more remote locations and are likely to avoid areas around motorized routes, and since routes proposed for designation under these alternatives occur in areas that are currently impacted by roads, wolverine are not likely to be affected by noise associated with these routes. If displacement does occur, there is ample habitat in more remote locations for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to wolverine that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not

likely to have any further effects to this species. Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by wolverine in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation. Prohibiting travel on undesignated routes would reduce the amount of wolverine habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

The amount of wolverine habitat affected at the Forest and District levels under these alternatives is far less than 1% of the amount of wolverine habitat that occurs within either the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to wolverine habitat on the Forest.

### ***Alternative D***

Under this alternative there would be a decrease of 20 miles in the amount of designated routes and a net change of less than 10 acres of wolverine habitat. This is far less than 1% of wolverine habitat on the Forest. Therefore, the effects to wolverine habitat under this alternative would be negligible.

At the District level, there would generally be a lower amount of miles of roads and trails and a lower amount of wolverine habitat affected in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects wolverine habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected wolverine habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

#### **Determination**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative, may impact individual wolverine, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.

### **Management Indicator Species**

#### **Rocky Mountain Elk**

##### **Direct and Indirect Effects**

To determine the effects to elk critical habitat from the action alternatives, the change in miles of designated roads within critical habitat and change in acres of elk critical habitat were calculated for each of the action alternatives and are shown in Table 69 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. Table 3.3.2 illustrates the road density within critical elk habitat among Districts and alternatives.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected elk critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 23 miles of designated routes and 22 acres of affected critical elk habitat.

Alternative E would have the next largest increase and Alternative B would have the least (10 miles of increase and nine acres affected).

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trail construction and routes reconstruction proposed under these alternatives are limited, and may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the route by elk. However, if displacement does occur, there is ample habitat on the Districts and on the Forest in any given drainage for any displaced individuals. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to elk that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by elk in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these routes were not carried forward in these alternatives for designation because of resource damage. Much of the resource damage was occurring in riparian areas and meadow areas. Since elk forage in riparian and meadow areas, reduction in these routes would result in a reduction in resource damage and improve elk foraging habitat. This habitat improvement would incrementally happen over time as these areas rejuvenate.

There would be some seasonal closures of routes (e.g. Proposals 3082 and 3001) under these alternatives among the Districts. This would restrict travel along these roads during the hunting season and in some cases during the calving season. This would reduce the disturbance hunters would have on elk as well as reduce harvest, and increase elk security areas. Roads that remain closed during the calving season would also limit human disturbance in those areas, providing a security area for calving elk.

Specifically proposals 2145, 2146, 2153, 2180, 2048, 2058, 2061, 2085, and 2047 are roads that have been administratively closed in the past for wildlife protection, particularly elk and deer. Although this area is not identified as critical winter or summer elk habitat, past closure of this area to public travel has reduced disturbance to elk during the calving season and provided a security area for them during the hunting season. These roads remain administratively closed under Alternative A, but are proposed to be opened to public travel under Alternatives B, C, and E, with a seasonal closure from October 1 to June 1. The critical time for elk is during the calving season in late spring and early summer and during the hunting season in the fall. Maintaining the closure of these roads between October 1 and June 1 would continue to protect elk during the hunting season and the first part of the calving season.

According to the best available science, road density should be less than 1.0 miles<sup>2</sup> in critical elk habitat (Christensen et al. 1993, pages 2-3). Areas of higher road densities tend to displace elk and can lower the quality of habitat in the area. Average road density Forest wide is less than 0.87 miles<sup>2</sup>. Among Alternatives B, C, and E road density Forest wide slightly increases, but stays below the 1.0 miles<sup>2</sup> (Table 3.3.2). Alternative C has the highest road density at 0.93, Alternative

B has the lowest at 0.89, and Alternative E is in between at 0.91. Therefore, among these alternatives, average road density on the Forest should stay at a level that would maintain elk habitat effectiveness. Some isolated areas may have a higher road density than 1.0 mile and may reduce the quality of elk habitat effectiveness immediately around those areas, but most of these areas are small, and would not adversely affect overall elk habitat on the Forest or the Districts. However, there are larger areas on the Vernal RD that exhibit road densities greater than 1.0 miles<sup>2</sup>.

District	ALT A Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT B Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT C Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT D Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT E Road Density (Mi Roads/Mi <sup>2</sup> Habitat)
Flaming Gorge RD	1.00	1.00	1.13	1.00	1.10
Vernal RD	0.91	0.96	0.97	0.91	0.94
Roosevelt/Duchesne RD (North Unit)	1.17	1.24	1.25	1.17	1.23
Roosevelt/Duchesne RD (South Unit)	0.76	0.77	0.78	0.76	0.77
Forest Wide Total	0.87	0.89	0.93	0.87	0.91

**At the District levels, all the potential effects to elk critical habitat discussed above will generally be the same, except on a smaller scale. Therefore, the discussion at the District level will focus on changes per alternative.** For the *Flaming Gorge Ranger District*, there would be a net increase in miles of designated routes and acres of affected elk critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 11 miles of designated routes and seven acres of affected critical elk habitat. There is decrease on this District for high traffic roads and an increase in low traffic roads and trails. This District has a road density of 1.0 mile, which is at the recommended cutoff for habitat effectiveness. Among alternatives road density slightly increases to 1.13 under Alternative C, 1.10 in Alternative E, and remains at 1.0 in Alternative B. The increase in Alternatives C & E is very little and is not likely to change habitat effectiveness for elk on the District.

For the *Vernal Ranger District*, there would little change in miles of designated routes and acres of affected elk critical habitat under Alternatives B, C, and E. The largest change in affected elk critical habitat would be in Alternative E with an increase of approximately two acres of affected elk critical habitat. There would be an overall decrease in the amount of high traffic roads, and an increase in the amount of low traffic roads and trails. This District currently has an area in which travel of existing undesignated routes is allowed. There is approximately 13 miles of these existing undesignated roads (low traffic roads) within elk critical habitat in the hatched travel area, affecting approximately 22 acres of elk critical habitat. Any undesignated routes in this area that would not be designated would no longer be available for motorized travel. Since the largest net increase of designated routes among Alternatives B, C, and E is approximately three miles, then there would be approximately 10 miles of these existing undesignated routes that would no longer be available for motorized travel. This would reduce the amount of affected elk critical habitat within the hatched travel area by approximately 17 acres. Therefore, implication of any of

these alternatives would reduce the current effects to elk critical habitat within this District. Given time these areas would rejuvenate and provide habitat for elk.

Road density for the Vernal Ranger District is 0.91 (counting only Forest system roads), which is below the recommended cutoff of 1.0. Road density goes up to 1.23, when the existing undesignated roads in the hatched area are included. However, Alternatives B, C, & E would reduce the miles of routes in the hatched travel area. Average road densities of designated routes among these alternatives would stay below the 1.0 cutoff for the District, and actually improve elk habitat effectiveness in the hatched area. Portions of higher road densities (greater than 1.0 mile) are exhibited in the hatched area. Since the alternatives would reduce the miles of routes open to travel in these areas, road density within elk critical habitat would be reduced, thus improving elk habitat in these areas.

For the *Roosevelt/Duchesne Ranger District (North Unit)*, there would be a net increase in miles of designated routes and acres of affected elk critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of seven miles of designated routes and 11 acres of affected elk critical habitat. There was an increase of low traffic roads and some decrease on this part of the District for high traffic roads. Road density within this District is at 1.17, which is slightly above the recommended cutoff of 1.0. Road densities increase only slightly from Alternative A, with Alternative C having the highest road density of 1.25. The increase among these alternatives is very little and is not likely to change habitat effectiveness for elk on the District.

For the *Roosevelt/Duchesne Ranger District (South Unit)*, there would be a net increase in miles of designated routes and acres of affected elk critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of six miles of designated routes and 11 acres of affected elk critical habitat. Road density within this District is at 0.87, which is below the recommended cutoff of 1.0. Road densities among Alternatives B, C, & E would slightly increase, but would stay below 1.0. Therefore, among these alternatives, road density should stay at a level that would maintain habitat effectiveness.

The amount of elk critical habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of elk critical habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to elk critical habitat on the Forest. Also, road densities among alternatives and among Districts will stay below the 1.0 mile cutoff or will remain only slightly above.

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under these Alternatives would not affect the trend of the elk population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.

### ***Alternative D***

Under this alternative there would be little change in the miles of designated routes and little change in the acres of affected elk critical habitat. This is far less than 1% of elk critical habitat on the Forest. Therefore, the effects to elk critical habitat under this alternative would be negligible. Road density under this alternative would remain below the recommended 1.0 miles<sup>2</sup> cutoff and deer habitat effectiveness would be maintained.

At the District level, there would generally be little change in the miles of roads and trails and acres of affected elk critical habitat in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to elk critical habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the miles of roads allowed for travel and the acres of affected elk critical habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E. Road density among Districts under this alternative

would remain below the recommended 1.0 miles<sup>2</sup> cutoff. Therefore, under this alternative, road density should stay at a level that would maintain habitat effectiveness.

### Conclusion

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under these Alternatives would not affect the trend of the elk population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.

### **Mule Deer**

#### Direct and Indirect Effects

To determine the effects to deer critical habitat from the action alternatives, the miles of designated roads within critical habitat and acres of deer critical habitat were calculated for each of the action alternatives and are shown in Table 71 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. Table 3.3.3 illustrates the road density within critical deer habitat among Districts and alternatives.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected deer critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of 16 miles of designated routes and 20 acres of affected critical deer habitat. Alternative B would have the next largest increase and Alternative E would have the least (10 miles of increase and 13 acres affected).

Nearly all the increase in designated roads are roads that currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Therefore, actual impacts to deer habitat from these alternatives are likely less than mentioned above, because the direct habitat loss and fragmentation already exists. Since, the majority of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

There are approximately 13 miles of these existing undesignated roads (low traffic roads) within deer critical habitat in the hatched travel area, affecting approximately 22 acres of deer critical habitat. Any undesignated routes in this area that would not be designated under the alternatives and would no longer be available for motorized travel. Since the largest net increase of designated routes among Alternatives B, C, and E is approximately two miles, there would be approximately 11 miles of existing undesignated routes that would no longer be available for motorized travel. This would reduce the amount of affected deer critical habitat within the hatched travel area by approximately 19 acres. Therefore, this alternative would reduce the current effects to deer critical habitat within this District. Given time these areas would rejuvenate and provide habitat for deer.

There would be some seasonal closures of routes (e.g. Proposals 3082 and 3001) under these alternatives. This would restrict travel along these roads during the hunting season and in some cases during the fawning season. This would reduce the disturbance hunters would have on deer as well as reduce harvest, and increase deer security areas. Roads that remain closed during the fawning season would also limit human disturbance in those areas, providing a security area for fawning deer.

Specifically proposals 2145, 2146, 2153, 2180, 2048, 2058, 2061, 2085, and 2047 are roads that have been administratively closed in the past for wildlife protection, particularly elk and deer. Although this area is not identified as critical winter or summer deer habitat, past closure of this area to public travel has reduced disturbance to deer during the fawning season and provided a

security area for them during the hunting season. These roads remain administratively closed under Alternative A, but are proposed to be opened to public travel under Alternatives B, C, & E, with a seasonal closure from October 1 to June 1. The critical time for deer is during the fawning season in late spring and early summer and during the hunting season in the fall. Maintaining the closure of these roads between October 1 and June 1 would continue to protect deer during the hunting season and the first part of the fawning season.

According to the best available science, road density should be less than 1.0 miles<sup>2</sup> in critical elk habitat. Deer may tolerate higher road densities than elk before displacement occurs, but the 1.0 miles<sup>2</sup> cutoff used for elk will also be used as the threshold for deer under these alternatives to help in determining the effects the alternatives may have on deer. Road density Forest wide in critical deer habitat is 0.82 miles<sup>2</sup>. Among Alternatives B, C, and E road density Forest wide slightly increases. Alternative C has the highest road density at 0.89 miles<sup>2</sup>, and the road density for Alternatives B and E are a little lower at 0.82. Average road density under these alternatives would remain below the 1.0 miles<sup>2</sup> threshold and therefore would maintain habitat effectiveness for deer (Table 3.3.3). Some isolated areas may have a higher road density than 1.0 miles<sup>2</sup> and may reduce the quality of deer habitat effectiveness immediately around those areas, but most of these areas are small, and would not adversely affect overall deer habitat on the Forest or the Districts. However, there are larger areas on the Vernal RD that exhibit road densities greater than 1.0 miles<sup>2</sup>. Refer to the Vernal RD discussion below for further information (Christensen et al. 1993, pages 2-3)

Table 3.3.3 Average Road Density in Critical Mule Deer Habitat by Alternative					
District	ALT A Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT B Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT C Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT D Road Density (Mi Roads/Mi <sup>2</sup> Habitat)	ALT E Road Density (Mi Roads/Mi <sup>2</sup> Habitat)
Flaming Gorge RD	0.93	0.96	0.98	0.93	0.98
Vernal RD	0.74	0.79	0.79	0.75	0.75
Roosevelt/Duchesne RD (North Unit)	0.83	0.86	0.86	0.83	0.85
Roosevelt/Duchesne RD (South Unit)	0.75	0.80	0.83	0.75	0.79
Forest Wide Total	0.82	0.86	0.89	0.82	0.86

*Flaming Gorge Ranger District*, there would be a net increase in miles of designated routes and acres of deer critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of six miles of designated routes and six acres of affected critical deer habitat. This District has a road density of 0.93 mile, which is below the recommended cutoff for deer habitat effectiveness. Among these alternatives road density for this District would stay below the 1.0 miles<sup>2</sup> threshold and therefore would maintain habitat effectiveness for deer.

*Vernal Ranger District* there would little change in miles of designated routes and acres of effected deer critical habitat under Alternatives B, C, and E. The largest change in affected deer critical habitat would be in Alternative B with an increase of approximately one acre of affected deer critical habitat.

Road density for this District is 0.74 miles<sup>2</sup> (counting only designated roads), which is below the recommended cutoff of 1.0 miles<sup>2</sup>. Road density increases to 1.06 miles<sup>2</sup>, when the existing

undesigned roads in the hatched travel area are added. However, Alternatives B, C, and E would reduce the miles of routes in this area that would be available for motorized travel. Road densities of designated routes among these alternatives would stay below the 1.0 miles<sup>2</sup> cutoff for the District.

Portions of higher road densities (greater than 1.0 miles<sup>2</sup>) are exhibited in the hatched travel area. However as discussed above all alternatives would reduce the road density in deer critical habitat, in these areas thus improving deer habitat.

Proposals 2145, 2180, 2058, and 2047 are roads that have been administratively closed in the past for wildlife protection, particularly elk and deer. Although this area is not identified as critical winter or summer deer habitat, past closure of this area to public travel has reduced disturbance to deer during the fawning season and provided a security area for them during the hunting season. These roads remain administratively closed under Alternative A, but are proposed to be opened to public travel under Alternatives B, C, and E, with a seasonal closure from October 1 to June 30. The critical time for deer is during the fawning season in late spring and early summer and during the hunting season in the fall. Maintaining the closure of these roads between October 1 and June 30 would continue to protect deer during the critical periods.

*Roosevelt/Duchesne Ranger District (North Unit)*, there would little change in miles of designated routes and acres of effected deer critical habitat under Alternatives B, C, and E. The largest increase would be in Alternatives B and C with an approximate increase of less than one mile of designated routes and approximately one acre of affected deer critical habitat. There was a small increase of low traffic roads and no change on this part of the District for high traffic roads.

Road density within this District is 0.83 miles<sup>2</sup>. Among these alternatives road density for this District would stay below the 1.0 miles<sup>2</sup> mile threshold and therefore would maintain habitat effectiveness for deer.

*Roosevelt/Duchesne Ranger District (South Unit)*, there would be a net increase in miles of designated routes and acres of effected deer critical habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of eight miles of designated routes and 13 acres of affected deer critical habitat.

Road density within this District is 0.75 miles<sup>2</sup>. Among these alternatives road density for this District would stay below the 1.0 miles<sup>2</sup> threshold and therefore would maintain habitat effectiveness for deer.

The amount of deer critical habitat affected at the Forest Level and at the District Level under these alternatives is far less than 1% of the amount of deer critical habitat that occurs within either of the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect to deer critical habitat on the Forest. Also, road densities among alternatives and among Districts would stay below the 1.0 miles<sup>2</sup> cutoff and still provide habitat effectiveness for deer.

### ***Alternative D***

Under this alternative there would be little change in the amount of designated routes and little change in the amount of acres of deer critical habitat. This is far less than 1% of deer critical habitat on the Forest. Therefore, the effects to deer critical habitat under this alternative would be negligible. Road density under this alternative would remain below the recommended 1.0 mile cutoff and deer habitat effectiveness would be maintained.

At the District level, there would generally be little change in the amount of miles of roads and trails and acres of affected deer critical habitat in each District, than discussed under Alternatives B, C, and E. Therefore, the overall effects to deer critical habitat would be lower under this

alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected deer critical habitat within the hatched area of the Vernal Ranger District than Alternatives B, C, and E. Road density among Districts under this alternative would remain below the recommended 1.0 mile cutoff. Therefore, under this alternative, road density should stay at a level that would maintain habitat effectiveness.

### Conclusion

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative would not affect the trend of the deer population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.

### **Golden Eagle**

#### Direct and Indirect Effects

To determine the effects to golden eagle habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of golden eagle habitat were calculated for each of the action alternatives and are shown in Table 74 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected golden eagle habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of approximately 85 miles of designated routes and 132 acres of affected golden eagle habitat. Alternative B would have the next largest increase and Alternative E would have the least (48 miles of increase and 79 acres affected). The majority of increase in roads among these alternatives comes from the increased miles of the low traffic roads. Since golden eagles are less likely to be disturbed, by low traffic roads than high traffic roads, the overall change in disturbance effects would be low.

