

# Travel Analysis Process



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San Juan National Forest

## Columbine Ranger District

Responsible Official: Matthew Janowiak, District Ranger

**Abstract:**

This Travel Analysis Process Report documents a route-by-route analysis of all National Forest System roads and motorized trails on the Columbine Ranger District and recommends the minimum road system needed for public access and forest management. San Juan National Forest, Colorado.

**Location:**

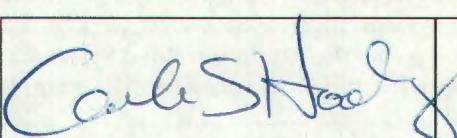
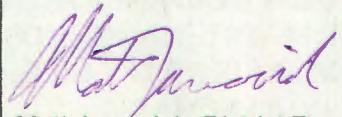
Columbine Ranger District, San Juan National Forest

Archuleta, Hinsdale, La Plata, and San Juan Counties, Colorado

Portions of Townships 34-42 North, Ranges 4-11 West, N.M.P.M.

**For More Information Contact:**

Cam Hooley  
P.O. Box 439  
Bayfield, CO 81122  
970-884-1414

Prepared by:	 Camela S. Hooley, IDT Leader	Date 11/15/11
Reviewed by:	 Matt Janowiak, District Ranger	Date 11/15/2011

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## **LIST OF ACRONYMS**

ATV – All Terrain Vehicle

EA – Environmental Assessment

GIS – Geographic Information System, refers to the Forest Service graphical mapping databases

IDT – Interdisciplinary Team

INFRA – Infrastructure, refers to the Forest Service database with road information.

IRA – Inventoried Roadless Area (2001 Roadless Rule)

MA – Management Area, as defined by a set of guidance in the Forest Plan

ML – Maintenance Level, refers to Forest Service road maintenance levels

MVUM – Motor Vehicle Use Map

NEPA – National Environmental Policy Act

SJNF – San Juan National Forest

TAP – Travel Analysis Process

# EXECUTIVE SUMMARY

This document is the Travel Analysis Process (TAP) report for the Columbine Ranger District Planning area.

In response to the Travel Management Rule, analyses addressing public motorized use for three landscapes on the District have previously been conducted and Decisions have been signed. These three landscapes are: 1.) the HD's Landscape, addressed in The Northern San Juan Basin Coalbed Methane EIS, 2007; the Lakes Landscape Travel Management EA, 2009; and the Beaver Meadows/Sauls Creek Travel Management EA, 2010. While those projects designated motorized roads and trails for **public** motorized use, they did not analyze the entire road system for administrative use. This TAP will generally not re-analyze these recently made decisions, and will instead focus on administrative uses of roads in those landscapes.

Travel planning in the Forest Service was traditionally split between the engineering program for road management and the recreation program for trails management. A revised federal regulation now combines the analysis of the motorized use of trails and roads under the TAP.

The TAP is intended to identify opportunities for a National Forest transportation system to meet current or future management objectives, and to provide information that allows integration of ecological, social, and economic concerns into future decisions. The TAP is tailored to local situations and landscape/site conditions as identified by forest staffs.

The outcome of the TAP is a set of science-based recommendations for the forest transportation system, and is intended to inform subsequent National Environmental Policy Act (NEPA) processes, allowing individual projects to be more site-specific and focused, while still addressing cumulative impacts. The TAP neither produces decisions nor allocates National Forest System lands for specific purposes; it merely provides the analytical framework from which to make recommendations that may then be examined in the NEPA process. It describes current conditions, risks, benefits, opportunities (needs for change), and priorities for action. Future NEPA analysis that includes public involvement may carry forward, reject or change the recommendations in this report, and provides the basis for making specific transportation system related decisions.

## Summary of Issues

Issues were identified using previous public involvement and internal Forest Service input.

- Insufficient funding for maintenance of the existing system of roads and motorized trails.
- Access needs, including motorized recreation use, general recreation access and connectivity, access for forest management, access to private lands, and emergency access.
- Environmental impacts, including impacts to water resources, soil and geologic hazards, fragmentation and wildlife security, impacts to vegetation (particularly invasive species), and impacts to cultural resources.
- Social impacts, including impacts to recreationists preferring to recreate in areas not directly under the influence of motorized use.
- Inappropriate jurisdiction of roads.

