

## EXISTING CONDITION OF UNROADED AREAS

### ANALYSIS AREA

The area of analysis for direct and indirect effects on the “unroaded” resource includes the unroaded areas within the project area. Unroaded parcels are defined as “any area, without the presence of a classified road, of a size and configuration sufficient to protect the inherent characteristics associated with its roadless condition” (Roadless Area Conservation FEIS, 2000).

### REGULATORY FRAMEWORK

#### Deerlodge Forest Plan

There are no Forest-wide or Management Area standards specific to unroaded areas.

#### Transportations Rule

The Transportation Rule (Roads Rule) Forest Service Handbook 7700 and Roads Policy (USDA Forest Service 36 CFR Part 212, et al, 2001) provide direction that road construction or reconstruction in inventoried roadless areas (IRAs) and contiguous unroaded areas may be authorized only if the Regional Forester determines a compelling need, until a comprehensive roads inventory and analysis is completed and incorporated into the Forest Plan.

The direction is that roads will not be constructed in:

- Unroaded areas of more than 1,000 acres that are contiguous to Roadless Area Review and Evaluation (RARE II) IRAs or;
- Unroaded areas of more than 1,000 acres that are contiguous to areas inventoried in land and resource land management plans that are contiguous to Congressionally designated wilderness areas or federally administered components of National Wild and Scenic River Systems classified as “Wild”, or;
- Unroaded areas of 1,000 acres which are contiguous to unroaded areas of 5,000 acres or more on other federal lands.

These areas of 1,000 acres or more; must have a common boundary of considerable length, be at least ¼ mile in width, and provide important corridors for wildlife movement or extend a unique ecological value of the established inventoried area.

The Regional Forester must approve exceptions to this rule, and the Regional Forester is the responsible official for the Environmental Impact Statement (EIS) for projects including road construction in contiguous unroaded areas.

### METHODS

This analysis evaluates the effects on the wilderness features considered in Forest planning (FSH 1920) and the roadless characteristics identified in the Roadless Policy (36 CFR 294.11). Table 3.X describes the link between the wilderness features and the roadless characteristics.

Forest Service Handbook (FSH) 1909.12 provides direction on inventorying potential wilderness. Some criteria include:

- Physiography or vegetation dictates that the area is manageable in its natural condition;
- The area is a self-contained ecosystem, such as islands;
- And the area is contiguous to existing wilderness, primitive areas, administration-endorsed wilderness, or roadless areas in other federal ownership.

Old timber harvest units (30 years or more) where logging is not evident (e.g. areas where stumps and skid trails or roads are substantially unrecognizable and clearcuts have regenerated to the degree that canopy closure is similar to surrounding uncut areas) may be included.

Table 3.80 – Wilderness Attributes and Roadless Characteristics

<i>Wilderness Attributes</i>	<b>Roadless Characteristics</b>
<b>Natural Integrity</b> (is the extent to which long-term ecological processes are intact and operating)	High quality or undisturbed soils, water, and air Sources of public drinking water Diversity of plant and animal communities Habitat for threatened, endangered, candidate, proposed, and sensitive species dependent on large areas. Reference landscapes
<b>Apparent Naturalness</b> (means the environment looks natural to most people)	Natural appearing landscapes with high scenic quality
<b>Remoteness</b> (perceived condition of being secluded, inaccessible, and out of the way) and <b>Solitude</b> (personal, subjective value defined as the isolation from the sights, sounds, and presence of others and the development of man)	Primitive, semi-primitive non-motorized, and semi-primitive motorized classes of dispersed recreation
<b>Special Features</b> (unique geological, biological, ecological, and cultural or scenic features) and <b>Special Places</b> (what is it about the area that causes one to visit for pleasure or their livelihood)	Other locally identified unique characteristics Traditional cultural properties and sacred sites
<b>Manageability and Boundaries</b> (ability to manage a roadless area to meet the minimum size criteria (5,000) for wilderness)	No criteria

Unroaded areas were determined by overlaying classified roads and unclassified roads and proposed treatments within the project area. All unroaded areas were identified prior to analyzing whether they met the criteria identified in the Roads Rule, Wilderness Attributes, and Roadless Characteristics. Areas were then analyzed based on these criteria and effects using a qualitative discussion based on amount and type of proposed activities.