Noise created from use of these routes in Alternatives B, C, & E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, & E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trail construction and routes reconstruction proposed under these alternatives are limited, and may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by golden eagles. However, foraging golden eagles frequent roadsides to feed on carrion, and appear not to be too disturbed by human activities associated with roads. Studies have mixed results, with some studies showing golden eagles disturbed by disturbance and other studies showing golden eagles are not disturbed (Kochert 2002). If displacement does occur, there is ample habitat for any displaced individuals on the Forest. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to golden eagles that currently exist. This species has likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by great gray owls in these

areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation. Much of the resource damage was occurring in riparian areas and meadow areas. Since golden eagles forage in riparian and meadow areas, reduction of routes in these areas would result in a reduction in resource damage, improve habitat for golden eagle prey species, and thus improve golden eagle foraging habitat. This habitat improvement would incrementally happen over time as these areas rejuvenate.

Roads may provide an additional food base for golden eagles, if there is an increase in wildlife vehicle collisions. Golden eagles may forage on road kill that may periodically occur along the side of these roads.

The amount of golden eagle habitat affected at the Forest and District levels under these alternatives is far less than 1% of the amount of golden eagle habitat that occurs within either the Districts or on the Forest. This small amount of directly affected habitat would have relatively little effect on golden eagle habitat on the Forest.

### ***Alternative D***

Under this alternative there would be an increase of four miles in the amount of designated routes and a net change of 15 acres of golden eagle habitat.

The change in acres under this alternative represents far less than 1% of golden eagle habitat on the Forest. Therefore, the effects to golden eagle habitat under this alternative would be negligible.

There would also be a reduction in the miles of designated routes and acres of affected golden eagle habitat within the hatched travel area of the Vernal Ranger District than Alternatives B, C, and E.

### **Conclusions**

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative would not affect the trend of the golden eagle population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.

### **Warbling Vireo and Red-naped Sapsucker**

#### **Direct and Indirect Effects**

To determine the effects to warbling vireo and red-naped sapsucker habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of warbling vireo and red-naped sapsucker habitat were calculated for each of the action alternatives and are shown in Table 75 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A.

### *Alternatives B, C, and E*

There would be a net increase in miles of designated routes and acres of effected warbling vireo and red-naped sapsucker habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of approximately 25 miles of designated routes and 26 acres of affected warbling vireo and red-naped sapsucker habitat. Alternative B would have the next largest increase and Alternative E would have the least (21 miles of increase and 21 acres affected). The majority of increase in roads among these alternatives comes from the increased miles of the low traffic roads. Since warbling vireos and red-naped sapsuckers are less likely to be disturbed, by low traffic roads than high traffic roads, the overall change in disturbance effects would be low.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Since, the majority of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New trail construction and route reconstruction proposed under these alternatives are limited, and may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by warbling vireos and red-naped sapsuckers. However, nesting and foraging red-naped sapsuckers do not appear to be disturbed by vehicular traffic along roads (Walters et. al. 2002). Therefore, these birds are not likely to be disturbed by noise disturbances associated with routes under these alternatives. However, if displacement (of red-naped sapsuckers or warbling vireos) does occur, there is ample habitat for any displaced individuals in any given drainage on the Forest that contains these species habitat. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to warbling vireos and red-naped sapsuckers that currently exist. These species have likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to these species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by warbling vireos and red-naped sapsuckers in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Prohibiting travel on these routes would reduce the amount of warbling vireo and red-naped sapsucker habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

### *Alternative D*

Under this alternative there would be an increase of five miles in the amount of designated routes and a net change of 13 acres of warbling vireo and red-naped sapsucker habitat. The overall

effects to warbling vireo and red-naped sapsucker habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected warbling vireo and red-naped sapsucker habitat within the hatched area of the Vernal Ranger District than Alternatives B, C, and E.

The change in acres under this alternative represents far less than 1% of warbling vireo and red-naped sapsucker habitat on the Forest. Therefore, the effects to warbling vireo and red-naped sapsucker habitat under this alternative would be negligible.

### Conclusion

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative would not affect the trend of the warbling vireo and red-naped sapsucker populations on the Forest or impair the ability of the Forest to provide well-distributed habitat for these species.

## **Lincoln's Sparrow and Song Sparrow**

### Direct and Indirect Effects

To determine the effects to Lincoln's sparrow and song sparrow habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of Lincoln's sparrow and song sparrow habitat were calculated for each of the action alternatives and are shown in Table 76 of the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. None of the changes proposed under the action alternatives would affect Lincoln's sparrow or song sparrow habitat on the South Unit portion of the Roosevelt/Duchesne RD. Therefore, this portion of the District was not included in the summary below.

## ***Alternatives B, C, and E***

There would be a net increase in miles of designated routes and acres of effected Lincoln's sparrow and song sparrow habitat under Alternatives B, C, and E. The largest increase would be in Alternative C with an approximate increase of approximately four miles of designated routes and seven acres of affected Lincoln's sparrow and song sparrow habitat. Alternative B would have the next largest increase and Alternative E would have the least (three miles of increase and six acres affected). The majority of increase in roads among these alternatives comes from the increased miles of the low traffic roads. Since Lincoln's sparrows and song sparrows are less likely to be disturbed, by low traffic roads than high traffic roads, the overall change in disturbance effects would be low.

Nearly all the proposed increase in designated routes currently exist on the ground, but are undesignated as system roads (existing undesignated roads or unauthorized). Since, the majority of these routes already exist there would be little increase in habitat fragmentation among these alternatives.

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Alternatives B, C, and E allow mixed use on some roads that is not allowed under Alternative A. Adding ATV use to these roads would likely increase noise in the immediate area around these roads. New roads and trails and reconstruction proposed under these alternatives are few, but may also cause noise disturbance in the immediate vicinity of these areas during the construction and/or reconstruction phase. This may potentially cause additional avoidance of the immediate area around the roads by Lincoln's sparrows and song sparrows. Song sparrows do not appear to be affected by noise associated with roads, but Lincoln's sparrows have been known to abandon nests (Arcese et. al. 2002 and Ammon 1995). Therefore, Lincoln's sparrows may be more sensitive to noise disturbance than song sparrows.

However, if displacement does occur, there is ample habitat in any given drainage on the Forest for any displaced individuals, and future nesting would likely take place in those areas. Furthermore, nearly all the routes proposed for designation under these alternatives already exist and would contribute little additional noise disturbance. Also, construction and reconstruction activities would only be for a short duration, thus displacement would only be temporary if it does occur. Continued use of designated routes would continue to have the same effects to Lincoln's sparrows and song sparrows that currently exist. These species have likely habituated to the disturbance or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to these species.

Prohibiting motorized use of routes that are not designated may concentrate motorized recreational use to areas that contain designated routes. This may slightly increase recreational use in these areas of the Forest. There may be an initial response by Lincoln's sparrows and song sparrows in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation, because of identified resource damage on these routes. Prohibiting motorized use of these routes for travel would reduce the amount of Lincoln's sparrow and song sparrow habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate.

### ***Alternative D***

Under this alternative there would be little change in the amount of designated routes and little change in the amount of Lincoln's sparrow and song sparrow habitat. The overall effects to Lincoln's sparrow and song sparrow habitat would be lower under this alternative than the other action alternatives. There would also be a further reduction in the amount of roads allowed for travel and the amount of affected Lincoln's sparrow and song sparrow habitat within the hatched area of the Vernal Ranger District than Alternatives B, C, and E.

The change in acres under this alternative represents far less than 1% of Lincoln's sparrow and song sparrow habitat on the Forest. Therefore, the effects to Lincoln's sparrow and song sparrow habitat under this alternative would be negligible.

#### Conclusion

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative would not affect the trend of the Lincoln's sparrow and song sparrow populations on the Forest or impair the ability of the Forest to provide well-distributed habitat for these species.

### **White-tailed Ptarmigan**

#### Direct and Indirect Effects

To determine the effects to white-tailed ptarmigan habitat from the action alternatives, the change in miles of designated roads within habitat and change in acres of white-tailed ptarmigan habitat were calculated for each of the action alternatives and are shown in Table 78 in the Wildlife Report (available in the Project Record). The changes reflect the change in miles and acres from Alternative A. There is no white-tailed ptarmigan habitat on the South Unit portion of the Roosevelt/Duchesne RD. None of the changes proposed under the action alternatives would affect white-tailed ptarmigan habitat on the Vernal RD or the Flaming Gorge RD. Therefore, the effects to white-tailed ptarmigan habitat would only be summarized for the North Unit portion of the Roosevelt/Duchesne RD.

### *Alternatives B, C, and E*

Noise created from use of these routes in Alternatives B, C, and E extend beyond the footprint of the directly impacted acres discussed above. Continued use of designated routes would continue to have the same effects to white-tailed ptarmigans that currently exist. This species has likely habituated to the noise disturbance associated with roads or has moved to suitable habitat that does not exhibit the disturbance. Therefore, the continued use of these routes is not likely to have any further effects to this species. Areas of the Forest that contain unauthorized or existing undesignated routes that are not proposed for designation under these alternatives may displace recreational use to areas that contain designated routes. This may slightly increase recreational use in areas of the Forest that contain designated routes. There may be an initial response by white-tailed ptarmigans in these areas, but individuals would likely move to adjacent suitable habitat or habituate to the slight increase in disturbance.

With implementation of this project motorized travel would be prohibited on routes that are not designated. Many of these currently undesignated routes were not carried forward in these alternatives for designation. Prohibiting motorized use of these routes for travel would reduce the amount white-tailed ptarmigan habitat that is currently being affected by resource damage and may incrementally improve this habitat over time as these areas rejuvenate

### *Alternative D*

Under this alternative there would be little change in the amount of designated routes and little change in the amount of white-tailed ptarmigan habitat affected. The change in acres under this alternative represents far less than 1% of white-tailed ptarmigan habitat on the Forest. Therefore, the effects to white-tailed ptarmigan habitat under this alternative would be negligible.

### Conclusion

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under this Alternative would not affect the trend of the white-tailed Ptarmigan population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.

## **Other Species of Concern**

### **Birds of Conservation Concern (Migratory Birds) and Utah Partners in Flight Priority Species**

#### *Direct and Indirect Effects*

There will be no adverse affects to migratory/priority species key wintering areas, migration routes, or stop-overs. Because the Action Alternatives apply to travel management in the long term, the evaluation of these species will be in the long term perspective.

Changes to the Travel Plan may increase motorized use on some routes. Noise related effects from this increase in use may cause some displacement to some of these species. Some birds, like the pygmy nuthatch (Kingery et. al. 2001) and Williamson's sapsucker (Dobbs et. al. 1997) are not disturbed by human activities during nesting and are not likely to be disturbed noise associated with any increase use of routes. Other species like the gray vireo may be more susceptible to human disturbance and may move to areas of less human disturbance (Barlow et. al. 1999). It is likely that foraging individuals of bird species would likely habituate to the noise or move to adjacent habitat for foraging. Nesting individuals of bird species, if disturbed during the initial increase of noise associated with the change in use of the routes, would also habituate to the disturbance or move into adjacent habitat to renest that same season or move into adjacent habitat the next nesting season. Also, there are some routes that will have a decrease in use or that

will be closed. This will decrease human disturbance in these areas and provide additional areas of low human disturbance for these species to move into if displaced. Overall, the change in disturbance to these species and their habitat would be small among the action alternatives and is not likely to have any substantial effects to migratory/priority species.

Several of the sensitive and MIS species use habitats that are similar to the migratory birds and PIF priority species primary habitats discussed in the Affected Environment section. For those migratory/priority species that are not sensitive or MIS, they do inhabit similar habitats. Consequently the effects analysis on habitat for these 'similar' species will be used to address effects to those bird species not yet addressed. Below is a summary and discussion of how the effects analysis of sensitive and MIS species relates to migratory birds and the PIF priority species. Habitat for these species directly affected by changes to the Travel Plan under the action alternatives would be relatively small compared to the amount of habitat on the Forest for these species. Refer to the summary below for the appropriate sensitive and MIS analysis for these migratory/priority species.

### ***Alternatives B, C, D, and E***

The effects to black rosy-finch habitat will be similar to those discussed for white-tailed ptarmigan. The black rosy-finch inhabits grassy and rocky areas usually above timberline, which overlaps white-tailed ptarmigan habitat (NatureServe 2008). Because habitat for both this finch and the ptarmigan are above timberline and overlap in the alpine, the effects (direct and indirect) from the action alternatives would be similar to both species. As was discussed for white-tailed ptarmigan, effects to the black rosy-finch from the action alternatives would only occur on the North Unit portion of the Roosevelt/Duchesne RD. These effects would be minimal as is discussed under white-tailed ptarmigan in the MIS section of this report, and would not adversely affect the population.

Habitat for the Williamson's sapsucker is characterized by conifer forests such as fir and lodgepole pine and some aspen (NatureServe 2003). Therefore, the effects (direct and indirect) from the action alternatives to Williamson's sapsucker will be similar to those discussed for the three-toed woodpecker and northern goshawk. Although, some direct and indirect effects may occur to Williamson's sapsucker habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under three-toed woodpecker and northern goshawk) and would not adversely affect the population.

Habitat for the broad-tailed hummingbird is characterized by pinon/juniper and conifer often associated with riparian as well as shrublands (NatureServe 2003). Therefore, the effects (direct and indirect) to broad-tailed hummingbird habitat will be similar to those discussed for the peregrine falcon (riparian habitat proximity to conifer), and golden eagle (shrublands and open forest habitats, including pinon/juniper). Although, some direct and indirect effects may occur to broad-tailed hummingbird habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under peregrine falcon and golden eagle) and would not adversely affect the population.

Habitat for the Lewis's woodpecker is characterized by open forest and often associated with burns or logged areas (NatureServe 2003). The effects (direct and indirect) to the Lewis's woodpecker will be similar to those discussed for the three-toed woodpecker. Although, some direct and indirect effects may occur to Lewis's woodpecker habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under three-toed woodpecker) and would not adversely affect the population.

Habitat for the pygmy nuthatch is characterized by ponderosa pine forests and less commonly in pinon/juniper (NatureServe 2003). Habitat for the Virginia's warbler is characterized by pinon/juniper and mountain shrub (NatureServe 2003). The effects (direct and indirect) to the

pygmy nuthatch and Virginia's warbler will be similar to those discussed for the three-toed woodpecker, (ponderosa pine habitat type) and golden eagle (pinyon/juniper and mountain brush habitat type). Although, some direct and indirect effects may occur to pygmy nuthatch and Virginia's warbler habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under three-toed woodpecker and golden eagle) and would not adversely affect their populations.

Habitat for the black-throated gray warbler and the pinyon jay is characterized by pinon/juniper (NatureServe 2008), and gray vireo habitat is more characterized by pinon/juniper with a shrub component (NatureServe 2003). The effects to black-throated gray warbler, pinyon jay, and gray vireo habitat will be similar to those discussed for the golden eagle (pinyon/juniper and shrubland habitat type). Although, some direct and indirect effects may occur to black-throated gray warbler, pinyon jay, and gray vireo habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under golden eagle) and would not adversely affect their populations.

Sage sparrows and Brewer's sparrows are tied to sagebrush habitats (NatureServe 2008). As sage grouse are also tied to sagebrush habitat (Connelly et. a l. 2000), the effects to Brewer's sparrows and sage sparrows and their habitat will be similar to those discussed for sage grouse. Although, some direct and indirect effects may occur to these species habitat among alternatives, the effects to habitat would be minimal (refer to the effects discussions under sage grouse) and would not adversely affect their populations.

### *Conclusion*

Based on the discussion above, it is determined that the changes to the Travel Plan proposed under these Alternatives would have minimal effects to the migratory birds and PIF priority species discussed above and would not adversely affect their populations.

### **3.3.6 Cumulative Effects**

Cumulative effects are analyzed within the Forest boundary. This area was selected as the cumulative effects area, because the area is the total land mass of the Forest that could cumulatively be affected by the action alternatives, and it is large enough to capture effects that may cumulatively affect wildlife. The term "wildlife" below refers to T and E species, sensitive species, MIS, and FWS BCC/PIF priority species discussed above.

Because of the small amount of wildlife habitat actually affected among action alternatives, cumulative effects from other activities combined with proposed changes to the Travel Plan under the alternatives would not adversely affect wildlife. For a detailed discussion of cumulative effects see the Wildlife Report available in the Project Record.

### **SUMMARY OF CONCLUSIONS AND MITIGATIONS**

Table 3.3.4 below summarizes the conclusions made for each species considered or discussed in the analysis of this report.