## Analysis Performed

A risk-benefit assessment was used to rank system roads and motorized trails based on risks (road or trail condition, impacts on water resources, etc.) and benefits (recreational opportunities, forest management access, etc.). The categories chosen to rank risk-benefit were based on issues identified in Step 3 and by criteria set by the members of the Interdisciplinary Team (IDT) in Step 4. Based on the risk-benefit assessment, the IDT identified roads that were “high value” to keep on the transportation system and those that were “low value” or not needed. This has resulted in the development of recommendations for what should constitute the District’s minimum road system, as well as other recommended changes to the District’s transportation system.

## Key Results and Findings

Through the Travel Analysis Process the IDT ranked routes based on their *risks* to natural, social, and cultural resources and their *benefits* to recreation use, forest management access, and emergency access.

- There was no need identified to construct any new road for long-term forest management.
- Approximately 183 miles of system roads are recommended to be removed from the system because they are not needed for long-term forest management. These are primarily roads that are already closed to public motorized use.
- There was a need identified to add 31 miles of existing non-system road into the system for long-term forest management and public use.
- These recommendations would result in a **net decrease in system roads of approximately 152 miles, for 572 total system miles in the landscape**. These recommendations break down as follows:
  - Of roads shown on the system as open to public motorized use: A net decrease of approximately 13 miles is recommended to be removed from the system.
  - Of administrative-use roads *not* open for public motorized use: A net decrease of approximately 139 miles is recommended to facilitate effective long term forest management. Changes to these roads will not affect public motorized uses.
- The recommendations include a net decrease of motorized trail of approximately 0.3 miles.

Step 5, Describing Opportunities and Setting Priorities, and maps in Appendix D and E show the TAP recommendations. A complete list of the individual rankings and recommendations for each road and motorized trail can be found in Appendix F.

## How the Report will be Used

The Travel Analysis Process report for the Columbine Ranger District will assist in addressing issues related to the road and motorized trail system. It will be used to inform future analyses, decisions, and specific actions.

# INTRODUCTION

## Travel Management Rule

In 2005, the U.S. Forest Service adopted the Travel Management Rule. The rule changes the way that the Forest Service regulates motor vehicles on National Forests and Grasslands. The Travel Management Rule requires that National Forests identify their minimum road system and designate roads, trails, and areas for motor vehicle use. This means that after the designation process is complete, the public will be able to operate motor vehicles only on the roads, trails, and areas that have been designated. The designations will not only list what roads, trails, and areas can be used, but also what types of vehicles can be used, and what time of year they can be used.

There are some exceptions to these designations, which include persons with a Forest Service permit specifically authorizing the otherwise prohibited act, any Federal, State or local law enforcement officer, or member of an organized rescue or firefighting force engaged in the performance of an official duty, and Forest Service administrative use.

The object of the Travel Management Rule is not to unnecessarily limit access to the Forest, but to protect the Forest from unmanaged use. The Forest Service must strike a balance in managing all types of recreational activities. To this end, a designated system of roads, trails, and areas for motor vehicle use, established with public involvement, will enhance public enjoyment of the National Forests while maintaining other important values and uses on National Forest System lands. The Travel Management Rule works to manage current use so future generations can continue to enjoy access to our National Forest System lands.

The travel management regulations (36 CFR 212.5(b)) require that the Forest Service “identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands”; and to identify the roads that “are no longer needed to meet forest resource management objectives and that, therefore, should be decommissioned or considered for other uses, such as for trails”.

## Travel Analysis Process

Before the Forest Service adopted the Travel Management Rule, the Roads Analysis Process described in the Forest Service Manual (7712.1) and publication *FS-643, Roads Analysis: Informing Decisions about Managing the Transportation System* was used. A Roads Analysis Report analyzing Maintenance Level (ML) 3, 4, and 5 roads across the San Juan National Forest was produced in July 2006. Direction for completing the TAP is provided in Forest Service Handbook 7709.55 Chapter 20. This TAP Report revises and updates the San Juan National Forest Roads Analysis Report, including adding ML 1 and 2 roads.

The Travel Analysis Process consists of six steps which are as follows:

- Step 1: Setting Up the Analysis
- Step 2: Describing the Situation
- Step 3: Identifying Issues
- Step 4: Assessing Benefits, Problems, and Risks
- Step 5: Describing Opportunities and Setting Priorities
- Step 6: Reporting

Travel Analysis is an iterative, not a one-time, process. When conditions change, additional analysis may point to the need for revisions in the recommendations. In fact, a travel management route designation process will likely result in additional information and, perhaps, decisions that will then be reflected in changes to the recommendations in this report.