The definition for classified and unclassified roads is as follows:

**Classified Road.** Road wholly or partially within or adjacent to National Forest System lands that are determined to be needed for long-term motor vehicle access, including State roads, county roads, privately owned roads, National Forest System roads, and other roads authorized by the Forest Service. (36 CFR 212.1, FSM 7705 – Transportation System).

**Unclassified Roads.** Roads on National Forest System lands that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization. (36 CFR 212.1, FSM 7705 – Transportation System).

The unroaded areas were analyzed for their inherent wilderness attributes and roadless characteristics and their value to the surrounding area as an unroaded area. A rating of high, moderate and low was used to describe the roadless attributes for the existing condition of the unroaded areas. Effects of proposed fuels reduction, temporary roads, slashing and burning in the unroaded areas were assessed.

## **EXISTING CONDITION**

Reference landscapes that have been identified occur in existing inventoried roadless areas and have not been identified in the unroaded portion; these areas will not be discussed further. Many of the unroaded areas within the project area contain narrow strips of land between roads (classified and unclassified) or areas that are “islands” separated from the adjacent roadless area (Basin Creek IRA) by major classified roads and/or private land.

Unroaded areas occur northeast of the Herman Gulch Road, west of Roosevelt Drive, west of the China Gulch Road, and in the southern part of the project area adjacent to the Highland Road.

### **Roadless Area Characteristics and Wilderness Attributes**

**Natural Integrity:** Natural Integrity is the extent to which long-term ecological processes are intact and operating. Impacts to natural integrity are measured by the presence and magnitude of human-induced change to an area. Such impacts include physical developments, recreation developments, domestic livestock grazing, mineral developments, vegetative manipulation, and fire suppression activities.

The overall natural integrity of the unroaded areas is low. Primary past and present influences to the natural integrity of the unroaded areas include livestock grazing and mineral developments, including logging to support mining activities in the Highland Mining District and Butte mines. Numerous heritage properties were identified in archeological surveys conducted in the project area within and adjacent to the unroaded areas (Heritage Existing Condition, pages FEIS 3.287-294). Past timber harvest occurred in the majority of the project area, and unroaded areas during the late 1800s and early 1900s (Vegetation, FEIS page 3.55). Fire suppression, including slashing and burning from timber harvests to support mining, is evident in the project area due to the lack of surface fuels (Fire and Fuels, FEIS page 3.1). Portions of the unroaded areas are adjacent to private land where the landscape has been manipulated from the construction of homes, timber harvests, grazing, and other human-induced activities. Several patented mining claims at the head of the Basin Creek were harvested and are evident to visitors driving along Forest Road 84. All the

unroaded areas are located in grazing allotments except for a small area in the northeast portion of the project area near the end of the Herman Gulch Road. Forest Development roads provide access to private lands and residences as well as serve as a major access onto National Forest lands that bound the unroaded areas.

Portions of unroaded areas have travel management restrictions that close the area to all motorized use.

**Apparent Naturalness:** Apparent naturalness measures the degree to which the impacts documented in natural integrity are apparent to most visitors. The evidence of mineral exploration, patented mining claims, and vegetative manipulation in the area influences the apparent naturalness. The overall rating for unroaded areas is low to moderate.

There is evidence of past timber harvest, although many stumps have deteriorated over time. Fire suppression and associated timber related burning for the past 100 years has created even-aged stand conditions leaving little surface fuels in the unroaded areas. In areas adjacent to private land, the apparent naturalness is reduced due to the presence of structures, pastures, and other constructed features such as roads.

In some of the unroaded areas the topography and vegetation shields the evidence of human presence. The low rating for natural integrity and the low to moderate rating for apparent naturalness indicates the evidence of human modifications of the landscape are not always obvious to the casual observer, or it is disappearing due to natural processes.