Table 3.3.4 Summary of impact analysis determinations		
Species	Status	Determination
<b><i>Federally Endangered, Threatened, or Candidate Species</i></b>		
Black-footed Ferret	ESA Endangered	No Effect
Canada Lynx	ESA Threatened	May affect, not likely to adversely affect
Mexican Spotted Owl		
Yellow-billed Cuckoo	ESA Candidate	No Effect
<b><i>Forest Service Region 4 Sensitive Species</i></b>		
Bald Eagle	USFS R4 Sensitive	May impact individuals, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species.
Northern Goshawk		
Peregrine Falcon		
Boreal Owl		
Great Gray Owl		
Flammulated Owl		
Northern Three-toed Woodpecker		
Greater Sage-grouse		
Spotted Bat		
Townsend’s Big-eared Bat		
Pygmy Rabbit		
Wolverine		
Trumpeter Swan	USFS R4 Sensitive	No Impact.
Common Loon		
<b><i>Ashley NF Management Indicator Species</i></b>		
Mule Deer	MIS	Would not affect the trend or viability of this species population on the Forest or impair the ability of the Forest to provide well-distributed habitat for this species.
Rocky Mountain Elk		
Northern Goshawk		
Golden Eagle		
Warbling Vireo		
Red-naped Sapsucker		
Lincoln’s Sparrow		
Song Sparrow		
Greater Sage Grouse		
White-tailed Ptarmigan		
<b><i>FWS Birds of Conservation Concern (BCC) and PIF Priority Species</i></b>		
Black-rosy Finch	PIF Priority Species	Minimal effects to habitat and would not adversely affect the population.
Greater Sage Grouse		
Brewer’s Sparrow		
Broad-tailed Hummingbird		
Golden Eagle	FWS BCC	Minimal effects to habitat and would not adversely affect the population.
Pygmy Nuthatch		
Pinyon Jay		

Table 3.3.4 Summary of impact analysis determinations		
Species	Status	Determination
Sage Sparrow		
Flammulated Owl		
Peregrine Falcon		
Williamson’s Sapsucker		
Red-naped Sapsucker		
Black-throated Gray Warbler	PIF Priority Species and FWS BCC	Minimal effects to habitat and would not adversely affect the population.
Gray Vireo		
Virginia’s Warbler		
Lewis’s Woodpecker		

**3.3.7 Mitigation Summary**

**Canada Lynx** - In the event that the location of new routes and reconstruction changes from what is proposed under the action alternatives, the following mitigations should be followed to maintain habitat connectivity for lynx within and between LAU’s.

- Locate trails/roads away from forested stringers.
- Minimize building of roads directly on ridgetops or areas identified as important for lynx habitat connectivity.

**Northern Goshawk** - To minimize effects to goshawks within PFA’s, the following mitigation should be applied for any new road/trail construction or reconstruction within the PFA of an occupied goshawk territory.

- Construction of new routes or reconstruction of existing routes within the PFA of an occupied goshawk territory should be restricted between March 1 and September 30, unless the biologist determines that there would be no adverse affects to goshawks. The biologist will be consulted prior to construction or reconstruction of any road or trail proposed under the action alternatives.

**Greater Sage Grouse** - To avoid nest abandonment and disruption to breeding sage grouse the following mitigation should be applied to reconstruction activities of routes within sage grouse habitat that is within two miles of an active lek.

- Reconstruction activities of routes within sage grouse habitat that is within two miles of an active lek should not occur between March 1 and June 15, unless the biologist determines that there would be no adverse effects to sage grouse. The biologist will be consulted prior to reconstruction of any road or trail proposed under the action alternatives.

## 3.4 Wilderness Potential

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### 3.4.1 Background

**RARE I and RARE II** - The process used to identify and evaluate National Forest System lands for wilderness suitability began as directed in the Wilderness Act of 1964. Roadless Area Review and Evaluation, or RARE, was initiated in 1971 and the final EIS was published in 1973.

In 1977 RARE II was initiated in response to concerns about areas overlooked in RARE I. The RARE II process was conducted using new definitions of roadless attributes. However, the RARE II final EIS was challenged in court and found to be inadequate. The Forest Service responded with regulations requiring roadless evaluation during Forest Planning.

Roadless Evaluations and Forest Plans: In September 1983 revised regulations for the National Forest Management Act of 1976 (CFR 36, Part 219.17) went into effect. A roadless area inventory and an evaluation for wilderness suitability were among the new forest planning requirements. Areas found suitable could be managed as prescribed by forest plans, and would be recommended to Congress for wilderness designation.

**Inventoried Roadless Areas** - A Forest Plan for the Ashley National Forest was initiated in 1982. The required roadless inventory and wilderness suitability study began in 1983, and 715,405 acres in 13 roadless areas were identified. The 1984 Utah Wilderness Act reduced the acreage of roadless by 273,426 acres through designation of the High Uintas Wilderness Area. The act prohibited further state-wide roadless reviews, however it did not remove inventory and evaluation requirements for subsequent forest plan revisions. No further consideration for roadless or wilderness proposals was made in the final 1986 Forest Plan for the Ashley National Forest. The plan was produced without including roadless area information, due to language in the Utah Wilderness Act. In 2000 the Forest, using current inventory criteria, produced a draft roadless area inventory (map) in anticipation of Forest Plan Revision.

**IRAs and the Roadless Rule** - In 2001, the Forest Service promulgated a Roadless Rule (36 CFR Part 294) that provided certain protections for Inventoried Roadless Areas (IRAs). That rule has since been the subject of a number of conflicting rulings from the Federal courts.

In May 2001, U.S. District Court Judge Edward Lodge in Idaho issued a preliminary injunction blocking implementation of the Roadless Rule on the grounds that the Forest Service had violated the National Environmental Policy Act (NEPA) by failing to provide adequate information to the public.

In December 2002, the Ninth Circuit Court of Appeals reversed Judge Lodge, rejecting the District Court's assertions that the Rule was illegally adopted. In April 2003, the full court of appeals denied a request by the State of Idaho to reconsider its decision.

However, in July 2003, U.S. District Court Judge Clarence Brimmer in Wyoming (part of the Tenth Circuit) issued an opinion invalidating the Rule and enjoining its implementation.

On May 13, 2005, the USDA issued the "State Petitions Rule". In July 2005, Tenth Circuit Court of Appeals dismissed environmentalists' appeal of the Wyoming district court decision and vacated the decision, solely on the grounds that the case was made moot by the Administration's May 2005 repeal of the Roadless Rule.

On September 20, 2006, the Northern District of California declared the State Petitions Rule invalid. The California court ordered that the State Petitions Rule is "set aside," the 2001 Roadless Rule be reinstated and specified that "federal defendants are enjoined from taking any further action contrary to the Roadless Rule...."

On August 12, 2008 The Federal District Court for Wyoming again held that the 2001 Roadless Area Conservation Rule was unlawfully promulgated in violation of the National Environmental Policy Act and the Wilderness Act.

The September 20, 2006 and August 12, 2008 rulings place the United States Forest Service in the untenable position of having to comply with one district court's injunction to follow the 2001 Roadless Rule and another district court's injunction not to follow the 2001 Roadless Rule, and raised the specter of contempt allegations in one Court or the other.

On August 20, 2008 the federal government filed motions with both the Wyoming and California district courts requesting that they at least temporarily suspend their injunctions in order to relieve the Forest Service of the potential to be held in contempt of court for complying or not complying with the Roadless Rule.

On December 2, 2008, in response to the federal government's motion and for the sake of judicial comity, Judge Laporte issued a partial stay of her injunction reducing the geographic scope of its injunction to the Ninth Circuit and New Mexico.

Current Forest Service direction regarding the treatment of Inventoried Roadless Areas affected by the 2001 Roadless Rule holds that National Forest units take no action that would conflict with the court rulings (USDA 2008).

Effects to inventoried roadless areas for this analysis are based on NEPA requirements (CFR 36, part 220) to consider effects to the undeveloped character of these areas, and on scoping comments regarding effects to inventoried roadless and potential wilderness.

**Potential Wilderness Inventory & Evaluation** - In 2004 Forest Service Region 4 (R4) adopted a new protocol for mapping areas to study for wilderness suitability during forest planning. The criteria were more detailed than those found the Forest Service Handbook, and were well suited to using GIS tools to produce and adjust the maps. The naming convention for the inventoried areas included a unique number and a place-named *undeveloped area*. FSH 1909.12\_70 was amended in January 31, 2007, with updated handbook direction consistent with the R4 mapping protocol for undeveloped areas. The handbook directs National Forests to use the term *potential wilderness* in place of *undeveloped* in inventories, evaluations, and reports.

The 2004 Region 4 mapping protocol was used to complete the Ashley National Forest draft potential wilderness (undeveloped) area inventory in 2005. Earlier roadless inventories were not used to identify potential wilderness areas. A draft evaluation report was last revised in 2008. NEPA direction includes analysis and disclosure of effects to undeveloped character for these potential wilderness areas as well, but this step has not been completed.

**NEPA and the inventories:** During the travel management NEPA process several options were considered for this analysis. Our initial approach was to analyze effects to roadless characteristics, as defined by the Roadless Rule, for the IRAs; wilderness attributes would be analyzed for lands in the 2005 Potential Wilderness Inventory. The series of court rulings described earlier enjoined the Forest Service from applying the 2001 Roadless Rule on the Ashley. However, we still have an obligation to consider the effects of the alternatives on the undeveloped character of IRAs as well as potential wilderness areas.

The 2005 Potential Wilderness Inventory best represents lands on the Forest with potential for wilderness designation, because it is based on current data and takes into account the effects of all existing system roads. A comparison of the 2001 and 2005 inventories showed that IRAs included areas with low-standard system roads present, and/or adjacent to motorized waterways whereas these areas were excluded from the 2005 Potential Wilderness Inventory. For example, the IRAs in Wyoming are narrow and flanked by the Flaming Gorge Reservoir (heavily used by motor boats) on one side, and are crossed by Forest roads leading to the Reservoir. In the Roosevelt/Duchesne Ranger District South Unit, the Reservation Ridge Backcountry Byway is

included in Roadless; the earlier inventory criteria did not result in removing this route from the inventory. Lands with this level of effects from motorized uses and other management are typically not assessed as having wilderness attributes, and do not meet current potential wilderness inventory criteria.

Therefore this document discusses effects to wilderness potential by Potential Wilderness Area. In recognition of the high degree of public interest in the 2001 Roadless Inventory, we have included an appendix (Appendix D) with a set of location maps showing 2005 potential wilderness inventory and 2001 roadless inventory. The appendix also displays analysis for roadless inventory lands and wilderness potential in tabular format by listing proposals that are in either or both inventories, and area analysis for potential wilderness areas.

### 3.4.2 Scope of the Analysis

The analysis area includes all Ashley National Forest Lands inventoried in 2004 and 2005, and evaluated for wilderness potential in 2005 to 2008. Cumulative effects additionally consider effect from past, present, and future actions on National Forest Lands and lands under other management but adjacent to Potential Wilderness.

#### Issue:

Changes to motorized travel opportunities within inventoried potential wilderness areas could affect the wilderness attributes and wilderness potential. (Wilderness potential could be improved, maintained, reduced, or removed.)

#### Indicators:

- Miles of roads and trails designated for motorized vehicle travel within potential wilderness areas.
- Acres of hatched travel areas in potential wilderness areas on Vernal Ranger District.

#### Analysis Scales:

Individual inventoried potential wilderness areas and combined areas in the four analysis units; the units are the Flaming Gorge R.D., Vernal R.D, Roosevelt-Duchesne R.D.-North Unit, and Roosevelt-Duchesne R.D.-South Unit.

### 3.4.3 Management Direction

**National Direction** is included in 36 CFR Part 220. One of the factors for determining the level of NEPA needed is the presence of inventoried roadless or potential wilderness in or near the project area, and the potential for proposals to alter the undeveloped character of an inventoried roadless area or a potential wilderness area. Methods of analysis are not specified; however, tools for evaluating wilderness are available in the wilderness attribute rating system developed for RARE II. Factors used in evaluating the wilderness capability quality of wilderness potential, as found in FSH 1909.12\_70.

**Regional Guidance** is provided in *Suggestions for analyzing the effects to wilderness potential from project activities within Inventoried Roadless Areas*, (Welsh, 2008). The internal Forest Service process paper includes suggestions for describing and analyzing effects to roadless characteristics and wilderness potential. The process paper describes a cross-walk between the wilderness capability quality factors and wilderness attributes.

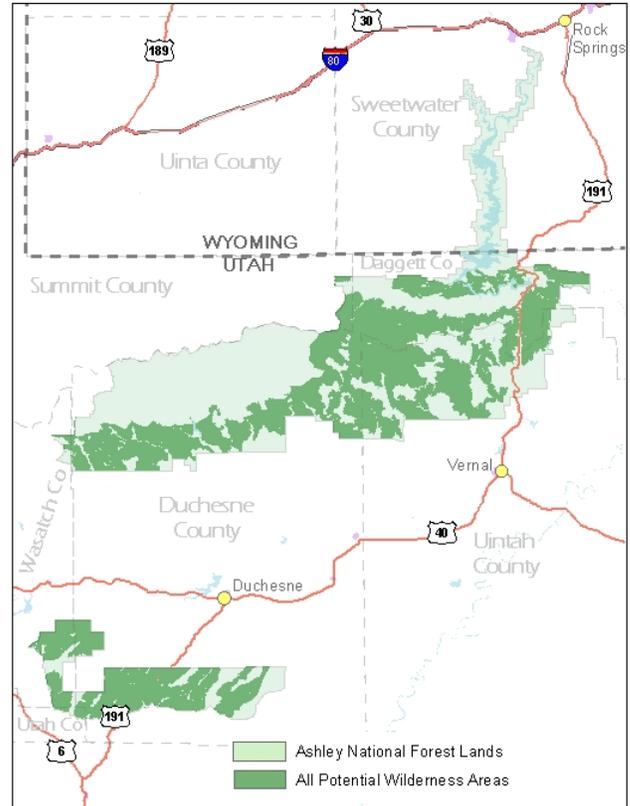
**Forest Plan Direction** is not provided for Ashley National Forest roadless lands or other lands with wilderness potential as described in the *Background* section.

### 3.4.4 Affected Environment

The Ashley National Forest has 37 inventoried potential wilderness areas across the forest totaling 676,869 acres. They are separated from each other by road corridors and other developments or area uses excluded using the inventory criteria. Three of the areas are connected to roadless on the Wasatch-Cache-Uinta National Forests. Three areas that cross ranger district boundaries are divided for the report below.

Four units on the Forest are used for the analysis; each of the three ranger districts on the Forest, with the Roosevelt-Duchesne District split into north and south units. Some of the potential wilderness areas cross these divisions (district boundaries).

These areas all meet the inventory criteria, but conditions of wilderness attributes vary within and between areas. Table 3.4.1 shows the acres and existing miles of routes within of the potential wilderness areas by District. The information below summarizes wilderness attributes for those areas with site specific route designation proposals. Additional information for each area is available in for all areas in the Wilderness Potential Report for Travel Management (available in the Project Record), and for even greater detail the *2008 Draft Potential Wilderness Evaluation Report*. (Available on the Ashley National Forest website [www.fs.fed.us/r4/ashley/projects/forest\\_plan\\_revision/forest\\_plan\\_home.shtml](http://www.fs.fed.us/r4/ashley/projects/forest_plan_revision/forest_plan_home.shtml)).



Vicinity Map

Table 3.4.1 Existing Miles of Route Type and Motorized Status								
Potential Wilderness Acres by Ranger District	Road Open	Trail Open	Unauth. Route	Undesig. Route	Road Closed	Trail Closed	Non-motorized	Hatched Travel Acres
Flaming Gorge - 138,212	0	20	39	NA	0	0	87	NA
Vernal - 210,670	2	52	39	49	0	0	166	83,101
Roosevelt-Duchesne N. U. - 173,164	0	8	93	NA	8	0	93	NA
Roosevelt-Duchesne S.U. - 154,821	5	7	61	NA	0	0	58	NA
Forest Totals	676,867 Acres	7	87	232	57	8	404	83,101

### Flaming Gorge Ranger District

The Flaming Gorge Ranger District has 138,212 acres of potential wilderness in ten separate areas. One, the Widdop Mountain (401020) is connected to roadless lands on the Wasatch-Cache-Uinta National Forests, and two others (0401107 and 401204) include lands on either side of the boundary between the Flaming Gorge and Vernal Ranger Districts. Only two areas, 0401007 (Roadshed), and 0401204 (Mount Lena) have individual proposals that could affect wilderness potential. Roadshed is described here, and Mount Lena is described in the Vernal District because the majority of each area is on the respective district. Area location maps by district are included in the wilderness potential appendix.

**401107 - Roadshed, 37,805 acres:** Of the total, 3029 acres are on the Vernal Ranger District; 34,776 acres are on the Flaming Gorge Ranger District. Elevations range from 7,500 feet along the northern boundary of the area to 9,750 feet near Leidy Peak.

Wilderness attributes are present; the area is mostly untrammeled, natural, and undeveloped. There is recreation use on trails for motorized and non-motorized travel, and livestock grazing allotments and permits. Soils and vegetation have minor effects from livestock grazing, and to aquatic systems from impoundments and fish stocking. Several small grazing developments are included. Canals, electrical power lines, and roads are present along most of the area boundaries, and there are strong effects to these attributes along the boundaries. Solitude and primitive recreation are possible, but are limited by the area's narrow width between roads and motorized trails that cross the area. The area's narrow width and proximity to developed areas would make it difficult to manage as wilderness, particularly along the eastern end.

Travel routes and areas – 28 miles of ATV trails, 2666 acres of hatched travel area (Vernal District only) and 23 miles of non-motorized trails. There are fewer than five miles of unauthorized and undesignated routes.

### D2 - Vernal Ranger District

The Vernal Ranger District has 210,670 acres of potential wilderness in ten separate areas. Two areas (0401107 and 401204) include lands on either side of the boundary between the Flaming Gorge and Vernal Ranger Districts. One area (0401209) includes lands on either side of the boundary between the Roosevelt-Duchesne and Vernal Ranger Districts. Each of the ten areas includes part of the open travel areas unique to the Vernal Ranger District; open travel areas make up 83,101 acres of the total potential wilderness on the district. The seven areas with proposed changes in travel route designations, in addition to Roadshed (shown in Flaming Gorge information) are described below. Location maps for the areas are shown in the wilderness potential appendix.