This TAP does not address non-motorized trail opportunities; it is focuses only on the motorized road and trail system. This TAP also does not address over-snow motorized use.

The TAP is not a decision process. Travel Analysis provides the analytical framework from which to make recommendations that may then be examined in the NEPA process, which provides the basis, including formal public involvement, for making decisions.

### **Forest Plan Direction**

The Forest Plan for the San Juan National Forest establishes programmatic direction for the management of National Forest System lands.

The San Juan National Forest is broken into discrete Management Areas. Management Areas (MA) provide management direction by emphasizing a particular resource and identifying associated guidelines (prescriptions) for management activities. The following management areas are located in on the Columbine District: 1A, 1B, 2A, 2B, 3A, 4B, 5B, 6B, 7E, 9A, 1.11, 1.12, 1.13, 10C, and 10D. Applicable Forest-wide transportation General Direction statements as well as transportation related direction for each management area are located in Appendix A.

### **Compliance with Forest Plan Direction**

Development of the minimum road system and designation of roads and motorized trails recommended in this report are in compliance with Forest Plan direction.

# STEP 1. SETTING UP THE ANALYSIS

## 1.1 Purpose

The purpose of this step is to:

- Identify the analysis area
- State objectives
- Identify the roles of technical specialists
- Develop a process plan and an analysis plan
- Address information needs

## 1.2 Analysis Area

The analysis area is the Columbine Ranger District which is approximately 763, 700 acres in size. Approximately 90% of the District is National Forest System lands, the remaining acres are private, state, tribal, and Bureau of Reclamation lands within the boundaries of the National Forest.

## 1.3 Objectives

The objective of this analysis is to provide scientific information for managing roads and motorized trails that are safe and responsive to public needs and desires, conform to the Forest Plan, are determined to be needed to meet resource and other management objectives, minimize adverse environmental impacts, and better reflect long-term funding expectations. All existing system roads and motorized trails within the analysis area are included in this Travel Analysis Process report. Not all non-system routes were analyzed in this TAP. Only non-system routes that were considered for addition to the transportation system are included in this TAP.

The TAP is intended to be a broad scale comprehensive look at the transportation network. The main objectives of the TAP are:

- Balance the need for access while minimizing risks by examining important resource, social, and economic issues related to roads and motorized trails;
- Furnish maps, tables, and narratives that display transportation management opportunities and strategies that address future access needs and environmental concerns;
- Identify the need for change by comparing the current motorized system to the desired condition; and
- Make recommendations to inform travel management decisions in subsequent NEPA documents.

## 1.4 Specialist Roles

The Interdisciplinary Team (IDT) members and their primary discipline(s) or function are listed below:

Cam Hooley – NEPA/Planning

Dave Crawford – Timber

Nancy Berry – Travel Management

Jed Botsford - Recreation

Pete Merkel – Engineering

Jared Whitmer – Range

Jeff Redders – Ecology  
Skip Fischer – Wildlife  
Hon Schlapfer – Fire, Fuels, Emergency Access  
Eric Herchmer – Hydrology  
Amy Wise – Archeology  
Jessie Ramirez – GIS

## **1.5 Analysis Plan**

The IDT followed these steps in order to carry out the analysis:

- Review and assemble existing data, including the San Juan National Forest Roads Analysis Report, and the recent Travel Management decision.
- Verify accuracy of system road and motorized trail locations on maps.
- Identify discrepancies between on-the-ground conditions, the Forest's INFRA database, geographic information system (GIS) database, and current management direction. Document and correct where possible these conditions and data discrepancies.
- Where possible, verify the current conditions of routes, including safety issues, surface type and environmental issues.
- Identify preliminary access and resource issues, concerns, and opportunities.
- Identify additional issues, concerns, and opportunities through previous public involvement and internal resource staffs.
- Perform the analysis concurrently with other plans and projects ongoing on the District.
- Recommend changes to the road and motorized trail system based on the findings of this TAP to develop the minimum road system and improve the management of forest resources relating to the transportation system.