Human induced changes within the unroaded areas include livestock grazing, and mining claims. Domestic livestock grazing is not evident throughout the unroaded analysis area because there are portions of grazing allotments in non-use status. Human-induced changes including fences and water developments remain in the allotment areas. There are riparian areas classified as functioning "at-risk" however it is unknown whether the casual observer would notice this. Prospect holes are scattered throughout the area, with one active unpatented mining claim. Patented mining claims are adjacent to some of the unroaded areas and are primarily owned by Butte-Silver Bow to provide public drinking water for Butte. Other patented mining claims are owned privately at the head of Basin Reservoirs, which are adjacent to several unroaded areas.

#### **Remoteness and Solitude:**

Remoteness is the sense of being secluded, inaccessible, or out of the way. Topography, vegetative screening, distance from human impacts such as roads and logging operations (sight and sound), and difficulty of travel all contribute to remoteness. A user's sense of remoteness in an area is also influenced by the presence or absence of roads.

Solitude is a personal, subjective value defined as being isolated from the sights, sounds, and presence of others and from the developments and evidence of humans. Common indicators of solitude are numbers of individuals or parties one may expect to encounter in an area during a day, or the number of parties camped within sight and sound of other visitors. Primitive recreation experiences are closely tied to opportunities for solitude.

The overall rating for the unroaded areas is low to moderate. The mountainous terrain provides some topographic cover or breaks to isolate users from distant sights and sounds for portions of unroaded areas in the northeast part of the project area near Eagles Nest, in the central part of the

project area near the upper reservoir, and in the northwest part of the project area. Current dense vegetation conditions provide more screening than if the landscape were more open. Vegetation and topography provide screening from other users. Other areas provide little opportunities for solitude because of their proximity to private homes and development. There is a moderate opportunity for solitude and remoteness in unroaded areas contiguous to the northeast corner of the Roadless Area because they lack public access except for walk-in and ATV traffic. Opportunities for solitude decrease during hunting season in areas between China Gulch and Roosevelt Drive when more people use the area. The sounds of traffic from forest development and private roads can be heard from many parts of each unroaded area.

There are unroaded areas east of the China Gulch Road (#1526) and patented mining claims owned by Butte-Silver Bow that include Basin Creek Reservoirs. Access to the reservoir is restricted to Butte-Silver Bow employees for the purpose of maintaining structures and facilities at the reservoirs. There may be periodic sounds from these lands associated with maintenance activities that are short in duration.

## Recreation Opportunity Spectrum – Dispersed Recreation

The unroaded areas are classified as rural, roaded natural or semi primitive motorized (Recreation FEIS page 3.264). Roaded Natural is characterized by predominantly natural-appearing landscapes with equal probability of encountering other users and experiencing isolation from other users. Motorized use is permitted. Semi Primitive Motorized is characterized by predominantly natural or natural-appearing landscapes with a low concentration of users and a moderate probability of experiencing isolation from other users. Motorized use is permitted.

Most unroaded areas within the project area are classified as Roaded Natural for both summer and winter ROS classes.

**Special Features:** Within the unroaded area the Continental Divide is a feature along the east boundary, which also serves as the project area boundary. The Basin Creek Research Natural Area is located in the southern portion of the project area west of the Highland Road. Large boulders in many of the areas are part of the Boulder Batholith, which is a special geologic feature.

**Manageability of Boundaries:** Manageability relates to the ability of the Forest Service to manage an area to meet the size criteria for Wilderness consideration (at least 5,000 acres) and maintain the five elements discussed above. The Basin Creek Roadless Area comprises 9,888 acres, of which 230 are privately owned (Deerlodge Forest Plan EIS, Appendix C, pages C-52).

Some unroaded areas west of China Gulch are contiguous to the Basin Creek Roadless Area. The other unroaded areas are separated from the roadless area by private land and classified roads. The distance from the roadless area ranges from ¼ mile to more than three miles. These areas lack the Natural Integrity, Apparent Naturalness, Remoteness and Solitude, and lack of Special Features (except for Boulder Batholith) characteristics to be considered for addition to the roadless area.