**401201 - South Slope High Country, 85,024 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Over 100 miles of non-motorized trails are used, some as access to the High Uintas Wilderness. The only ATV trail is in Lost Park, and is less than two miles long. There are a few undesignated or unauthorized routes with motorized use within the area. Soils and vegetation have minor effects from livestock grazing, small livestock developments, and to aquatic systems from impoundments and non-native fish. Roads are present along but outside the southern boundary. Opportunities for solitude and primitive recreation are excellent; ROS is mostly semi-primitive non-motorized and primitive. The area's common boundary with the High Uintas Wilderness and other potential wilderness provides the potential for a manageable boundary in combination with other areas.

Travel routes and areas – two miles of designated ATV trails, six miles unauthorized routes, and two miles of undesignated routes in 17,170 acres of hatched travel area.

**401202 - Dyer Mountain, 10,185 acres:** Wilderness attributes are present; but the area has some apparent effects of human use to untrammeled, natural, and undeveloped attributes. There are two corridors along excluded roads, modified areas, and a private in-holding. There is recreation use on ATV trails and undesignated routes, and livestock grazing allotments with small developments. Solitude and primitive recreation are possible due to topography, but limited by use on motorized trails. The area's boundaries would be difficult to manage in their current locations.

Travel routes and areas – Three miles of designated ATV trails, one mile unauthorized routes, and 12 miles of undesignated routes in 8,241 acres of hatched travel area.

**401203 - Grizzly Ridge, 11,467 acres:** Wilderness attributes are present; but the area has some impacts to untrammeled, natural, and undeveloped attributes. There are two excluded road corridors penetrate the area from the east. There is recreation use on ATV trails and undesignated routes, and several dispersed camp sites along the perimeter. Livestock grazing allotments have a few small developments. Developments and motorized uses in the area are minor but widespread. Solitude and primitive recreation are possible due to topography. The area's boundaries would be difficult to manage in their current locations due to the close proximity to main roads, including U.S Highway 191.

Travel routes and areas – six miles of designated ATV trails and five miles of undesignated routes in 9,311 acres of hatched travel area.

**401204 - Mount Lena, 31,494 acres:** 23,603 acres are on the Vernal Ranger District, and 7,891 acres are on the Flaming Gorge Ranger District. Wilderness attributes are present; but the area has apparent impacts to untrammeled, natural, and undeveloped attributes. Non-native species, such as rainbow trout stocked in Cart Creek, and non-native plants, have slightly altered natural composition. Livestock watering ponds and spring developments, and livestock grazing have affected hydrologic systems. Three ATV trails and numerous unclassified roads are in use. The Limber Flag Yurt is located in the most southern part of the area. The yurt is available for overnight use by hikers and ATV users during summer and fall months, and snowmobilers and skiers in winter. The grazing permit currently allows motorized access to the numerous stock ponds, fences, and spring developments. Solitude and primitive recreation are possible due to topography and the large size of the area. The area has several inventoried historic sites and routes. About half of the boundaries can be located on the ground; adjustments would be needed to improve manageability.

Travel routes and areas – 13 miles of ATV trails, two mile unauthorized routes, and four miles of undesignated routes in 9,311 acres of hatched travel area.

**401205 - Brush Creek, 5,936 acres:** Wilderness attributes are present; but the area has apparent impacts to untrammeled, natural, and undeveloped attributes. Livestock grazing, heavy dispersed recreation use, and city lights from Vernal have moderately affected the area's naturalness and undeveloped character. The northern boundary area of Brush Creek is one of the areas most heavily used for dispersed camping and other recreation on the forest. About two-thirds of the area is mapped as motorized ROS classes. The area's narrow width results in affects from sights, sounds, and smells of motorized activities along the boundaries. Solitude and primitive recreation are difficult to find due to the area's narrow width between designated roads. Managing the area as wilderness would be difficult due to developments throughout the area, excluded road corridors, and activities in the corridors.

Travel routes and areas – 14 miles of designated ATV trails, nine miles unauthorized routes, and six miles of undesignated routes in 4,104 acres in a hatched travel area.

**401206 - Ashley Gorge, 31,869 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped along Ashley Gorge and Black Canyon. Human uses

have had more effect along Grasshopper Flats and other areas outside of the canyons due to livestock grazing and heavy dispersed motorized recreation uses. Opportunities for solitude and primitive recreation are excellent within the canyons. ROS is mostly semi-primitive non-motorized and primitive. The Ashley Gorge Research Natural Area (1,085 acres) is located along the fork of Red Pine Creek, Cow Canyon Creek, and Ashley Gorge Creek, and the gorge is considered a special feature by local citizens. A portion of the Sims Peak Potholes Research Natural Area (650 acres) is within the western boundary near South Fork of Ashley Creek. About half of the area's boundaries can be located on the ground and would be manageable, but boundary adjustments would be needed to resolve conflicts.

Travel routes and areas – 21 miles of designated ATV trails, 14 miles unauthorized routes, and three miles of undesignated routes in 5,058 acres of hatched travel area.

**401209 - Lower Whiterocks, 32,611 acres:** 22,744 acres are on the Vernal Ranger District, and 9866 acres are on the Roosevelt-Duchesne District North Unit. Wilderness attributes are present; the area is untrammeled, natural, and undeveloped particularly outside of the Whiterocks road corridor. Evidence of human uses is very minor, and includes dispersed camping areas, irrigation ditches, and grazing developments. Opportunities for solitude and primitive recreation are present, though not in large areas due to the area's narrow width either side of the road corridor. Whiterocks Cave is a special and unique feature. The presence of excluded roads, particularly Whiterocks road which penetrates the area for 5.5 miles, would make the area difficult to manage.

Travel routes and areas – no designated ATV trails, five miles unauthorized routes, and six miles of undesignated routes in 18,926 acres of hatched travel area.

### **D3U – Roosevelt-Duchesne Ranger District, North Unit:**

The Uintas part of the Roosevelt-Duchesne Ranger District has 173,164 acres of potential wilderness in eight separate areas. Whiterocks (401209) includes lands on either side of the boundary between the Roosevelt-Duchesne and Vernal Ranger Districts, and is discussed in the Vernal Ranger District section. Area location maps by district are included in the wilderness potential appendix.

**401301 - High Uintas A, 21,669 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses is very minor, and includes dispersed camping areas, irrigation ditches, and grazing developments. Opportunities for solitude and primitive recreation are present, including non-motorized trails into the area and adjacent wilderness. The exception would be the corridor and area near Moon Lake Lodge, where sights and sound of others would interrupt solitude. The High Uintas Wilderness lies along the northern boundary; other boundaries may need adjustment to improve manageability.

Travel routes and areas – four miles of designated ATV trails and 10 miles unauthorized routes.

**401301 - High Uintas B, 46,413 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses is very minor, and includes dispersed camping areas, irrigation ditches, and grazing developments. Opportunities for solitude and primitive recreation are present, including non-motorized trails into the area and adjacent wilderness. The High Uintas Wilderness lies along the northern boundary; other boundaries may need adjustment to improve manageability.

Travel routes and areas – no designated ATV trails or roads and 18 miles unauthorized routes.

**401301 - High Uintas C, 48,851 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses is very minor, and includes dispersed camping areas, irrigation ditches, and grazing developments. The exception is areas along the Rock Creek Road, where additional recreation developments interrupt the undeveloped character. Opportunities for solitude and primitive recreation are present, outside of the road

corridor, and include non-motorized trails into the adjacent wilderness. The High Uintas Wilderness lies along the northern boundary; other boundaries may need adjustment to improve manageability due to their close proximity to roads and developments.

Travel routes and areas – no designated ATV trails or roads and 21 miles unauthorized routes.

**401302 - Rhoades Canyon, 6,137 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses is minor, except along the North Fork road, and public and private developments there. Other effects include minor grazing developments. Opportunities for solitude and primitive recreation are present away from the main road corridor, and include non-motorized trails into the adjacent wilderness. The High Uintas Wilderness lies along the northern boundary; other boundaries would be difficult to manage unless adjacent lands on the Wasatch-Cache-Uinta N. F. were added to increase the area's size and its locatable boundaries.

Travel routes and areas – 0 miles of designated roads, 31 miles of designated ATV trails, and more than two miles unauthorized routes.

**401303 - Big Ridge, 22,214 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses is minor, and includes minor grazing developments and dispersed motorized recreation uses. Opportunities for solitude and primitive recreation are present away from the main roads along the outer boundary and into the area's center from the south. The area is surrounded by roads, but the terrain is very limiting to incompatible uses; it could be managed as wilderness with boundary adjustments.

Travel routes and areas – 15 miles of designated ATV trails and 23 miles unauthorized routes.

**401304 - Hells Canyon, 4,790 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped, with moderate effects due to the area's small size. Evidence of human use includes minor grazing developments and the close proximity and motorized use on boundary roads and in excluded road corridors. Opportunities for solitude and primitive recreation are present away from the main roads, but the area would be difficult to manage as wilderness due to the mid-slope boundary location along the west.

Travel routes and areas – one mile of designated ATV trails and two miles unauthorized routes.

**401305 - Pole Creek, 13,224 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses includes minor grazing developments and the close proximity and motorized use on unauthorized routes. There are opportunities for solitude; most of the area has semi-primitive ROS classes. The area would be difficult to manage as wilderness due to its juxtaposition between a main forest road and the Forest boundary with other ownerships.

Travel routes and areas – 0 miles of designated ATV trails and 11 miles unauthorized routes.

### **D3U – Roosevelt-Duchesne Ranger District, South Unit**

The Uintas part of the Roosevelt-Duchesne Ranger District has 154821 acres of potential wilderness in eight separate areas. One area (0401209) includes lands on either side of the boundary between the Roosevelt-Duchesne and Vernal Ranger Districts. Area location maps by district are included in the wilderness potential appendix.

**401402 - Timber Canyon East, 9,467 acres:** Wilderness attributes are present; the area is untrammeled, natural, and undeveloped. Evidence of human uses includes minor grazing developments and motorized use on unauthorized routes and roads along the boundaries. There are opportunities for solitude; most of the area has semi-primitive ROS classes. The area would be manageable as wilderness if boundaries could be located away forest roads.

Travel routes and areas –0 miles of designated ATV trails or roads, and seven miles unauthorized routes.

**401403 - Indian Springs, 5,231 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped. Apparent human use includes minor grazing developments and the close proximity and motorized use on roads in excluded corridors, and on unauthorized routes. Opportunities for solitude would be difficult due to use on excluded road corridors in the small area. The area would be difficult to manage as wilderness due to its excluded corridors and other boundary issues along roads.

Travel routes and areas - Four miles of designated ATV trails and five miles unauthorized routes.

**401404 - Mill Hollow, 6,131 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped. Apparent human use includes minor grazing developments and the close proximity and motorized use on roads in excluded corridors, and on unauthorized routes. Opportunities for solitude would be difficult due to use on excluded road corridors in the small area. The area would be difficult to manage as wilderness due to its excluded corridors and other boundary issues along roads.

Travel routes and areas –six miles of designated and two miles unauthorized routes.

**401405 - First Canyon, 6,748 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped. Apparent human use includes minor grazing developments and the close proximity and motorized use on roads in excluded corridors, and on unauthorized routes. Opportunities for solitude would be difficult due to use on excluded road corridors in the small area. The area would be difficult to manage as wilderness due to its excluded corridors and other boundary issues along roads.

Travel routes and areas –four miles of designated and six miles unauthorized routes.

**401406 - Right Fork Indian Canyon, 37,474 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped. Evidence of human uses includes minor grazing developments, and the close proximity and motorized use on unauthorized routes and on roads in the several excluded road corridors. There are opportunities for solitude and primitive recreation, particularly in the core of the area where the ROS is semi-primitive non-motorized. The area could be managed as wilderness if the number of excluded road corridors were reduced and other boundary adjustments were made.

Travel routes and areas –two miles of designated ATV trails and eight miles unauthorized routes.

**401407 - Cottonwood, 25,989 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped. Evidence of human uses includes minor grazing developments, and the close proximity and motorized use on unauthorized routes and on roads in the several excluded road corridors. There are opportunities for solitude and primitive recreation, particularly in the core of the area where the ROS is semi-primitive non-motorized. The area could be managed as wilderness if excluded road corridors were reduced and other boundary adjustments were made.

Travel routes and areas – one mile of designated and eight miles unauthorized routes.

**401410 - Alkali Canyon, 16,885 acres:** Wilderness attributes are present; the area is untrammled, natural, and undeveloped, but there is minor evidence of human uses. Livestock grazing and grazing developments, the proximity and motorized use on unauthorized routes and boundary routes is apparent, especially from ridge tops. There are opportunities for solitude; much of the area has semi-primitive ROS classes. The area would be difficult to manage as wilderness due to its juxtaposition between forest roads with yearlong use, and its several excluded road corridors.

Travel routes and areas –0 miles of designated ATV trails and eight miles unauthorized routes.

### 3.4.5 Environmental Consequences of Alternatives

#### *Direct and Indirect Effects*

##### **Summary**

Alternative A would allow continued uses as they are now, with changes over time to travel restrictions and opportunities in individual routes and areas. The alternative would result in negative effects to wilderness potential on the Vernal Ranger District, and no effects in the other areas.

Alternative D designates the fewest new routes of all the alternatives and would result in smallest area available for dispersed camping. Alternative D would have the most positive effects on wilderness potential forest-wide.

Alternatives B, and E would generally be about the same, with a mix of effects that would generally be considered slightly positive on most of the Forest.

Alternative C would be neutral, with both positive and negative effects not present under Alternative A, depending on the specific potential wilderness area.

An exception for Alternatives B, C, and E would be the North part of the Roosevelt-Duchesne Ranger District. These Alternatives would be less desirable than Alternative A because of the high number and miles of routes converted to designated trails open to all vehicles in these Alternatives, and the resulting potential for added effects in the potential wilderness areas.

Alternatives B, C, D, and E would result in a reduction of about 40 acres less area (area 401204) with wilderness potential on the Vernal Ranger District in any re-inventory or updated draft of potential wilderness areas. The proposal does not fall within any 2001 inventoried roadless areas.

##### **General effects by type of proposal**

The types of proposals in each alternative are consistent with developments and uses that are allowed by the inventory (mapping) criteria. Even so, proposals within the inventoried potential wilderness areas were reviewed for changes that could affect the location of inventory boundaries. The Action alternatives all have proposals that would result in changes to the draft potential wilderness area inventory of approximately 40 acres as discussed in the above paragraph. Each of route types and uses are described below by effects they would generally have in the alternatives.

**Roads** – Thirteen segments of unimproved roads are included in the draft inventory areas total 10.3 miles. One 0.6 mile segment of improved road is also included, and it is proposed for a change of status to unimproved in all alternatives (proposal 2026). One-half mile of undesignated route proposed (Proposal 2345) for designation as an unimproved road, this route is not within an inventoried roadless area. No other changes to road designations.

**Undesignated routes, unauthorized routes, and trails for all vehicles** – Very few of these routes are constructed (engineered and built with surfacing). Many undesignated or unauthorized routes have developed through multiple recreation users traveling the route over several seasons. Others are routes developed for resource management objectives, but not designated as Forest roads. These routes are generally wide enough for one full size vehicle. Most proposed designations of trails for all vehicles in Alternatives B, C, D, and E are along existing undesignated routes (in hatched travel areas) or unauthorized routes (outside hatched travel areas).

Use on these routes can affect naturalness; exotic plants, including noxious weeds may be introduced or spread, surfacing can erode, and displaced water can carry sediments to streams and lakes. Roads are also an effect to undeveloped character, and their use may affect opportunities

for solitude and primitive recreation. If these effects are large in scale or distribution, they could reduce the condition of wilderness attributes and the wilderness capability of an area. These routes would have effects great enough to remove wilderness potential only with route density and heavy use that the removed undeveloped character, integrity of natural systems, or remoteness and opportunities for primitive recreation within the larger area.

Removing use from these routes would generally be considered positive for wilderness potential and/or attributes, particularly if the closure is accompanied by restoration measures to reduce erosion, weed spread, or other effects to naturalness and undeveloped character. Removing routes may also result in increased opportunities for solitude and primitive recreation, depending on density and relative location of other motorized routes.

Continued motorized travel on existing classified (designated) roads and trails where it is already occurring is not expected to produce new negative effects on wilderness attributes and potential. Continued use on unauthorized or unclassified routes could have additional effects, depending on specific resource conditions, the type of route, amount of use on the route, and the density of routes in the area, and route proliferation in these relatively undeveloped settings (see recreation for more on route proliferation).

**Motorized trails for vehicles less than 50 inches wide (ATV trails, motorcycle trails)** – these trails are narrower than roads. They occupy less surface area and have smaller cleared corridors due to the width of the design vehicles. Use of these trails generally results in the same kinds of effects as those from roads and other full size vehicle routes, but the narrower width means the corridor of immediate effects is smaller (narrower) depending on location. The exception would be effects to undeveloped character. The narrower width of these trails would generally be less to undeveloped character than the effect of roads. On the other hand, ATVs and motor bikes are often louder than full size vehicles, and those participating usually come to the forest in groups of two or more vehicles. Noise from use on these trails would have more affect on undeveloped character and opportunities for solitude than roads and trails for full size vehicles. On the balance all motorized vehicle routes and uses are about equal on their effects to wilderness attributes, depending on site specific conditions and use.

**Non-motorized trails (mountain biking, stock use, hiking and back packing)** – These trails are usually narrower than roads; the standard minimum width on the ground is 24 inches. Other trail standards, such as maximum grades and surface construction, and water displacement systems are similar to those for roads and motorized trails. Noise from use is usually a minor factor on these trails, when compared to ATV trails. Though there may be site specific exceptions, these trails generally have little effect on wilderness attributes, and could contribute to opportunities for solitude and primitive recreation. Due to the lack of proposals and effects, these trails will not be further evaluated.