## **1.6 Information Needs**

Information needs were identified and the IDT worked to gather as much information as available about the following:

- Accurate location and condition of all system roads and motorized trails within the analysis area. A complete inventory of non-system routes was not required; however some of these routes were inventoried at the District's discretion.
- Maintenance responsibility.
- Assessment of previous and current opportunities, problems and risks for all routes in the analysis area.
- Soil, hydrology, vegetation, invasive species, wildlife, and cultural resources and areas where they are being impacted by motorized use.
- Areas of special sensitivity, resources values, or both.
- Public access and recreational needs and desires in the area, including access for nearby landowners.
- Conflicts among uses, public access, user safety, and accessibility.
- Anticipated future levels of motor vehicle use and changes in motor vehicle technology.
- Transportation needs for Forest management activities.
- Transportation investments necessary to meet land management plan objectives.
- Current observed road and motorized trail uses.
- Economic costs and benefits.

- Road and trail management objectives.
- Best management practices.
- Forest Plan and other management direction.
- Agency objectives and priorities.
- Interrelationship with other governmental jurisdictions for roads.
- Applicable federal, state, and local laws.
- Public and user group values and concerns.
- Forest-wide and project level road analyses.
- Previous administrative decisions regarding travel management.

## STEP 2. DESCRIBING THE SITUATION

### 2.1 Purpose

The purpose of this step is to:

- Describe the existing management direction
- Describe the existing road and motorized trail system

### 2.2 Road Management

The transportation system on the San Juan National Forest (SJNF) serves a variety of resource management and access needs. Most roads on the SJNF were originally constructed for commercial access purposes which included grazing, timber, and mineral extraction. Other roads resulted from construction of gas pipelines, power transmission corridors, and other activities. Over the past 100 years, an extensive road network was developed that continues to serve commercial, recreation, and administrative purposes and provide access to private lands located within the Forest.

National Forest System Roads are managed in accordance with the Road Management Objectives established for the each road. These objectives stipulate the uses for which the road was designed and currently managed, maintenance levels, target maintenance frequencies and tasks, and other information.

National Forest System Roads are assigned a specific maintenance level that is based on a set of criteria which describes how each individual road will be maintained. These criteria include considerations for resource protection, season of use, user comfort and safety, travel speed, traffic volume and type, and surface type.

Discussions about roads in this TAP report will use the Forest Service Maintenance Level (ML) terminology which includes ML 1-5:

- ML 1, roads closed to public, usually native surface;
- ML 2, high clearance vehicles, usually native surface;
- ML 3, suitable for passenger car travel, usually gravel surface;
- ML 4, suitable for passenger car travel, provides comfort at moderate speeds), usually gravel surface; and
- ML 5, paved, or chip sealed.

Maintenance levels 1-5 (operational and objective) are described in more detail in Forest Service Handbook (FSH) 7709.59, Section 62.32, and in Appendix B.

### 2.3 Motorized Trail Management

Many of the Columbine District's trails evolved over the past 100 years through repeated use by grazing permittees and other forest users and visitors, while some were designed and constructed by Forest Service employees or contractors. Over time, a system of trails was established and formally administered by the Forest Service.

National Forest System Trails are managed in accordance with the Trail Management Objectives established for the trail. Trail Management Objectives stipulate the uses for which the trail was designed and currently managed, prohibited uses, seasons of use, target maintenance frequencies and tasks, trail class, and design parameters. Trail classes range from 1 through 5, with 1 being the most undeveloped and 5 being the most highly developed. Target design parameters and maintenance

frequencies are based on the trail class and level of development. Maintenance tasks include trail opening, logging out, brushing, tread drainage, and tread maintenance.

Designed and managed uses for standard terra (i.e., summer) trails are as follows: hiker/pedestrian, pack and saddle, bicycle, motorcycle, and ATV. A trail is considered to be designed for one use (the highest use based on the intensiveness of management required, with ATV trails being the most intensive and hiker/pedestrian being the least), though it may be *managed* for multiple uses (e.g., a trail with a designed use for ATVs may be open and managed for all other uses).

It should be noted that following the implementation of the Travel Rule, trail terminology relating to accepted and prohibited uses was refined and differs slightly from the terminology used in Trail Management Objectives. Motorized trails on the San Juan National Forest may be designated as open to all motor vehicles 50 inches or less in width (which includes ATVs and motorcycles), or they may be designated as open only to motorcycles (referred to as “single track” motorized trails).