Some smaller unroaded areas are contiguous to the eastern boundary of the Basin Creek Roadless Area, but they do not meet the minimum size criteria for the Road Rule, Wilderness Characteristics, or Roadless Policy. Including these areas would not necessarily enhance the existing roadless character because they do not provide wilderness attributes of Natural Integrity, Apparent Naturalness, Remoteness and Solitude, or they have a lack of Special Features except

for the Boulder Batholith. Unroaded areas on the northeast boundary of the Roadless Area and west of the Basin Creek Road have the potential for future inclusion in the roadless area, but the result would be a "cherry stem", making management of the boundary more difficult. Unroaded areas adjacent to the Basin Creek Research Natural Area could be included and would enhance the wilderness attributes to be consistent with the remaining portion of the RNA already in the Roadless Area. There are no treatments proposed in the RNA.

Unroaded areas east of Forest Service Road #84 to the Continental Divide would provide opportunities for Remoteness and Solitude due to the lack of existing public access to the area; however the road separates this area from the roadless area. The Natural Integrity and Apparent Naturalness is moderate, however evidence of past and present human-induced influences is present. Special features of the Area include the Continental Divide and Boulder Batholith.

One unroaded area that is adjacent to private land and Forest Service Road #84 would not meet the criteria for consideration as roadless as well because of its proximity to private land, size constraints, and it is separated from the roadless area by a major forest development road.

Unroaded areas east of the Basin Creek Reservoirs are separated from the existing roadless boundary by private land and are bounded by a classified road identified to remain on the forest transportation system during the roads analysis process that was conducted for the Basin Creek and Blacktail watersheds.

## EFFECTS TO UNROADED AREAS

The environmental consequences of the proposed activities on unroaded areas within the project area were evaluated for each of the four alternatives. The cumulative effects analysis area for the unroaded resource includes the inventoried roadless area or unroaded area that lies outside but adjacent to the project area boundary. As explained in the existing condition section, the potential effects of all proposed activities including timber harvest for fuels reduction, temporary road construction, slashing and burning in the unroaded areas were assessed.

### Direct and Indirect Effects

Direct and indirect effects to unroaded areas can be temporary or long-term. Temporary or short-term effects are the human-induced impacts to the land surface and vegetation that would recover within three to five years after initiation of the activity. Long-term effects are human-caused disturbances that would be evident for more than five years.

### DIRECT AND INDIRECT EFFECTS

**Natural Integrity:** Effects on the natural integrity are measured by the presence and magnitude of human-induced change to an area.

**Alternative 1:** Under this alternative there would be no fuels reduction activities. The risk of crown fire and high intensity surface fire would increase over time. While fire is a natural process, fire suppression activities would continue under Alternative 1. Vegetation succession would continue as would on-site fuel accumulations and increased tree mortality from pine beetle infestations. Information provided in Fire/Fuels, Vegetation, Hydrology, Soils, Air Quality, Wildlife, and Fisheries and Aquatics Resources are applicable to the unroaded areas. There would be no change to the natural integrity of the area. Total acreage of the unroaded area (5,186) would remain the same.

**Alternative 2:** Under this alternative proposed thinning, burning, and tree removal along the Forest/Private boundary would occur in unroaded areas west of Roosevelt Drive, south of Herman Gulch, and west and east of Basin Creek Road north of the reservoirs. There would be short-term effects on these areas from equipment noise, tree slash, vegetation disturbance, more open stands, and smoke. Treatment areas and obliterated road corridors would be visible for the long-term until trees are re-established. Treatments would improve ecosystem health and resiliency, reduce stand densities, and reduce the risk of a large high intensity wildfire for the long-term. Under this alternative approximately eight miles of new temporary roads would be constructed and three miles of existing roads would be maintained to provide access to treatment units. Approximately 1.25 miles of temporary road would be constructed in an unroaded area contiguous to the Basin Creek Inventoried Roadless Area. All newly constructed temporary roads would be obliterated by recontouring, seeding, and covering with slash after use. Natural Integrity would decrease in the short-term, but would slowly return to its pre-treatment condition in the long term, except where roads are recontoured, in which case natural integrity would be improved from the pre-treatment condition. This alternative would reduce the unroaded area by 802 acres from 5,186 acres to 4,384 acres primarily along the Forest boundary. Under this alternative there were no proposed treatments in unroaded areas south and east of the reservoirs and west of the Lime Kiln road therefore, no changes would occur in these unroaded areas.