**Dispersed camping with motorized vehicles** – this type of camping includes car, truck, and OHV camping with tents or open air, and RV camping with pickup campers, trailers, or motorized RVS. Most heavily used dispersed camping areas identified by the public and forest personnel, and excluded from potential wilderness during the inventory process. Still, some dispersed camping with motorized vehicles does occur inside of these areas along boundaries and along included roads, undesignated routes, and unauthorized routes. Negative effects of dispersed camping on wilderness attributes were generally accounted for in the inventory and evaluation process.

### **Effects common to all action alternatives**

The potential wilderness inventory and evaluation for the Forest is a draft map and document until the Forest Plan is revised, amended, or otherwise changed. The draft inventory map has been overlain with travel proposals to determine any potential change to the areas size and boundaries,

based on the mapping criteria for potential wilderness. Only proposal 2354, in potential wilderness area 401201, would result in a change to area boundaries during any revision to the inventory. The route is less than 0.1 miles long, and re-mapping of inventory boundaries would remove 40 acres from the inventory in one corner. The effect, then, would be a loss of 40 acres of area with wilderness potential in Alternatives B, C, D, and E.

All action alternatives would reduce the amount of area available for dispersed camping to 150 feet of designated routes where dispersed camping is shown as allowed on the travel map. This would result in less area where wilderness attributes would be affected along roads near potential wilderness boundaries and along excluded road corridors. The change in area available for dispersed camping, then, would be considered a positive effect to wilderness potential in all areas across the Forest because all of the areas have a road along at least part of their boundaries.

In all action alternatives travel with motorized vehicles on undesignated routes in the hatched area would no longer be allowed. This change is considered a positive effect to wilderness potential because it would reduce the potential for degradation of wilderness attributes from travel on existing undesignated routes and from route proliferation. Across the forest there are many additional unauthorized routes where travel by motorized vehicle is occurring. While these effects vary from area to area, the general effects of reducing the number of route available by not designating all of them would be a positive effect for wilderness attributes and potential.

**Effects of Alternative A**

Dispersed camping is allowed within 300 feet of designated and undesignated routes across the forest except where specifically closed. When including the undesignated routes in the hatched travel area Alternative A has the most routes with motorized travel and dispersed camping, within potential wilderness areas. These effects are minor and ongoing across the Flaming Gorge and Roosevelt-Duchesne Ranger Districts, and will not affect wilderness attributes or potential over time in these areas.

Table 3.4.2 Alternative A - Miles of Route Type and Motorized Status								
Acres of Potential Wilderness by Ranger District		Road Open	Trail Open	Undesig. Route	Road Closed	Trail Closed	Non-motorized	Hatched Travel Acres
Flaming Gorge - 138,212		0	20	NA	0	0	87	NA
Vernal - 210,670		2	52	49	0	0	166	83,101
Roosevelt-Duchesne N. U. - 173,164		0	8	NA	8	0	93	NA
Roosevelt-Duchesne S.U. - 154,821		5	7	NA	0	0	58	NA
Forest Totals	676,867 Acres	7	87	57	8	0	404	83,101

**Flaming Gorge Ranger District:** Alternative A would have no changes, than the other alternatives. There may be some motorized travel on an additional 39 miles of unauthorized routes, and dispersed camping along the boundaries of some areas.

**Vernal Ranger District:** Negative effects would occur over time on the Vernal Ranger District under Alternative A. Motorized travel is allowed on undesignated routes in the Vernal Ranger District hatched travel area, and on many unauthorized routes. The hatched travel areas are also resulting in route proliferation and increasing areas of dispersed camping (see recreation section for more on route proliferation). Within and near the hatched areas in potential wilderness conditions of wilderness attributes will be degraded in potential wilderness areas and wilderness potential could be reduced.

**Roosevelt Duchesne Ranger District North Unit:** Wilderness attributes are in good condition throughout most of these areas, but the undeveloped character and untrammelled nature of the areas is being degraded in some areas along unauthorized routes and dispersed camping areas. Some route proliferation is occurring in areas with gentle terrain. Wilderness attributes and overall wilderness potential will be most difficult to maintain under Alternative A.

**Roosevelt Duchesne Ranger District South Unit:** The area receives less recreation use than most of the Forest, though the area is most popular during hunting season. Wilderness attributes and potential could be maintained in the area under existing travel management.

**Effects of Alternative B**

In addition to effects common to all alternatives, Alternatives B would have a mix of effects that would generally be considered positive on most of the Forest.

<b>Table 3.4.3 Alternative B: Miles of Route Type and Motorized Status</b>						
<b>All Potential Wilderness</b>	<b>Road Open</b>	<b>Trail All Vehicles</b>	<b>ATV Trail</b>	<b>Road Closed</b>	<b>Trail Closed</b>	<b>Non-motorized</b>
Flaming Gorge R.D.	0	0	16	0	0	91
Vernal R.D.	0	7	32	1	8	177
Roosevelt-Duchesne N.U.	1	11	11	3	0	93
Roosevelt-Duchesne S.U.	5	8	5	0	0	58
<b>Forest Total</b>	<b>6</b>	<b>26</b>	<b>64</b>	<b>4</b>	<b>8</b>	<b>419</b>

**Flaming Gorge Ranger District:** Alternative B would have positive effects, including the reduction of the area available for dispersed camping, clarified restrictions to motorized travel on unauthorized routes, and the change in travel from Proposal 1005 from a motorized trail to a non-motorized trail in Roadshed Potential Wilderness Area (401007).

**Vernal Ranger District:** Wilderness attributes would be maintained across most of the areas if Alternative B were selected. The designation of motorized routes, the removal of the hatched travel area designations, and restriction of dispersed camping to 150 feet from designated routes would neutralize ongoing effects to wilderness attributes. The exception would be from Proposal 2350, as described in effects common to all action alternatives. In Ashley Gorge potential wilderness area (401201) the closure of seven miles of ATV trails would improve conditions for

wilderness attributes of manageability and opportunities for solitude by reducing motorized effects and potential boundary conflicts.

**Roosevelt Duchesne Ranger District North Unit:** There are several proposals for designation of motorized trails open to all vehicles and for ATVs (trail vehicles) across the areas. Effects from Alternative B are more varied between potential wilderness areas in this unit. Like the other parts of the Forest, new dispersed camping restrictions would have positive effects. In individual areas the effects of proposals are mostly positive. See the potential wilderness Appendix C for detailed effects of proposals by area.

**Roosevelt Duchesne Ranger District South Unit:** Most effects from Alternative B would be positive due forest-wide travel changes. An exception is proposal 4001 in the Alkali Canyon Potential Wilderness Area (401410). The proposal would designate four miles of trails open to all vehicles into a narrow are of semi-primitive non-motorized ROS, and with proposals 4002 and 4003 effectively eliminate non-motorized opportunities from the area, thereby negatively affecting wilderness attributes of solitude and primitive recreation.

**Effects of Alternative C**

In addition to effects common to all alternatives, Alternatives C would have a mix of effects that would generally be considered neutral in most of the potential wilderness areas.

<b>Table 3.4.4 Alternative C: Miles of Route Type and Motorized Status</b>						
<b>All Potential Wilderness</b>	<b>Road Open</b>	<b>Trail All Vehicles</b>	<b>ATV Trail</b>	<b>Road Closed</b>	<b>Trail Closed</b>	<b>Non-motorized</b>
Flaming Gorge R.D.	0	0	16	0	0	91
Vernal R.D.	2	7	40	0	2	177
Roosevelt-Duchesne N.U.	2	15	11	2	0	93
Roosevelt-Duchesne S.U.	5	11	5	0	0	55
<b>Forest Total</b>	<b>9</b>	<b>33</b>	<b>72</b>	<b>2</b>	<b>2</b>	<b>416</b>

**Flaming Gorge Ranger District:** The effects of Alternative C would be the same as Alternative B.

**Vernal Ranger District:** Wilderness attributes would be maintained across most of the areas if Alternative C were selected. The designation of routes available for travel, the removal of the hatched travel area designations, and restriction of dispersed camping up to 150 feet from designated routes would neutralize or reduce ongoing effects to wilderness attributes.

**Roosevelt Duchesne Ranger District North Unit:** There are several proposals for new motorized trails for all vehicles and trail vehicles in the areas. Alternative C adds an addition seven trails for all vehicles to access dispersed camping areas in the potential wilderness areas. Each trail is less than .5 miles, and effects are expected to be minimal, particularly when balanced with new camping restrictions forest-wide. Proposal 3025 would also open one mile of road that is currently closed in High Uintas B Potential Wilderness Area (401301). ROS would change from semi-primitive non-motorized to semi-primitive motorized on about 200 acres from this

change, but wilderness attributes of opportunities for primitive recreation and solitude would be minimally affected due to terrain and remoteness in the area. See the potential wilderness appendix for effects of proposals by area.

**Roosevelt Duchesne Ranger District South Unit:** Effects from Alternative C would be the same as Alternative B in all areas except Cottonwood potential wilderness area (401407). Proposal 4006 would bisect the core of the area, and introduce new negative effects to solitude an to undeveloped character.

**Effects of Alternative D**

Alternative D would have the most positive effects for wilderness potential. In addition to the effects of all action alternatives, this alternative would result in the designation of the fewest motorized trails of all the alternatives in areas with wilderness potential. Wilderness attributes of solitude and primitive recreation, and manageability would have the most positive effects; this would be true for some areas on the Vernal Ranger District and all area of the Roosevelt Duchesne Ranger District, North Unit.

Table 3.4.5 Alternative D: Miles of Route Type and Motorized Status						
All Potential Wilderness	Road Open	Trail All Vehicles	ATV Trail	Road Closed	Trail Closed	Non-motorized
Flaming Gorge R.D.		0	16	0	0	91
Vernal R.D.	0	2	17	1	12	186
Roosevelt-Duchesne N.U.	0	0	4	8	4	93
Roosevelt-Duchesne S.U.	5	3	4	0	2	58
<b>Forest Total</b>	<b>5</b>	<b>6</b>	<b>41</b>	<b>9</b>	<b>18</b>	<b>428</b>

**Flaming Gorge Ranger District:** Alternative D would be the same as Alternatives B, except the closure of additional ATV trails in Roadshed potential wilderness area (401107).

**Vernal Ranger District:** Alternative D would be best for maintaining wilderness potential across the district, and improving potential in some areas. Several fewer routes would be designated than in other alternatives. In Mount Lena potential wilderness area (401204) eleven miles of existing ATV trails would be closed, and only 3 of the 5 all vehicle trails proposed in other alternatives would be available under Alternative D. Though other minor effects to wilderness attributes would remain, the reduction in motorized use would improve opportunities for solitude and primitive recreation, and would improve manageability. There would also be no new trail designations in Whiterocks potential wilderness area (401209), and wilderness attributes would be easily maintained. Effects would be similar to Alternative B in Ashley Gorge potential wilderness area (401206) due to the ATV trail closures.

**Roosevelt Duchesne Ranger District North Unit:** Alternative D would be best for maintaining wilderness potential across the district, would result in improved conditions of all wilderness

attributes in potential wilderness. No existing closed roads or trails would be opened, and no new motorized trails would be designated.

**Roosevelt Duchesne Ranger District South Unit:** Alternative D would be best for retaining wilderness potential in the south unit. Proposals 4001, 4002, and 4003 in Alkali Canyon potential wilderness area (410410) would not be implemented. Opportunities for solitude and primitive recreation attributes would not be affected in the area.

**Effects of Alternative E**

Alternative E would effects similar to Alternative B overall. In some areas the alternative has fewer designations of new trails for all vehicles as dispersed camping access, in addition to the effects of all action alternatives.

Table 3.4.6 Alternative E: Miles of Route Type and Motorized Status						
All Potential Wilderness	Road Open	Trail All Vehicles	ATV Trail	Road Closed	Trail Closed	Non-motorized
Flaming Gorge R.D.	0	0	16	0	0	91
Vernal R.D.	0	7	33	1	8	177
Roosevelt-Duchesne N.U.	2	9	11	2	0	93
Roosevelt-Duchesne S.U.	5	6	4	0	0	58
<b>Forest Total</b>	<b>8</b>	<b>22</b>	<b>64</b>	<b>3</b>	<b>8</b>	<b>419</b>

**Flaming Gorge Ranger District:** The proposals and effects of Alternative E would be the same as Alternative D.

**Vernal Ranger District:** The proposals and effects of Alternative E would be the same as Alternative B.

**Roosevelt Duchesne Ranger District North Unit:** The effects would be similar to Alternative B; most of the proposals are the same. The Alternative does offer seven fewer trails for all vehicles to dispersed camp areas, but these trails are all less than 0.5 miles; four of them are in the Big Ridge potential wilderness area (401303). The difference in effects to wilderness attributes would be negligible.

**Roosevelt Duchesne Ranger District South Unit:** The proposals and effects of Alternative E would be similar to Alternative B.

## 3.5 Economics

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### 3.5.1 Scope of the Analysis

The analysis area for economics includes Daggett, Duchesne, Summit, and Uintah Counties in Utah, and Sweetwater County in Wyoming. This is because these counties have National Forest Lands within their boundaries, and travel management proposals could have economic effects. Small parts of the National Forest also fall within Utah and Wasatch Counties in Utah. Utah and Wasatch Counties are not included in the general analysis due to the very minor role of the Forest into their overall economic profiles.

The *Draft Economic Assessment for the Ashley National Forest*, Henry Eichman, 2008, was written as a Forest-wide assessment for Forest Plan revision. The following description includes parts of that Assessment.

Estimates of the area economic contribution of the Ashley National Forest were developed with an input-output modeling tool called IMPLAN. The IMPLAN database describes the economy in 509 sectors using federal data from 2006.

### 3.5.2 Issues and Indicators

**Economic Issue 1:** OHV opportunities on the Forest may lead to economic benefits in Manila and other parts of Daggett County if routes are available that connect communities to those OHV opportunities.

**Indicators:**

- Effects to Daggett County and businesses within the county

**Background:**

Local government within Daggett County has demonstrated a deep interest in the opportunity to link Manila to the ANF via motorized trail systems. It is believed this linkage could provide an economic opportunity for this small, isolated town, located on the edge of the Flaming Gorge. This potential is tied to the increasing popularity of OHV activities.

**Economic Issue 2: Travel Management has the potential to affect overall economics of communities.**

**Indicators:**

- Effects to overall economics of the area
- Effects to specific business types

**Background:**

Growth in the basin and increasing popularity of OHVs has resulted in the increased demand for OHV (all sizes) routes and opportunities. This growth and demand is expected to continue. Over an eleven year period ATV registration in the Uintah Basin has increased 616% percent. While the area receives economic benefits from the full range of recreational opportunities available on the Forest, the growth in OHV recreation has resulted in some local businesses developing or becoming dependent on continued OHV activities for increased profits, or even for their viability.

Dispersed camping in the area most commonly includes RV use. Many RVs are sold and serviced in the local communities. There is a concern that reduction in opportunities for dispersed camping will result in fewer people participating and spending on goods and services associated with dispersed camping.

### 3.5.3. Management Direction

The Ashley Forest Plan, 1986 provides no specific standards regarding economics. However, page IV-56 (3.) states, as a part of "Other Management Principles and Guidelines" that "Economic analysis and the evaluation of the cumulative effects of project activities will be considered in all resource management decisions.... in accordance with the National Environmental Policy Act."

### 3.5.4 Affected Environment

#### External Influences on Economic Conditions and Contributions

Economic possibilities include many area and population characteristics. Many of these outside influences could change the outcome of implementing an alternative. The biggest effects on recreation participation and particularly on motorized trail activities, RV use, and travel are likely to come from gas prices and from other changes that are completely disconnected from travel planning or other decisions for the Ashley National Forest. Due to the complexity presented by speculations about potential changes in such variables, the analysis assumes that these factors will remain constant, and recreation preferences and participation will follow current recreation trends and predictions.

#### Recreation Activity Participation on the Ashley National Forest

Two surveys provide information on recreation use for the Ashley National Forest and for all public lands in Utah. National Visitor Use Monitoring (NVUM) data collection and surveys, used for the above analysis, were completed for the Ashley National Forest from October 2000 through September 2001. The results were compiled as *National Visitor Use Monitoring Results*, August 2002, USDA Forest Service, Region 4, Ashley National Forest. Utah State University completed a survey, *Public Lands and Utah Communities*, in 2007. The survey responses include participation in specific recreational activities on public lands within the last year. The responses from the three Uintah Basin counties were considered, along with NVUM data, to draw the following conclusions about recreation uses on the Ashley National Forest.

- The majority of the respondents to both surveys said that pleasure driving, and viewing scenery, wildlife, and other natural and historic features were a part of their activities. Camping, fishing, and gathering with family or friends for picnics or to escape their normal routine were also among the top reported activities.
- The survey data shows many visitors participating in motorized and non-motorized trail activities, and indicates growth in participation rates in motorized trail activities over the last several years.
- The NVUM report shows a high level of visitor satisfaction with recreation facilities and conditions of the natural environment on the Ashley National Forest.
- The NVUM report shows that few visitors to the Forest felt crowded. Most visitors were comfortable with the number of other visitors they encountered, and many said hardly anyone else was there.

The counties within the analysis area and Utah have experienced rapid population growth over the last several years, and that growth is expected to continue. According to the *Ashley National Forest Draft Recreation Assessment*, 2008, the number of recreation visits to the Forest is expected to increase between 15 and 30 percent over the next 15 years. Participation in motorized travel activities is expected to increase more rapidly than participation in other activities.