## 2.4 Geographic Information System and Corporate Database

Two of the tools used to manage these routes are 1) a geographic information system (GIS), and 2) a corporate database known as INFRA. Each of these computer-based tools contains slightly different information. The GIS database spatially displays the routes and other information across the landscape. Using GIS, transportation routes may be overlaid with streams, wildlife areas, land ownership, and a host of other information. The INFRA databases include a variety of survey-based information about each route, such as route number, length, beginning and ending locations, ownership, ranger district, surface type, and other similar data. The database also includes features along the route, such as culvert pipes, switchbacks, signs, waterbars, cattle guards, and gates. The INFRA database also includes maintenance information.

The INFRA and GIS databases are working tools to help manage the transportation system. Over the years, they are being refined. Not all ML1 or non-system roads have been field-verified at this point in time, but as problems or mistakes are discovered, corrections are made in accordance with NEPA requirements. The District is continually working to ensure that the GIS and INFRA databases match what is actually on the ground.

In a three year effort beginning in 2006, engineering employees field-verified 1,058 miles of ML2 roads across the San Juan National Forest, mapping current alignments with Geographic Positioning System units and comparing the data with INFRA and GIS. They found that 20% of the roads Forest-wide either followed a different alignment, had incorrect lengths, or had the wrong maintenance level assigned to them. For the Columbine Ranger District, 48 % of the roads followed a different alignment or had incorrect lengths; 35% had wrong maintenance levels. Minor discrepancies were corrected in the databases while the more significant changes were addressed with District staff members on a case-by-case basis following NEPA requirements. In addition, Road Management Objectives were reviewed or developed for all ML 2-5 roads. These are on file at the Engineering Office at the San Juan Public Lands Center, Durango, Colorado.

## 2.5 Existing Direction

Travel analysis is focused on identifying needed changes to the forest transportation system. Identifying the existing direction is an important first step. In general terms, the existing direction includes how the National Forest System roads and trails are currently managed for motor vehicle use. Restrictions, prohibitions, and closures on motor vehicle use are also part of the existing direction.

The Columbine Ranger District published a Motor Vehicle Use Map (MVUM) in September, 2010. This map contains the existing direction for motor vehicle use on the district. All motor vehicle use (excluding over-snow travel) is limited to designated roads and trails shown on the MVUM. There are no designated motorized *areas*. The MVUM for the Columbine Ranger District is available on the web at: <http://www.fs.usda.gov/goto/sanjuan/home>.

States, counties, other Federal agencies, and private entities may control roads that cross Forest land by obtaining easements from the Forest Service. Roads that have easements issued to other entities are generally not managed as National Forest System Roads.

## 2.6 Existing Condition

Table 1 lists the existing number of miles of system roads by maintenance level and system motorized trails by use classification on the Columbine Ranger District.

*Table 1. Miles of System Roads and Motorized Trails on the Columbine Ranger District*

Road Maintenance Level	Miles
Maintenance Level 1	397
Maintenance Level 2	177
Maintenance Level 3	124
Maintenance Level 4	26
Maintenance Level 5	<1
<b>Total System Roads</b>	<b>724</b>
Motorized Trails	
Open to Vehicles <=50" wide	66
Single-Track Motorized Trails	45
<b>Total Motorized Trails</b>	<b>111</b>

Most roads on the Columbine Ranger District are seasonally closed to all motor vehicles during the winter and spring seasons (except snowmobiles operating on snow).

Initial reviews of the roads GIS layers and data base revealed a number of instances where maintenance levels appeared to be inconsistent, and where some roads were not mapped correctly, or were not included at all in the GIS layer or INFRA database.

Not all non-system roads or routes were analyzed in the TAP. Only non-system roads that were considered for addition to the minimum road system were carried forward for analysis. Other non-system roads and motorized trails will be analyzed as necessary on a case-by-case basis in future analyses.

## Existing Road Density

The Forest Plan provides a desired level of road density for many of the Management Areas (MA). These mile-per-square-mile guidelines reflect the management emphasis of each particular area. The guidelines focus on roads open to public use only. The Columbine District road densities are one indicator of how well the area is contributing to Forest Plan objectives.