**Alternative 3:** Under this alternative activities proposed are similar to Alternative 2, but would also treat stands with a crown fire hazard. Unroaded areas that would not have any treatment are areas south of the lower Basin Creek Reservoir to the Continental Divide. Under this alternative 14 miles of new temporary roads would be constructed and four miles of existing roads would be maintained to provide access to treatment units. All newly constructed temporary roads would be obliterated by recontouring, seeding, and covering with slash after use. There would be short-term effects on unroaded areas north and west of Roosevelt Drive and east and west of Basin Creek Road from equipment noise, tree slash, vegetation disturbances, more open stands, and smoke. Effects under this alternative would be similar to Alternative 2 except where roads are recontoured, in which case natural integrity would be improved from the pre-treatment condition. This alternative would reduce unroaded areas by 2,296 acres.

**Alternatives 4 and 5:** Under these alternatives activities proposed are similar to Alternative 2 and 3, but would create strategic locations to initiate direct attack on a fire and to thin trees in areas that most contribute to crown fires and future high intensity surface fires. Treatments are identified for a small unroaded area west of the junction of Forest Service roads 84 and 8520. Unroaded areas that would not have any treatment are areas west of the Lime Kiln road and small areas east of the lower Basin Creek Reservoir. Under these alternatives 13 miles of new temporary roads would be constructed to provide access to treatment units. All newly constructed temporary roads would be obliterated by recontouring, seeding, and covering with slash after use. There would be short-term effects on unroaded areas north and west of Roosevelt Drive and east and west of Basin Creek Road, and to areas east of Forest Service road #84 near the Continental Divide. Effects to Natural Integrity would be the same as for Alternative 3.

**Apparent Naturalness:** This is a measure of importance of visitor's perception of human impacts to the area.

**Alternative 1:** There would be no direct effect on the apparent naturalness of the area. Naturalness may increase in some areas between Roosevelt Drive and China Gulch south to the project boundary; and areas west of Basin Creek Road, but not change in other areas, as there would still be evidence of human-induced impacts from other activities such as livestock grazing and private land activities.

**Alternatives 2, 3, 4, and 5:** Thinning and tree removal would reduce stocking. Burning activities would leave evidence from adjacent black trees. Human activities would be evident to the casual observer in the form of remaining tree stumps and slash (until burned). Over time, the evidence of human activities would diminish and the apparent naturalness of the unroaded areas would slowly return to its pre-treatment condition in the long-term. Temporary road restoration would further diminish evidence of human activities in the long-term.

**Remoteness and Solitude:** This is a perceived condition of being isolated from the sights, sounds, and presence of others and from the developments and evidence of humans.

**Alternative 1:** There could be a long-term effect on remoteness and solitude with the continued fuel buildup and a higher risk of a large, high-severity wildfire. After a wildfire, the unroaded areas would be more open than with harvest activities proposed under the action alternatives. Evidence of humans and their activities would be more visible to the public particularly in areas between Roosevelt Drive and China Gulch south to the project boundary; and areas west of Basin Creek

Road and to a lesser degree in areas in the northeast corner of the project area and areas east of the Basin Creek Road. There would be no change to areas adjacent to Forest Service Road 8492.