## **Community Economics and ANF Recreation**

According to IMPLAN models, recreation represents 75 and 62 percent, respectively, of employment and labor income contributions from the Ashley National Forest to the economy of the counties. Non-government revenues tied to ANF recreation include services and retail sales. Some services cater specifically to recreationists (outfitter-guides). Services such as overnight accommodations and restaurants can attribute some to most of their receipts to recreationists. Retail sales of specialized gear (i.e. fishing poles and tackle), fuel, food, and specialized vehicles (boats, camp trailers, ATVs, motorcycles and others) are the most common retail goods associated with National Forest recreation uses.

While providing recreation opportunities to local residents is an important contribution, the recreation expenditures of locals do not generally represent new money introduced into the economy. If National Forest related opportunities were not present, residents would likely participate in other locally based activities and their money would still be spent in the local economy. The contributions described above, then, do not include local recreation expenditures. The benefits of local recreation are addressed in non-economic terms in other parts of the analysis.

Daggett County, along the Flaming Gorge Reservoir, is more dependent on Ashley National Forest Recreation than any of the other counties in the project area. More than half of the residents of the county are directly dependent on the Ashley National Forest; they are employed by the Forest Service, own recreation sector dependent businesses, or work for recreation businesses.

Businesses that sell vehicles or gear specific to ATVs and/or motorcycles within all of the counties are among those who could be affected by alternatives if changes to opportunities are great enough to affect their sales.

### **3.5.5 Environmental Consequences**

#### **Issue 1: Effects to Daggett County and businesses within the county**

##### **Effects Common to Alternatives A and D**

The administrative closure on the road from Long Park Reservoir would remain under Alternatives A and D. Hence, there would be no added positive economic effect for Daggett County.

##### **Effects Common to Alternatives B, C and E**

An administratively closed road from Long Park Reservoir to the Forest boundary on the north would be open to mixed 4WD travel under Alternatives B, C, and E. This route, if connected to Manila via other routes crossing BLM and private lands, could bring additional expenditures on services (restaurants, gas, over-night accommodations) to Manila. Though not measurable, this change would be considered a positive economic effect for Daggett County. However, the change would be too small to discern as an economic contribution to the combined county area.

#### **Issue 2: Effects to overall economics of the area**

##### **Effects Common to All Alternatives**

All of the action alternatives would prohibit motorized travel on some existing routes where motorized travel is presently occurring.

None of the alternatives are likely to change recreational opportunities enough to change number of visitors, or the number of visitors participating in activities that produce higher or lower expenditures in the area as a whole.

### **Community Economics and Changes to Recreation Opportunities**

The data from surveys of recreation participation, expenditures, and ANF to county economic contributions has lead to the following conclusions about the potential effects of alternatives for managing routes for various modes of travel.

- Closure of routes to motorized vehicles could be considered a negative effect for area economics *if* the number of routes or miles closed reduced motorized recreational opportunities to the point that: 1) a sense of crowding would result among users and lead to lower visitor participation, and/or 2) visitors were displaced to opportunities in other counties due to the perception of inadequate adequate opportunities for motorized activities in this area.
- Adding routes for motorized vehicles would be considered a positive effect for area economics *if* the routes provided exceptional or unique opportunities sufficient to draw additional new visitors to the area, but were not extensive enough to discourage non-motorized visitors from coming to the area.
- The change in the number of visitors by type of recreation based on miles of trail types is not predictable. If the number of visitors were predictable, the differences in expenditures among types of non-snow recreation are not large enough to show any statistical difference in effects between alternatives.
- Possible effects on certain types of individual businesses in specific locations can and should be considered, but future business potential is likely more dependent on outside economic forces than on the existence or status of particular travel routes.

### **3.5.6 Cumulative Effects**

There are no measurable effects expected. Economic effects would not be cumulative with other actions on Forest Service or other nearby lands.

## **3.6 Environmental Justice**

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### **3.6.1 Management Direction**

Executive Order 12898 requires that federal actions address impacts to minority and low income people (environmental justice). USDA Regulations 5600-2 outlines requirements to serve environmental justice. Summarized, the regulations require specific consideration of effects to the environment and opportunities that may cause disproportionate negative effects to communities or individuals in these demographic groups.

### **3.6.2 Analysis Area**

The analysis considers people living in Daggett, Duchesne, Summit, and Uintah Counties in Utah, and Sweetwater County in Wyoming.

### **3.6.3 Affected Environment**

Uintah and Ouray Tribal Lands are within Duchesne and Uintah Counties in Utah. Tribal members represent the largest minority population living near the Ashley National Forest. There are also Hispanic and African Americans, and people of mixed races living in these counties; most live in Vernal, Utah, and Rock Springs or Green River, Wyoming. Green River and Rock Springs, Wyoming; and Vernal, Manila, and Dutch John, Utah have fewer than the national average of households living below the poverty line. The majority of people with incomes below the poverty line are mostly found in the smaller communities and rural areas of Uintah and Duchesne County; Fort Duchesne, Duchesne, Whiterocks, and others between Highway 40 and the Uinta Mountains. The percentage of households with incomes below the poverty line varies between communities with 13.7 to 62 percent of household having incomes below the poverty line.

### **3.6.4 Environmental Consequences of Alternatives**

None of the alternatives would result in changes that specifically impact minority or low income people or communities where they are concentrated.

All recreational and economic opportunities would remain available under all alternatives. None of the alternatives change the driving distance to various opportunities.

## 3.7 Heritage Resources

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### 3.7.1 Introduction

Cultural resources may be identified as those resources either directly or indirectly related to the material life ways of a cultural group or groups as specified by the Code of Federal Regulations (CFR), 36 CFR 296.3. Cultural resources may refer to sites, areas, buildings, structures, districts, and objects which possess scientific, historic, and social values. The National Register of Historic Places (NRHP) Program provides eligibility criteria to help federal agencies determine the significance of cultural resources and subsequent management guidance.

Section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 USC 470 et. Seq.) and its implementing regulations (36 CFR 800) require a specific evaluation process which is separate and distinct from the processes required by the National Environmental Policy Act (NEPA). The NEPA analysis can be combined with the NHPA analysis; however final compliance with each law is a distinct process. Completion of NEPA does not equate to completion of NHPA. Consequently, the fulfillment of the NHPA process (also called the Section 106 process) requires specific steps which must be fulfilled before proposed routes or route changes can be authorized and added to the Motor Vehicle Use Map (MVUM).

The cultural resource review required by the NHPA includes several steps which are outlined in 36 CFR 800. The steps include: 1) identification efforts; 2) evaluation for National Register of Historic Places (NRHP) eligibility; 3) determination of effects; and 4) resolution of adverse effects (if any). All steps include consultation with the Utah State Historic Preservation Officer and concerned tribes.

### Nature of Potential Effects to Cultural Resources

Cultural resources are sensitive and irreplaceable resources that can be affected by a variety of activities and actions. The value of a cultural resource is intrinsic and relates to the educational, historical, cultural, aesthetic, and architectural properties of the resource. The proposed action has the potential to affect cultural resources in a variety of ways.

1. Road and trail construction activities have the potential to disturb, destroy, and adversely affect cultural resources.
2. Creation and use of unauthorized routes can introduce ground disturbances in the form of road swells and tire tracks that have the potential to disturb, destroy, or adversely affect cultural resources.
3. Creation and use of unauthorized routes can reduce vegetation and increase natural erosion which has the potential to disturb, destroy, or adversely affect cultural resources.
4. Creation of unauthorized routes facilitates access to otherwise remote locations containing cultural resources - thus increasing potential for vandalism and unauthorized collection of artifacts.

Dispersed camping activities associated with roads and trails have the potential to affect cultural resources in the following ways:

1. Dispersed camping activities often reduce vegetation cover and increases natural erosion which has the potential to disturb, destroy, or adversely affect cultural resources.

2. Dispersed camping activities often include ground disturbing actions, such as: excavation of fire pits, excavation of latrines, excavation for site landscaping, etc. Ground disturbing activities have the potential to disturb, destroy, or adversely affect cultural resources.

### 3.7.2 Scope of the Analysis

The scope of analysis for this project includes all National Forest System land within the Ashley National Forest administrative boundary. The Area of Potential Effects of the proposed undertaking (pertaining to Section 106 of the NHPA) includes all newly designated routes, all changed routes, and a 150 foot (50 m) buffer on each side of all new or changed routes. The APE is based upon the route locations and the associated dispersed camping areas.

### 3.7.3 Issues and Indicators

**Cultural Resource Issue 1 (Directly affected cultural resource sites):** Designating new routes for motor vehicle use may result in adverse effects to cultural resources. Effects are a result of motor vehicle use, road construction, and road maintenance on cultural resource sites. Direct effects may occur when a designated route intersects with a cultural resource site.

**Indicators:**

- Number of cultural resource sites *directly* affected by designated routes.

**Cultural Resource Issue 2 (Indirectly affected cultural resource sites):** Designating new routes for motor vehicle use may increase access to cultural resource sites. Increased access to cultural resource sites may lead to adverse effects, such as vandalism, unauthorized collecting, and increased erosion. Designating new routes also increases the number of cultural resources adversely affected by dispersed camping activities (excavation of fire pits, excavation of latrines, excavation for site landscaping, etc.). Indirect effects may occur when designated routes are within 150 feet of a cultural resource site.

**Indicators:**

- Number of cultural resources sites *indirectly* affected by designated routes.

### 3.7.4 Management Direction and Other Laws or Guidance

*The Forest Service Manual (FSM) 2360 – Heritage Program Management* contains the Forest Service’s policies for cultural resources. Sections of several other manuals and handbooks also cover aspects of cultural resource management, including *Forest Service Handbook (FSH) 1909.15- Environmental Policy and Procedures, Chapter 60.1, Physical Factors*, which provides guidance on cultural resources including archeological, historical, and architectural resources.

The Land and Resource Management Plan for the Ashley National Forest (USDA Ashley National Forest 1986:IV-20) identifies standards and guidelines that relate to cultural resources within the Forest. The following management direction applies to the route designation process:

- Conduct cultural resource surveys prior to any agency undertaking which could affect significant cultural values.
- Evaluate and identify sites for nomination to the National Register.
- Develop and implement a plan for the interpretation, protection, maintenance, and/or mitigation of known significant cultural resources sites.
- Coordinate management of cultural resources with the State Historic Preservation Office and others as needed.

- Prevent damage to any significant cultural site. (USDA Ashley National Forest 1986:IV-20).

Cultural resources are individually unique and non-renewable resources. Numerous Federal laws and policies govern their management and protection including: the Antiquities Act of 1906 as amended [16 USC 431-433], the Historic Sites Act of 1935 as amended [16 USC 461-467], the National Historic Preservation Act of 1966 as amended (NHPA) [16 USC 470 et seq.], the Archaeological and Historic Preservation Act of 1974 as amended [16 USC 469-469c-2], the Archaeological Resources Protection Act of 1979 as amended (ARPA) [16 USC 470aa-mm], and the Native American Graves Protection and Repatriation Act of 1990 as amended (NAGPRA) [25 USC 3001 et seq.].

Section 106 of the National Historic Preservation Act of 1966 (NHPA) and the Act's implementing regulations (36 CFR Part 800) require that federal agencies take into account the effect of their undertakings on Historic Properties and that agencies provide the Advisory Council on Historic Preservation (ACHP) or State Historic Preservation Officer (SHPO), and the relevant American Indian Tribes, an opportunity to comment on those undertakings.

In regards to travel management planning, the following categories of proposals are considered "undertakings" with the potential to affect Historic Properties, triggering evaluation under Section 106 of NHPA, 36 CFR Part 800:

- Construction of a new road or trail;
- Authorization of motor vehicle use on a route currently closed to public use;
- Formal recognition of unauthorized routes as authorized, by designating routes open to motor vehicles.
- Change in use (including administrative use) of authorized routes.

Specific routes which are determined to be "undertakings" will be reviewed for their potential to affect cultural resources. Cultural resource review includes identification efforts to determine if cultural resources will be affected, evaluation of the cultural resources to determine historic significance based on National Register of Historic Places (NRHP) criteria, determination of the level of effects on NRHP eligible "Historic Properties," and proposed methods to resolve the adverse effects on the properties.

Ashley National Forest will fulfill consultation required by 36 CFR 296.7 and 36 CFR 800 Section 101(d)(6)(B). The forest will consult with the Ute Tribe and the Eastern Shoshone Tribe regarding potential effects to historic properties which are of significance to the Tribes. Consultation with the Tribes will be conducted in a manner befitting the Government-to-Government relationship between federal agencies and Native American Tribes as required by Executive Order 13084, legal agreements, federal treaties, and case law.

### **3.7.5 Affected Environment**

The affected environment includes all cultural resources which could be potentially affected by the proposed action. Cultural resources are defined as "an object or definite location of human activity, occupation, or use. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, places, or objects and traditional cultural properties." (Cultural resources include objects, materials, sites, and structures from all periods of time, from prehistory to present day. The types of cultural resources on the Ashley National Forest are directly related to the prehistory and history of the area and the associated activities and material remains from each period.

### **Current Authorized Motorized Routes**

Ashley National Forest has approximately 1955 miles of currently authorized motorized routes under the current Ashley National Forest travel management plan (including 90 miles of administratively closed roads). Vernal Ranger District also has 368 miles of undesignated routes in the hatched travel area that are authorized under the current travel rules. These authorized roads potentially affect 444 cultural resource sites throughout the Forest (including 299 directly affected sites and 145 indirectly affected sites). However, the effects to cultural resources from continued use of existing authorized routes will not be evaluated in this analysis.

The Travel Rule indicates that existing authorized routes which were designated under previous decisions will not require a review under the current proposed Forest Travel Plan. Travel Rules in CFR 212.50 state that “the responsible official may incorporate previous administrative decisions regarding travel management made under other authorities, including designations and prohibitions of motor vehicle use in designating National Forest System roads...” Consequently, existing authorized routes without anticipated changes will not be reviewed under the current NEPA document.

### **Unauthorized Routes**

Additionally, about 1078 miles of unauthorized routes (traces, tracks, incompletely obliterated project roads, one-time fire or special use access, etc.) have been identified through digital orthophotos and infra red photography.

## **3.7.6 Environmental Consequences**

### **Effects Common to All Action Alternatives**

#### **Current Authorized Motorized Routes**

The continued use of authorized routes will be common in all of the Action Alternatives and will potentially affect 444 cultural resource sites throughout the Forest (including 299 directly affected sites and 145 indirectly affected sites).

#### **Maintenance of Authorized Routes**

All currently authorized routes and proposed routes will be subject to road and trail maintenance. Maintenance activities could include repairing erosion, adding fill, hardening of trail with gravel or rock, and removal of vegetation.

#### **Unauthorized Routes**

Use of motorized travel on undesignated routes would be prohibited under all alternatives. However such use may continue illegally and would continue to potentially affect cultural resources.

#### **Signed Identification of all Authorized Routes**

Implementation of the Travel Rule which prohibits cross country motorized travel, and closes all routes not specifically signed as open for public use, will benefit cultural resources by significantly reducing the potential for inadvertent damage to sites by motor vehicle use on undesignated routes. Vandalism to sites may also be reduced because access to sensitive cultural resource sites can be limited. These beneficial effects will occur regardless of the Alternative.

#### **Accuracy of the Data and Analysis**

Only a portion of newly proposed routes have been surveyed for cultural resources prior to the preparation of the Draft EIS. Subsequently, the conclusions offered for each alternative are based upon incomplete data and may not be fully accurate. Each alternative is discussed using available cultural resource information. Conclusions are based upon the assumption that the available data is a statistically accurate representation of the cultural resources across the Forest as a whole.

### **NHPA Review**

The limited survey data is sufficient for the NEPA analysis portion of the Travel Management Plan, but not for fulfillment of NHPA requirements. Prior to authorization and opening of a route for motorized access, all routes will undergo a cultural resource review and be subject to cultural resource identification and review procedures (as outlined in 36 CFR 800). Subsequent identification efforts and review under NHPA will be a requirement under all alternatives except the No Action Alternative.

### **Resolution of Adverse Effects**

Measures to avoid, minimize, or mitigate adverse effects are intended to reduce the adverse effects to a site, or to offset the adverse effects on one site by acting to achieve beneficial effects to another site elsewhere, or to collect scientific data allowing interpretation of a site. Resolution measures could include closing routes, recovering archaeological data by excavating sites, avoiding sites, or providing public education products that provides in depth information about the resources that will be affected. Numerous resolution measures are available and the Forest is required to consult with the State Historic Preservation Officer and concerned tribes to determine appropriate mitigation plans.

During the review process for the proposed alternatives, some routes were located in areas with so many cultural resource concerns that they were dropped from consideration in all alternatives because the anticipated mitigation measures would have been unfeasible or unattainable.

### **Cultural Resource Site Monitoring**

In some situations where indirect effects may potentially affect a site, the Forest may develop a site monitoring plan assess the effects. This option would be adopted for the cultural resources sites with anticipated effects from the proposed alternatives. Ashley National Forest would select a sample of sites eligible for the National Register of Historic Places that are within 30m (100feet) of designated routes to be monitored periodically to determine if adverse effects related to travel route designation are occurring. If the condition of a particular site is found to have significant deterioration due to travel route designation, resolution of the adverse effects will be conducted.

## **3.7.7 Direct and Indirect Effects**

### **Alternative A - Current Condition**

Ashley National Forest currently has a total of 1955 miles of authorized motor vehicle routes on the Forest. Authorized routes include all National Forest System Roads both open and closed as well as undesignated routes within the hatched travel area on the Vernal Ranger District. Currently, 1085 miles (55%) of the existing authorized motor vehicle routes have been surveyed for cultural resources. There are 299 known cultural resource sites directly affected and 145 known sites indirectly affected by currently authorized routes for a total of 444 sites affected by current authorized routes. In addition, because only 55% of the route miles have been surveyed for cultural resources, there are likely to be more undocumented cultural sites that are being affected by currently authorized routes.