*Table 2. District- Wide Road Density by Management Area*

MA	Emphasis	Forest Plan Density Guideline (mi/sq mile)	District- Wide Density
1A	Existing and Proposed Developed Recreation Sites	Not specified	Not mapped
1B	Winter Sports Sites	Not specified	1.5
2A	Semi-primitive Motorized Recreation	See below	Not Calculated
2B	Rural and Roaded Natural Recreation	0.5-1	1.0
3A	Semi-primitive Non-motorized Recreation in Roaded or Non-roaded areas	Not specified	0.1
4B	Habitat for Management Indicator Species	0.5-1	0.1
5B	Big-Game Winter Range in Forested Areas	0-0.5	0.2
6B	Livestock Grazing	0.5-1	0.6
7E	Wood-Fiber Production and Utilization	1-3	1.2
9A	Riparian Area Management	Not specified	Not mapped
10C	Special Interest Areas – Falls Creek	Not specified	0.0
10D	Wild and Scenic Rivers	Not specified	9.3
1.11	Wilderness – Pristine	Not specified*	0.0
1.12	Wilderness – Primitive	Not specified*	0.0
1.13	Wilderness – Semi-primitive	Not specified*	0.0

\*Use of motor vehicles is prohibited in the Weminuche Wilderness, South San Juan Wilderness, and Piedra Area.

The road density guideline for MA 2A (Semi-primitive Motorized Recreation) is, “Do not exceed an average open local road density of 1 mile/square mile in fourth order watersheds”. There are several areas of MA 2A on the Columbine District, including lower Missionary Ridge, upper Junction Creek, upper side slopes of La Plata Canyon, around Haviland Lake, and the Columbine Lake/Black Bear Pass area. Density in this MA was not calculated because there is no fourth order watershed GIS layer available at this time. This TAP recommends the reduction in motorized roads in most of these areas, except La Plata Canyon. It is anticipated that when GIS analysis is completed, that District-wide road density in this MA will fall below the guideline.

Initially, the road density for MA 10D appears high; however, this is because there is only one small area of 10D on the Columbine District with one major access road traversing through it, which creates an artificially high road density calculation. This area is along the Piedra River with the Lower Piedra Road passing through it. There is no Forest Plan guideline specified for 10D.

Current open road densities are within or below Forest Plan desired levels in all management areas, where the density has been calculated.

**Motorized Trail Density**

Direction in the Forest Plan addressing motorized trail density is sparse, with only two management areas containing any specific standards and guidelines. These are as follows:

*Management Area 2A (Semi-Primitive Motorized Recreation Opportunities)*

- Do not exceed an average motorized trail density of 4 miles per square mile on fourth-order watersheds.
- Do not exceed an average motorized trail density of 2 miles per square mile in nonforested areas of fourth-order watersheds.

There are currently two segments of motorized trail in Management Area 2A on the Columbine District. These are segments of the Clear Creek and Columbine Lake trails, both of which are recommended to be removed from motorized use in this TAP. One currently ML1 road, Neptune Creek, approximately 3.5 miles, is proposed to be converted to a motorized trail in 2A. This segment is in a forested area, and would be well below the Forest Plan direction for density.

*Management Area 2B (Rural and Roaded-Natural Recreation Opportunities)*

- On all nonforested areas, motorized trail and local road density is not to exceed 4 miles per square mile.

There are 9.7 miles of segments of motorized trail in Management Area 2B on the Columbine District. 1.4 miles are the part of the Columbine Lake trail, which is recommended to be made non-motorized in this TAP. The other segments are part of the Pinkerton-Flagstaff trail, and trails in Sauls Creek. All segments are within generally forested areas, so the standard and guideline does not apply.

Motorized trail densities on the Columbine District are well below the limits established for these two Management Areas.

## STEP 3. IDENTIFYING ISSUES

### 3.1 Purpose

The purpose of this step is to:

- Identify key issues related to management of the existing road and motorized trail system.

### 3.2 Key Issues

The key issues were identified using recent public involvement and comments for travel management and Forest planning that addressed the Columbine Ranger District transportation system as well as input from Forest Service personnel. These issues are listed in random order and do not represent a hierarchy of importance.

#### 1. Insufficient funding for maintenance of the existing system roads and motorized trails

Inadequate maintenance reduces access for National Forest users and management, accelerates soil erosion by concentrating surface water flow, and affects water quality and aquatic habitat by increasing sediment into water courses and intermittent drainages. Funding for road and trail maintenance is not adequate to maintain the existing system and perform needed monitoring. (See Appendix B for more information on road and trail maintenance costs.)