**Alternatives 2, 3, 4, and 5:** Under these alternatives remoteness would be diminished as understory trees and vegetation are removed and the sights and sounds of valley and adjacent roads become more apparent. In the short-term the sights and sounds directly associated with the fuels reduction and burning operations would decrease the recreation user's sense of remoteness. In the long-term following the rehabilitation of temporary roads, recreation user's sense of remoteness would return to pre-treatment conditions as vegetation begins to regenerate and access into the project area is reduced. The sense of remoteness would be greatest in areas between Roosevelt Drive and China Gulch where the majority of temporary roads are located.

Solitude would be disrupted from fuels reduction and burning activities for all action alternatives. Solitude would be disrupted to a lesser degree under Alternatives 2 and 3 in unroaded areas near the south end of the project area. After treatment operations were complete, recreation users would generally experience solitude to a greater degree in areas where access would be reduced due to temporary road rehabilitation (China Gulch area).

## Recreation Opportunity Spectrum – Dispersed Recreation

**Alternative 1:** The recreation opportunity spectrum for dispersed recreation would not change under this alternative.

**Alternatives 2, 3, 4 and 5:** Under these alternatives the recreation opportunity spectrum would not change. The majority of the unroaded areas are in roaded natural and rural settings where site modifications are moderate to heavy. In the unroaded areas west of the Basin Creek Road that are classified as semi-primitive motorized the recreation opportunity would not change in the long-term from proposed treatment activities.

### Special Features:

No special features would be affected by project activities for all alternatives.

### Manageability of Boundaries:

**Alternative 1:** The characteristics of the unroaded areas would remain the same, as there would be no treatments under this alternative. Most unroaded areas would not meet the criteria in which to change the boundaries. Manageability of unroaded areas would be more difficult if small areas were added to the inventoried roadless area due to the accessibility via existing roads and trails leading from Roosevelt Drive west toward China Gulch. The current roadless boundary provides the best boundary for the roadless area on the east side because of the private land and physical barrier of the reservoirs.

**Alternatives 2, 3, 4 and 5:** Under these alternatives there may be opportunities to extend the roadless boundary on the southeast boundary to include the entire Research Natural Area (RNA) since no treatments are proposed in the RNA. Fuels reduction activities in areas west of Basin Creek Road would diminish wilderness attributes and roadless character, making these areas unsuitable for inclusion in the roadless area.

## CUMULATIVE EFFECTS

The cumulative effects analysis area for the unroaded resource includes the Basin Creek Roadless Area and the entire project area to the east that lies outside the roadless area boundary. The analysis area was not extended beyond the east boundary of the project area, as the unroaded areas near this boundary would not meet the criteria for inclusion in the inventoried roadless area. There would be no cumulative effects from current or future proposed projects that would affect the wilderness attributes and roadless character of the unroaded areas. The proposed small tracts acquisition in Herman Gulch south of Forest Service Road 8493 would not change the character of the unroaded area as this area currently does not meet the criteria for inclusion in the roadless area. Construction of the Continental Divide National Scenic Trail (CDNST) is expected to be completed in 2008. Portions of the CDNST would be located in unroaded areas as well as the Basin Creek Roadless Area. This project would increase visitor use to these areas and the roadless area. The CDNST would be non-motorized.

Reconstruction of Bear Gulch Trail #108 could cause a slight increase in motorized use in the roadless area.

The grazing allotments are expected to continue and would not change the roadless area characteristics or wilderness attributes that currently exist.

Proposed timber harvests on public and private lands would not change the characteristics of the unroaded areas as the activities would take place on the eastside of the project area, adjacent to unroaded areas already considered unsuitable for inclusion in the roadless area because they are not contiguous to the Basin Creek Roadless Area and lack the wilderness attributes and roadless character to qualify them for inclusion. There would be some short-term effects from the sights and sounds of associated timber removal activities on private land that would diminish the opportunities for solitude in some unroaded areas west of Roosevelt Drive.

There would be no change in the unroaded characteristics in areas east of the lower Basin Creek Reservoir. Public access is limited and the maintenance work associated with the reservoirs would not alter the unroaded characteristics.