Existing unauthorized motor vehicle routes may continue to be used, causing adverse effects to cultural resources. Continued use of undesignated routes within the hatched travel areas on the Vernal Ranger District would continue to affect cultural resources. Protection of cultural resources in those areas would be insufficient because undesignated trails are inherently difficult to control or management.

## Alternative B – Preferred Alternative

Alternative B is the agency's initial proposed action. Alternative B provides for 1705 miles of motorized routes (357 miles of new or changed routes [including administratively closed routes] and 1348 miles of existing routes). Approximately 246 miles (68%) of the newly proposed or changed routes will require further cultural resource review. A total of 55 known cultural resource sites would be affected (35 directly and 20 indirectly) by the newly proposed or changed routes. In addition, because 68% of the route miles will require cultural resource identification efforts, additional cultural resource sites may be present along routes which have not yet been reviewed for cultural resources. Newly designated or NFS routes on which the motorized use would be changed, that have not previously been reviewed for cultural resources will require appropriate identification efforts and review. All NRHP eligible sites (both previously known and newly encountered) which could be directly or indirectly affected by proposed routes would require a review of potential effects. When potential effects are identified for a cultural resource site, those effects would need to be resolved prior to authorization and placement of the specific route on the Motor Vehicle Use Map (MVUM).

Designated routes which would not affect NRHP eligible cultural resources would be authorized for use and placed on the Motor Vehicle Use Map (MVUM) once the cultural resource review is complete.

The majority of the proposed routes are unauthorized or undesignated routes that currently exist on the ground. However; five of the proposed routes would require new construction. Proposals 1017.2, 1011.2, 2144, 3013, and 2130.2 would require moderate to extensive construction totaling approximately three miles to create the proposed motorized trails for ATVs.

## Alternative C

Alternative C would increase motorized routes for public use. This alternative contains the largest quantity and length of motorized routes for public use.

Alternative C provides for 1731 miles of motorized routes (382 miles of new or changed routes [including administratively closed routes] and 1349 miles of existing routes). Approximately 263 miles (68%) of the newly proposed or changed routes will require further cultural resource review. A total of 60 known cultural resource sites would be affected (38 directly and 22 indirectly) by the newly proposed or changed routes. In addition, because 68% of the route miles will require cultural resource identification efforts, additional cultural resource sites may be present along routes which have not yet been reviewed for cultural resources. Newly designated or NFS routes on which the motorized use would be changed, that have not previously been reviewed for cultural resources will require appropriate identification efforts and review. All NRHP eligible sites (both previously known and newly encountered) which could be directly or indirectly affected by proposed routes would require a review of potential effects. When potential effects are identified for a cultural resource site, those effects would need to be resolved prior to authorization and placement of the specific route on the Motor Vehicle Use Map (MVUM).

Designated routes which would not affect NRHP eligible cultural resources would be authorized for use and placed on the Motor Vehicle Use Map (MVUM) once the cultural resource review is complete.

The majority of the proposed routes are unauthorized or undesignated routes that currently exist on the ground. However; six of the newly proposed routes will require new construction to establish the routes. Routes 1017.2, 1011.2, 1248.2, 2144, 3013, and 2130.2 are new routes that will require moderate to extensive construction totaling approximately three miles to create the proposed motorized trails for ATVs.

## Alternative D

Alternative D proposes to increase the ratio of non-motorized routes to motorized routes. This alternative contains the least motorized access.

Alternative D provides for 1585 miles of motorized routes (232 miles of new or changed routes [including administratively closed routes] and 1353 miles of existing routes). Approximately 186 miles (80%) of the newly proposed or changed routes would require further cultural resource review. A total of 36 known cultural resource sites would be affected (22 directly and 14 indirectly) by the newly proposed or changed routes. In addition, because 80% of the route miles would require cultural resource identification efforts, additional cultural resource sites may be present along routes which have not yet been reviewed for cultural resources. Newly designated or NFS routes on which the motorized use would be changed, that have not previously been reviewed for cultural resources will require appropriate identification efforts and review. All NRHP eligible sites (both previously known and newly encountered) which could be directly or indirectly affected by proposed routes would require a review of potential effects. When potential effects are identified for a cultural resource site, those effects would need to be resolved prior to authorization and placement of the specific route on the Motor Vehicle Use Map (MVUM).

Designated routes which would not affect NRHP eligible cultural resources would be authorized for use and placed on the Motor Vehicle Use Map (MVUM) once the cultural resource review is complete.

The majority of the proposed routes are unauthorized or undesignated routes that currently exist on the ground. However, one of the newly proposed routes will require new construction to establish the route. Proposal 2144 would require moderate to extensive construction to create 0.36 miles of motorized trail for ATVs.

## Alternative E

Alternative E proposes to blend a mixture of both non-motorized routes and motorized routes in an effort to provide increased broader access for the public.

Alternative E provides for 1677 miles of motorized routes (328 miles of new or changed routes [including administratively closed routes] and 1,349 miles of existing routes). Approximately 243 miles (74%) of the newly proposed or changed routes will require further cultural resource review. A total of 51 known cultural resource sites would be affected (33 directly and 148 indirectly) by the newly proposed or changed routes. In addition, because 74% of the route miles will require cultural resource identification efforts, additional cultural resource sites may be present along routes which have not yet been reviewed for cultural resources. Newly designated or NFS routes on which the motorized use would be changed, that have not previously been reviewed for cultural resources will require appropriate identification efforts and review. All NRHP eligible sites (both previously known and newly encountered) which could be directly or indirectly affected by proposed routes would require a review of potential effects. When potential effects are identified for a cultural resource site, those effects would need to be resolved prior to authorization and placement of the specific route on the Motor Vehicle Use Map (MVUM).

Designated routes which would not affect NRHP eligible cultural resources would be authorized for use and placed on the Motor Vehicle Use Map (MVUM) once the cultural resource review is complete.

The majority of the proposed routes are user-created routes that will change from unauthorized routes to authorized routes. Five of the newly proposed routes will require new construction to establish the routes. Routes 1017.2, 1011.2, 2144, 3013, and 2130.2 are new routes that will require moderate to extensive construction to create the roadway for vehicle use.

### Cultural Resource Conclusions

The proposed action has the potential to cause an adverse effect on cultural resources under any of the alternative proposals. Each proposed alternative would have a different level of potential effects. Alternative D would have the potential to affect the least number of cultural resources. Alternative C would have the potential to affect the greatest number of cultural resources through new or changed routes. Adverse effects to cultural resources resulting from the selected alternatives would require a resolution of adverse effects in consultation with the State Historic Preservation Officer (SHPO) and concerned Tribes.

The Forest intends to fulfill obligations under 36 CFR 800 by using the standard Section 106 process through a phased approach. The phased review will consider the effects of the project as a whole but will make a separate determination of effect for each route. For details on the phased approach see the Heritage Resource Report available in the Project Record.

As NHPA requirements are completed for specific road segments, they will be opened for public use and added to the MVUM. Because of time restraints and available funding to complete NHPA requirements, some newly designated routes authorized under this NEPA document may not be authorized for public use for several years because of cultural resource mitigation needs.

Tables 3.7.1 through 3.7.3 compare motorized route mileages, the miles of cultural resource survey needed for new or changed motorized routes, and the approximate number of cultural resource sites which would be affected by designation of new routes or changing motorized use of NFS routes on the Forest by Alternative. Table 3.7.4 gives a summary of the potential effects to cultural resources by Alternative. The tables are intended to provide an easy overview comparison of the effects of each Alternative on Cultural Resources. Similar tables have been prepared for each alternative and provide a breakdown of the same data by districts and can be found in the Heritage Report available from the Project Record.

<b>Table 3.7.1 Miles of Motorized Routes on the Ashley National Forest by Alternative</b>					
<b>Miles of Routes</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>	<b>Alternative D</b>	<b>Alternative E</b>
<b>Miles of newly designated or changed use NFS routes</b> Proposed for each Alternative*	N/A	357	382	232	328
<b>Miles of Unchanged Existing Authorized Motorized Routes</b> Proposed for each Alternative	N/A	1348	1349	1353	1349
<b>Total Miles of Authorized Motor Routes</b> Proposed for Each Alternative (Both New and Existing routes)*	1955†	1705	1731	1585	1677

\* Includes administratively closed roads † Alternative A includes 368 miles of undesignated routes in the Vernal hatched travel area.

**Table 3.7.2 Miles of Designated Routes Requiring Cultural Resource Review**

Cultural Resource Review	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Approximate Miles of New or Changed Motorized Routes which require a Cultural Resource Review	N/A	246	263	186	243

Table 3.7.3 Number of Known Eligible Sites Affected						
Cultural Resource Sites		Alt A	Alternative B	Alternative C	Alternative D	Alternative E
Approximate Number of Known Eligible** Sites Affected by New or Changed Motorized Routes by Alternative	Directly Affected	N/A	35	38	22	33
	Indirectly Affected	N/A	20	22	14	18
	Total Affected	N/A	55	60	36	51

\*\* Includes known sites listed on the NRHP, as well as sites determined eligible for the NRHP, and sites still unevaluated for the NRHP. Because many of the routes are not yet surveyed for cultural resources, these numbers are likely to increase as identification efforts proceed.

Table 3.7.4. Summary of Potential Effects to Cultural Resources by New or Changed Motorized Routes (by Alternative)					
Indicator	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Quantity of heritage resources to be potentially adversely affected – potential for resolution of the adverse effects.	No new adverse effects.	High number of potential adverse effects – most effects can be resolved	Highest number of Potential adverse effects – some effects can be resolved	Lowest number of potential adverse effects – most effects can be resolved	Moderate number of potential adverse effects – most effects can be resolved

Regardless of the Alternative selected, the Forest will be required to find ways to resolve any adverse affects to NRHP eligible cultural resources. Most of the adverse effects under each alternative can be resolved, but unfortunately all potential effects cannot be completely avoided in any of the proposed alternatives. Because cultural resources are non-renewable and are individually unique, they are limited in number. Adverse effects to cultural resources are permanent, irreparable, and incalculable. Alternative D will cause the least number and lowest level of adverse effects to cultural resources and is therefore the preferred alternative for cultural resource protection.

### 3.7.8 Cumulative and Inadvertent Effects

Cumulative and inadvertent effects to cultural resources relate to unplanned effects resulting from multiple activities across time and space. Under Alternative A, cumulative effects from dispersed camping would continue within a 300 foot radius on each side of authorized roads. Additionally, because the Forest does not have a clear method to indicate which routes are authorized, the public will continue to use unauthorized routes, potentially affecting cultural resources on those routes.

Under Alternatives B, C, D and E, cumulative effects to cultural resources may result from dispersed camping within a 150 foot of authorized routes. Dispersed camping opportunities pose a concern because of the potential for site specific damage to cultural resources and unauthorized collection. Under Alternative B, C, D, and E the effects from dispersed camping would be less than Alternative A (present condition) because dispersed camping would be reduced from 300 to 150 feet from designated routes. In addition, under Alternatives B, C, D, and E, motorized travel on undesignated routes in the hatched travel area would not be permitted.

### 3.9 Short-Term Uses and Long-term Productivity

NEPA requires consideration of “the relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity” (40 CFR 1502.16). As declared by the Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

Allowing continued motorized travel within the hatched travel area (Alternative A) allows motor vehicle use to occur over the largest possible area in the short term. However, as detailed in the effects analysis contained in this chapter, long-term productivity would be harmed. Impacts would occur to wildlife, soils, fish, heritage, and vegetation. All of the action alternatives reduce resource impacts although to differing degrees.

Since the motor vehicle use map requires annual updates, nothing limits future choices to meet the challenge of providing for motorized recreation while protecting resource values and other uses of the National Forest.

Wilderness potential of the areas would be most affected by Alternative A due to motorized travel off of designated routes. Motorized travel off of designated routes results in disturbance to natural systems, noise effects to remoteness, and visible effects to undeveloped character. These effects can compound over time due to continued use of undesignated routes and proliferation of routes (see section 3.1 *Recreation Resources*). An important part of retaining or improving wilderness potential is the restriction of motorized vehicles to designated routes forest wide, and a reduction of the areas available for dispersed camping.

### 3.10 Unavoidable Adverse Effects \_\_\_\_\_

All alternatives carry the risk that some motor vehicle users could create new routes, such as in the hatched travel area (under Alternative A) or stray off designated routes (under Alternatives A-E). Not all illegal OHV use would cause adverse resource impacts, but certainly some would. The potential for illegal use should decline with regulations that are clearer and better communicated as contained within the proposed action alternatives. Establishment of a designated road and trail

system can be better signed, maintained, and managed to further reduce the potential for illegal use. However, no enforcement system is perfect, thus some violations are inevitable. While impacts from roads and motorized trails can be minimized, they cannot be eliminated.

As described in the effects analysis and Resource Specialist Reports, compared with the No Action alternative, all action alternatives reduce impacts to wildlife, soils, fisheries, plants, wilderness potential, watersheds, heritage resources and opportunities for non-motorized recreation within the hatched travel area specifically and throughout the forest in general. The impacts are reduced because much less of the Forest would be open to motorized use under a designated route system compared with the 111,805 acre hatched travel area where motorized travel is allowed on over 368 miles of existing undesignated routes. However, where motorized routes are designated, some unavoidable effects to resource values and other forest uses would occur.

Irreversible and irretrievable commitments are limited as noted in the following section. If motorized travel continues within the hatched travel area, these areas would be increasingly less desirable for non-motorized use and they would lose some of their potential for wilderness designation and inventoried roadless character would be reduced. This condition is not irreversible but unavoidable adverse effects to non-motorized recreation and wilderness character would occur where roads and trails are designated for motorized use. This is because the longer a period of OHV use is established in an area, the harder it is to change back to a non-motorized setting.

For motorized recreation opportunities, all action alternatives carry unavoidable effects associated with restricting motor vehicle use to designated trails. This would eliminate the authorized use of undesignated routes and limit access to some locations, particularly when seasonal restrictions are in effect. This would likely require more advance trip planning, especially during the hunting season when arrangements may need to be made for retrieving game using non-motorized means..

Although all action alternatives would designate motorized trails in several potential wilderness areas. These designations are not expected to produce unavoidable effects because they all follow routes already on the ground. Further, if the designations result in unacceptable effects to resources, the routes can be closed later date.

There would be no unavoidable adverse effects on fisheries or other aquatic resources. Analysis indicates that all of the action alternative would improve conditions and reduce potential impacts to fisheries habitat, cutthroat trout populations, and macroinvertebrates. The implementation of any of the action alternatives would not result in an adverse or significant effect on fisheries or other aquatic resource.

### **3.11 Irreversible and Irretrievable Commitments**\_\_\_\_\_

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irretrievable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line rights-of-way or road.

Changing area and trail designations from motorized to non-motorized or vice versa is not considered irreversible or irretrievable because the trails and roads would create linear features that are not permanent scars on the landscape. The Forest could always change the designations in the future or implement projects to revegetate these routes and areas. No irreversible or irretrievable effects to motorized recreation are anticipated due to the ability to update the motor vehicle use map annually, allowing correction of significant problems that emerge

The construction of approximately three miles of new routes would decrease soil productivity where new construction takes place. Proposals 1011.2, 1017.2, 1248.2, 2129, and 3013 are new routes that would require approximately three miles of construction.

Soil productivity is described as the “the inherent capacity of a soil under management to support the growth of specified plants, plant communities, or a sequence of plant communities” (R4 Supplement FSH 2509.18). Roads remove organic matter, alter soil properties, change the microclimate and accelerate erosion. Roads can concentrate, divert and intercept water flow from rainfall and subsurface flows affecting the hydrologic function of an area (Gucinski, et al, 2000) (Ouren, et al, 2007). There would be no irreversible commitments to wildlife among the action alternatives. There may be some irretrievable commitments to wildlife as some wildlife habitat would be affected among the action alternatives. However, the amount of this affected habitat would be negligible in comparison to the amount of habitat that is on the Forest, and therefore would not adversely affect wildlife.

No irreversible or irretrievable commitments of economic resources would be expected to water resources.

No roads are proposed within the roadless areas and motorized trails are neither an irreversible or irretrievable commitments of roadless resources.

The implementation of any of the action alternatives would not result in an adverse or significant effect on fisheries or other aquatic resources and there would be no irreversible or irretrievable commitments of fisheries or aquatic resources for any of the action alternatives associated with this proposed project (see the Aquatic Resources Specialist Report available from the Project Record).

### **3.12. Cumulative Effects**

As defined by Council on Environmental Quality (CEQ) regulations, cumulative impacts result from the incremental impacts of an action when added to past, present, and reasonably foreseeable future actions, regardless of whom takes the action (40 CFR §1508.7). Concurrently, the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884) (ESA) defines cumulative impacts as effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR §402.02).

Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. This chapter discusses cumulative impacts as the incremental effect to specific resources or issues that would occur from the Proposed Action, in conjunction with other cumulative actions.

#### **Past and Present Actions**

In order to understand the contribution of past actions to the cumulative effects of the proposed action and alternatives, this analysis relies on current environmental conditions as a proxy for the impacts of past actions. This is because existing conditions reflect the aggregate impact of all prior human actions and natural events that have affected the environment and might contribute to cumulative effects.