#### 2. Access Needs

Motorized vehicle access, of various types, is needed in order to efficiently manage the Forest, provide recreational opportunities, and provide access for emergency response.

a. **Motorized Recreation Use:** Roads and trails are used for various types of motorized recreation including driving for pleasure, 4-wheel driving, All Terrain Vehicle (ATV) and motorcycle riding, and snowmobile riding.

b. **Recreation Access/Connectivity:** Roads and trails are often used to provide motor vehicle access to recreational activities occurring off roads, such as hiking, camping, hunting, firewood gathering, rock collecting, etc. Roads also can provide important connectivity to other roads and motorized trails.

c. **Forest Management:** Roads are used for access to forest management activities such as fuels reduction, timber harvest, grazing, mining, oil and gas development, noxious weed treatment, etc. Motorized trails are used for these same purposes to a lesser degree.

d. **Emergency Access:** Roads and motorized trails facilitate responding to emergencies such as fire suppression and search and rescue.

e. **Need to obtain rights-of-way and access:** Some Forest roads that cross private property do not have legal rights-of-way. Public and administrative access may be barred in the future if legal rights-of-way are not acquired, or database errors need to be rectified. Conversely, private landowners may need to obtain authorization to use Forest system or non-system roads to access their property.

### 3. Environmental Impacts

There are concerns about damage from motor vehicle use, including:

- a. **Impacts to water resources:** Erosion and sediment transport off roads and trails in areas with perennial, intermittent, and ephemeral stream channels or wetlands may impair the ecological and hydrologic function of drainage channels;
- b. **Soil and Geologic Hazards:** Portions of the analysis area have soils that erode easily. These soils are extremely susceptible to compaction, rutting, gullying, and development of mud holes. Some roads and trails are susceptible to mass movement, such as landsliding and slumping.
- c. **Fragmentation and wildlife security:** Motorized routes may fragment wildlife habitat, create barriers to movement, reduce wildlife habitat capability to sustain populations, and increase areas of disturbance.
- d. **Impacts to vegetation:** Motor vehicle use may cause the spread of invasive species by dispersing seed sources.
- e. **Impacts to cultural resources:** Motorized routes and use of these routes may impact cultural resources.

### 4. Social Impacts (motorized trails only)

The use of motor vehicles on trails is viewed by some non-motorized trail users as disruptive to their recreational pursuits and experiences. Providing recreation opportunities for motorized users that minimize these types of user group conflicts is a challenge for land managers and planners.

### 5. Inappropriate Jurisdiction (roads only)

Portions of some roads may not be under the appropriate jurisdiction and would be better managed within a county road system, particularly where they provide access to large private inholdings and developments. Additionally, some roads currently considered system roads are on private lands and there is no need for administrative or public use of the road.

## STEP 4. ASSESSING BENEFITS, PROBLEMS, AND RISKS

### 4.1 Purpose

The purpose of this step is to:

- Describe the analysis process
- Describe the criteria and rankings used in the risk and benefit analysis
- Summarize the results of the risk and benefit analysis

### 4.2 The Analysis Process

The risk and benefit criteria categories (Table 3) were developed by considering the issues from Step 3, the assessment of benefits, problems, and risks contained in the San Juan National Forest Roads Analysis Report, and additional knowledge and information from the Forest staff. The questions and answers for assessing the benefits, problems, and risks of the existing and potential road system contained in Step 4 of the San Juan National Forest Roads Analysis Report were reviewed and found to be applicable to this TAP and are not repeated in this document. Each road and motorized trail was then evaluated against the identified risks and benefits.

### 4.3 Criteria and Rankings Used in the Risk and Benefit Analysis

Roads and motorized trails on the Columbine Ranger District provide access for many uses and users. They also provide the infrastructure to facilitate motorized recreation and Forest management. However, their presence has possible negative effects on the natural and cultural resources of the Forest, and maintenance and repair costs in excess of recent budgetary allocations. The IDT identified the following risks and benefits of motorized routes as the most important resource issues for managing the transportation system on the Columbine Ranger District.