This cumulative effects analysis does not attempt to quantify the effects of past human actions by adding up all prior actions on an action-by-action basis. There are several reasons for not taking this approach. First, a catalog and analysis of all past actions would be impractical to compile and unduly costly to obtain. Current conditions have been impacted by innumerable actions over the last century (and beyond), and trying to isolate the individual actions that continue to have residual impacts would be nearly impossible. Second, providing the details of past actions on an

individual basis would not be useful to predict the cumulative effects of the proposed action or alternatives. In fact, focusing on individual actions would be less accurate than looking at existing conditions, because there is limited information on the environmental impacts of individual past actions, and one can not reasonably identify each and every action over the last century that has contributed to current conditions. Additionally, focusing on the impacts of past human actions risks ignoring the important residual effects of past natural events, which may contribute to cumulative effects just as much as human actions. By looking at current conditions, we are sure to capture all the residual effects of past human actions and natural events, regardless of which particular action or event contributed those effects. Third, public scoping for this project did not identify any public interest or need for detailed information on individual past actions. Finally, the Council on Environmental Quality issued an interpretive memorandum on June 24, 2005 regarding analysis of past actions, which states, “agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.”

The cumulative effects analysis in this EIS is also consistent with Forest Service National Environmental Policy Act (NEPA) Regulations (36 CFR 220.4(f)) (July 24, 2008), which state, in part:

“CEQ regulations do not require the consideration of the individual effects of all past actions to determine the present effects of past actions. ... With respect to past actions, during the scoping process and subsequent preparation of the analysis, the agency must determine what information regarding past actions is useful and relevant to the required analysis of cumulative effects. Cataloging past actions and specific information about the direct and indirect effects of their design and implementation could in some contexts be useful to predict the cumulative effects of the proposal. The CEQ regulations, however, do not require agencies to catalogue or exhaustively list and analyze all individual past actions. Simply because information about past actions may be available or obtained with reasonable effort does not mean that it is relevant and necessary to inform decisionmaking. (40 CFR 1508.7)”

For these reasons, the analysis of past actions in this section is based on current environmental conditions.

### **Foreseeable Future**

Currently there are approximately 400 oil and gas wells, 75 wind energy turbines comprising one (1) wind energy farm, and one (1) transmission power line proposed on the Forest.

To estimate surface disturbance for associated 30 foot wide access roads for oil and gas, wind energy farms, transmission power lines, communication sites, and alternative energy development that may be proposed on the Forest in Daggett, Duchesne, and Uintah Counties in Utah, and Sweetwater County in Wyoming, the following assumptions have been applied:

- Surface disturbance for an access road, assuming 0.2 mile/oil and gas well: 0.73 acres/oil and gas well (per well is overestimated because it assumes one 30 foot wide access road per well. In some cases, two or more wells may be drilled from a single well pad (i.e., directional drilling on a skid may be utilized);
- Surface disturbance for an access road, assuming 0.5 mile/wind energy farm: 1.82 acres/wind energy farm;
- Surface disturbance for an access road, assuming 0.2 mile/transmission power line: 0.73 acres/transmission power lines;
- Surface disturbance for an access road, assuming 0.5 mile/communication site: 1.82 acres/communication site;

- Surface disturbance for an access road, assuming 0.2 mile/alternative energy source: 0.73 acres/alternative energy source.

## **Hazard tree Removal**

### *Vernal*

Hazardous fuels reduction treatments on approximately 138 acres in lodgepole pine stands in the vicinity of the East Park Campground

### *Roosevelt/Duchesne Ranger District*

Hazard tree removal on seventeen developed recreation and administrative sites on the Roosevelt-Duchesne Ranger District. The sites are located in the Duchesne River, Rock Creek, Lake Fork, Yellowstone River, Uinta River, and Pole Creek drainages of the District

## **Recreation**

### *Flaming Gorge Ranger District*

4.3 acre parking area a permanent part of the marina permit and allow Cedar Springs Marina to maintain the parking area, remove and spray for weeds and vegetation, improve parking area drainage, grade surface, gravel surface where needed, and install one RV hookup for a camper RV that would house security personnel in the summer months.

Construct a 15 acre RV Park next to the existing Lucerne Marina The total number of sites planned for this area is 111 RV units.

### *Vernal Ranger District*

Designate an official trailhead for the Dry Fork Flume Trail, and (2) to reroute the Flume trail and add new segments, so that it becomes one continuous route that does not require shared mixed use with the Red Cloud Loop Scenic Backway.

Reroute approximately 1/3-mile of motorized Forest system trail 1196. The East Galloway Trail 1196 is part of the Outlaw ATV Trail and is located south of the Red Cloud Loop National Scenic Backway, between Trout Creek Guard Station and Oaks Park Reservoir.

## **Fuels reduction and Vegetation Treatments**

### *Flaming Gorge Ranger District*

Reduce hazardous fuels within the Wildland Urban Interface (WUI) on approximately 345 acres within and adjacent to the Cedar Springs and Deer Run Campgrounds and 199 acres within the Mustang Ridge Campground areas.

Bighorn sheep habitat improvement project which includes lopping and scattering the juniper on some slopes along the Flaming Gorge Reservoir, followed one year later with prescribed burning.

### *Vernal Ranger District*

Little Elk Summit Fuel Reduction

North Flank Vegetation Management Project - 98 acres commercial harvest, 412 acres stand improvement, 4,100 acres prescribed burning.

## **Salvage**

### *Flaming Gorge Ranger District*

North Flank Vegetation Management Project - Commercial salvage of 1,296 acres,

Summit Springs commercial salvage of approximately 201 acres of dead and dying conifers

*Roosevelt/Duchesne Ranger District*

Salvage timber harvest of fire-killed and dying trees from a 225-acre burn area on Pole Mountain.

**Cumulative Effects**

*Wildlife:* Because of the small amount of wildlife habitat actually affected among action alternatives, cumulative effects from other activities combined with proposed changes to the Travel Plan under the alternatives would not adversely affect wildlife. For a detailed discussion of cumulative effects see the Wildlife Report available in the Project Record.

*Wilderness Potential:* Most of the South Unit of the Roosevelt-Duchesne Ranger District is covered by oil and gas leases. NEPA and exploration are occurring within the unit. Developments are most likely in the near future in the Sowers Canyon, Nutters Canyon, and Alkali Canyon parts of the unit. Developments would likely result in a developed or altered landscape; conditions which are not consistent with wilderness potential. These effects are acknowledged here, but are unlikely to be cumulative with travel management other than in Alkali Canyon. With proposal 4001 added to other effects, Alkali Canyon would not have a sufficient size are left with Wilderness attributes to be mapped and Potential Wilderness in inventories conducted after the oil and gas developments.

*Soil:* Cumulative effects from past and present activity and increased miles of route associated with Alternatives B, C and E would degrade soil productivity in alpine areas. Alternative D would decrease miles of route in alpine areas and not add to cumulative effects.

Cumulative effects from past and present activity and increased miles of route associated with Alternatives B, C, and E would degrade soil productivity in the LPA. Alternative D would decrease miles of route in the Limestone Plateau Association and not add to cumulative effects.

Cumulative effects from past and present activity and action alternatives would be minimal for wet meadow and riparian corridor areas as overall there would be fewer routes and decreased dispersed camping areas. In the reasonably foreseeable future however, proposed oil and gas development would increase motorized routes and add well pads that could potentially affect wet meadow and riparian corridors as the area where this activity would take place is Sowers Canyon with a perennial stream on the South Unit of the Roosevelt-Duchesne Ranger District.

*Water Resources:* Potential effects from these routes could add to cumulative effects in the localized areas mentioned in section 3.2.6, while Forest-wide a reduction in travel route related cumulative effects to water resources would occur.

*Economics:* There are no measurable effects expected. Economic effects would not be cumulative with other actions on Forest Service or other nearby lands.

**3.13 Other Required Disclosures**

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NEPA at 40 CFR 1502.25(a) directs “to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with ...other environmental review laws and executive orders.”

The Ashley National Forest has consulted with several State and Federal agencies in preparing this EIS.

This EIS and accompanying project file has been prepared in accordance with the 2005 National Forest Travel Management Rule, Executive Orders 11644 and 11989 that relate to OHV management, National Environmental Policy Act, and the numerous laws that pertain to specific resources affected by OHV management.

## Endangered Species Act

The Endangered Species Act of 1973 requires that actions of federal agencies do not jeopardize or adversely modify critical habitat of federally-listed species. Informal consultation with Fish and Wildlife Service will be initiated to review the Wildlife Biological Assessment (BA) for the Travel Plan. Determinations in the BA found a “no effect” for the black-footed ferret and yellow-billed cuckoo, and a “may affect, not likely to adversely affect” for the Canada lynx and Mexican spotted owl. The may affect, not likely to adversely affect determinations are pending concurrence from FWS, but will be finalized and documented in the FEIS.

A Biological Evaluation (BE) was prepared for Region 4 Forest Sensitive Species. A determination of “may impact individuals, but will not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species” was found for: bald eagle, northern goshawk, peregrine falcon, boreal owl, great gray owl, flammulated owl, northern three-toed woodpecker, greater sage-grouse, spotted bat, Townsend’s big-eared bat, pygmy rabbit, and wolverine. A determination of “No Impact” was found for trumpeter swan and common loon.

An Aquatic Species BA was prepared for fish species. A “no effect” determination was made as there are no federally listed fish species within the project area and the project would not result in any water depletions from the Green River Basin.

An Aquatic Species BE for Colorado River cutthroat trout (a sensitive species) was completed for the project. The finding was “may impact individual Colorado River cutthroat trout but would not likely contribute to a trend toward federal listing or cause a loss of viability to the population or the species”.

A Federally listed plant species BA was completed for the project. There are no roads or trails for motorized vehicles in areas with listed plant species on the Ashley National Forest. Based on this information, a determination of "No Effect" is made for Threatened, Endangered or Proposed plants in relation to the proposed action.

Sensitive plant species BE was prepared for the project. Site specific evaluations need to be made for clustered ladies slipper, stemless beardtongue, low greenthread, and Untermann daisy when specific proposals are made for changes in travel management. The other species will need no additional evaluation. Based on this information, a determination of "No Impact" is made for sensitive plants not listed in the preceding sentence in relation to the proposed action. Site specific evaluations will be needed for those that are listed.

## Clean Water Act

As required by the Clean Water Act, the State of Utah has adopted a Water Quality Antidegradation Policy that requires maintenance of water quality to protect the instream Beneficial Uses existing as of 1975. The Clean Water Act also directs each State to establish a Nonpoint Source Management Plan. The State of Utah Division of Water Quality and USDA Forest Service Intermountain Region have agreed through a 1993 Memorandum of Understanding to use Forest Plan Standards & Guidelines and the Forest Service Handbook (FSH) 2509.22 Soil & Water Conservations Practices (SWCPs) as the Best Management Practices (BMPs) to meet the water quality protection elements of the Utah Nonpoint Source Management Plan. The use of SWCPs as the BMPs meets the water quality protection elements of the Utah Non-point Source Management Plan.

Increased contributions to any 303d listed stream is not anticipated in any alternative except Alternative A, where motorized travel with the hatched travel area would allow additional impacts to wetlands, floodplains, and stream channels. The Beneficial Uses and High Quality of

water in the streams draining the analysis area would be maintained to the extent feasible during and following project implementation through the proper implementation of Best Management Practices (the Soil and Water Conservation Practices) as described within the project-specific design features.

### **Executive Order 11644 of February 8, 1972**

#### **Use of Off-road Vehicles on the Public Lands**

As amended by Executive Order 11989 of May 24, 1977.

Executive Order (EO) 11644, as amended, provides direction for federal agencies to establish policies and procedures to control and direct the use of OHVs on public lands in order to: 1) protect the resource of those lands; 2) promote the safety of all users of those lands; and 3) minimize conflicts among various users of those lands. In response, the Forest Service developed regulations at 36 CFR 216, 219, and 295. Under these regulations OHV use can be restricted or prohibited to minimize: 1) damage to soil, watershed, vegetation, or other resources of the public lands; 2) harm to wildlife or wildlife habitats; or 3) conflicts between the use of OHVs and other types of recreation.

Each of the action alternatives analyzed in this EIS makes substantial improvements in reducing redundant routes and minimizing resource impacts and use conflicts as required by 36 CFR 212.55 and EO 11644.

### **Executive Order 11988 of May 24, 1977**

#### **Floodplain Management**

This order requires the Forest Service to provide leadership and to take action to: 1) minimize adverse impacts associated with occupancy and modification of floodplains and reduce risks of flood loss; 2) minimize impacts of floods on human safety, health, and welfare; and 3) restore and preserve the natural and beneficial values served by floodplains.

**Hydrology:** The Forest Service is proposing to reduce or maintain the number of roads within the riparian influence zone in every alternative except Alternative A, where motorized travel on existing undesignated routes would allow for additional impacts to floodplains.

**Aquatic Biota:** None of the alternatives would result in an increase in impacts within floodplain areas. Alternative A would result in a continuation of the current motorized travel management strategy across the Forest. All action alternatives would result in a decrease of impacts within floodplain areas, primarily through the elimination of undesignated travel within the hatched travel area on the Forest. Thus, all alternatives ultimately comply with the intent of Executive Order 11988.

### **Executive Order 11990 of May 24, 1977**

#### **Protection of Wetlands**

This order requires the Forest Service to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

**Hydrology:** The Forest Service is proposing to reduce or maintain the number of roads within the riparian influence zone in Alternatives B, C, and D. In Alternatives A and E, road density in the riparian influence zones would either increase or remain the same. In Alternative A, cross-country travel would allow for additional impacts to wetlands, while in Alternative E, road density in riparian influence zones would increase.

**Aquatic Biota:** Although Alternatives B, C, and E propose some new trail construction across streams, all action alternatives would result in an overall decrease of impacts within wetland and riparian areas, primarily through the elimination of the hatched travel area on the Vernal Ranger District. Thus, all alternatives ultimately comply with the intent of Executive Order 11990. Alternative A would result in a continuation of the current motorized travel management strategy.

### **Executive Order 12898 of February 11, 1994**

#### **Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations**

Executive Order 12898 directs the agency to identify and address, "...as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations ...." In its outreach and scoping (public involvement) processes, the Forest did not identify any potentially disproportionately high and adverse human-health or environmental effects to minority or low-income populations.

None of the alternatives would result in changes that specifically impact minority or low income people or communities where they are concentrated.

All recreational and economic opportunities would remain available under all alternatives. None of the alternatives change the driving distance to various opportunities.

### **Executive Order 13186 of January 10, 2001**

#### **Responsibilities of Federal Agencies to Protect Migratory Birds**

Executive Order 13186 directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices into agency activities and by avoiding or minimizing, to the extent practical, adverse impacts on migratory birds' resources when conducting agency actions. The Migratory Bird Treaty Act prohibits the taking of migratory birds, their parts, nests, eggs, and nestlings.

On August 1, 2007, the National Forests in Utah formalized an updated state-wide strategy for addressing migratory birds in Forest Service planning and project documents (MacWhorter 2007). Several species on the Birds of Conservation Concern and Utah Partners in Flight (PIF) Priority Species lists occur or have habitats within the Forest. These species are the black rosy-finch, black-throated gray warbler, sage sparrow, Brewer's sparrow, greater sage grouse, broad-tailed hummingbird, flammulated owl, burrowing owl, golden eagle, northern harrier, peregrine falcon, prairie falcon, three-toed woodpecker, Williamson's sapsucker, Lewis's woodpecker, loggerhead shrike, red-naped sapsucker, Virginia's warbler, pinyon jay, pygmy nuthatch, and gray vireo.

For this analysis, the flammulated owl, bald eagle, peregrine falcon, and three-toed woodpecker are sensitive species and are discussed in detail in the Sensitive Species section of this report. The greater sage grouse is both a sensitive species and an MIS and is discussed in the Sensitive Species section of this report. The red-naped sapsucker and golden eagle are MIS and are discussed in the MIS section of this report. Refer to those sections in this report for analysis on those species.

### **The National Historic Preservation Act of 1966 Section 106 (NHPA)**

The Act's implementing regulations (36 CFR Part 800) require that federal agencies take into account the effect of their undertakings on Historic Properties and that agencies provide the Advisory Council on Historic Preservation (ACHP) or State Historic Preservation Officer

(SHPO), and the relevant American Indian Tribes, an opportunity to comment on those undertakings.

Ashley National Forest is consulting with the Ute Tribe and the Eastern Shoshone Tribe regarding potential effects to historic properties which are of significance to the Tribes as required by 36 CFR 296.7 and 36 CFR 800 Section 101(d)(6)(B). Consultation with the Tribes will be conducted in a manner befitting the Government-to-Government relationship between federal agencies and Native American Tribes as required by Executive Order 13084, legal agreements, federal treaties, and case law.

The proposed action has the potential to cause an adverse effect on cultural resources under any of the alternative proposals. Each proposed alternative would have a different level of potential effects. Alternative D would have the potential to affect the least number of cultural resources. Alternative C would have the potential to affect the greatest number of cultural resources through new or changed routes. Adverse effects to cultural resources resulting from any of the selected alternatives would require mitigation efforts in consultation with the State Historic Preservation Officer (SHPO) and concerned Tribes.

Because effects to cultural resources must be evaluated under the National Historic Preservation Act (NHPA) and any adverse effects must be mitigated, a separate effort under that law is being conducted in tandem with the requirements of the National Environmental Policy Act (NEPA). Road segments which are determined to potentially cause adverse effects to cultural resources would remain closed until the requirements under NHPA have been fulfilled. As NHPA requirements are completed for specific road segments, they would be opened for public use and added to the Motor Vehicle Use Map (MVUM). Because of time restraints and available funding to complete NHPA requirements, some newly designated routes authorized under this NEPA document may not be authorized for public use for several years because of cultural resource mitigation needs.