*Table 3: Motorized Route Risk and Benefit Categories*

ROAD RISKS	ROAD BENEFITS
<ul style="list-style-type: none"> <li>• Road Condition</li> <li>• Water Resources</li> <li>• Soil/Geologic Hazards</li> <li>• Wildlife Resources</li> <li>• Ecological Resources</li> <li>• Invasive Species</li> <li>• Cultural Resources</li> <li>• Jurisdiction (roads only)</li> <li>• Right-of-Way Needed (roads only)</li> <li>• Social Conflicts (trails only)</li> </ul>	<ul style="list-style-type: none"> <li>• Motorized Recreation Use</li> <li>• Recreation Access/Connectivity</li> <li>• Range Management Access (roads only)</li> <li>• Timber Management Access (roads only)</li> <li>• Fuels Management Access (roads only)</li> <li>• General Forest Management Access (trails only)</li> <li>• Emergency Access</li> </ul>

The IDT evaluated each road and motorized trail for each of these risks and benefits and assigned a numerical value for each category. This was based on field knowledge of the routes, data contained in GIS layers, professional knowledge of the routes, and impacts and benefits to the various resources and uses. High risks/benefits were assigned a numerical value of three (3), medium risks/benefits were assigned a numerical value of two (2), and low risks/benefits were assigned a numerical value of one (1). Where cultural resource risk was rated as “unknown”, this category was not assigned a numerical value. Assignment of a High (3), Medium (2), or Low (1) rating for each risk and benefit category generally followed the guidelines presented below.

*Table 4: Road and Motorized Trail Risk and Benefit Guidelines*

Risks		
Issue	Rating	Criteria Guidelines
Condition / Maintenance and Repair Costs	High	High levels of deferred maintenance and repair needs as based on the presence of three or more of the following conditions: washboarding; surface deterioration; landslides; roadbed slumping; slope raveling; drainage problems; rutting or gullyng; mud holes; poor condition structures or culverts; and design deficiencies.
	Medium	Moderate levels of deferred maintenance and repair needs as based on the presence of two or more of the above conditions.
	Low	Little or no deferred maintenance and repair needs; no existing damage or one of the above conditions present and condition fair or better.
Water Resources	High	Close proximity to surface water, history of drainage problems or sediment being transported off road.
	Medium	Some buffer between route and surface water, some history of drainage problems or sediment being transported off route.
	Low	Distant from surface water, minimal history of drainage problems or sediment being transported off route.
Soil/Geologic Hazards	High	Forest Service knowledge of road damage from landslides, slumps, mudflows, rockfall, retaining wall failure, gullyng, soils that are unstable or extremely susceptible to erosion.
	Medium	Knowledge of minor road damage from soil or geologic hazards.
	Low	No knowledge of damage from soil or geologic hazards.
Wildlife Resources	High	High levels of motorized and non-motorized use on roads in highly roaded area.
	Medium	Moderate levels of motorized and non-motorized use on roads in moderately roaded area.
	Low	Low levels of motorized and non-motorized use on roads in minimally roaded area.

Risks		
Issue	Rating	Criteria Guidelines
Ecological Resources	High	High road densities, high levels of motorized use, and high concentrations of sensitive ecological resources.
	Medium	Moderate road densities, moderate levels of motorized use, and moderate concentrations of sensitive ecological resources.
	Low	Low road densities, low levels of motorized use, and low concentrations of sensitive ecological resources.
Invasive Species	High	Numerous known populations of noxious weeds in vicinity of route corridor.
	Medium	Some known populations of noxious weeds in vicinity of route corridor.
	Low	No or few known populations of noxious weeds in vicinity of route corridor.
Cultural Resources	High	Known historic properties within road prism or in vicinity of corridor.
	Unknown	Area of unknown archaeological potential, little or no archaeological survey and/or the presence of "needs data" sites.
	Low	No known or located historic properties within prism or in vicinity of corridor where archaeological potential has been largely assessed (through Class III archaeological inventory) or Level 3 or higher road where cultural resources are likely to be compromised.
Jurisdiction (roads only)	High	Access to multiple private parcels or large private development(s).
	Medium	Access to few private parcels.
	Low	No private access.
Rights-of-Way (roads only)	High	Multiple or complex right-of-way issues
	Medium	Few or non-critical rights-of-way issues.
	Low	No rights-of-way issues.
Social Conflict Potential (trails only)	High	Heavy amount of non-motorized trail use and/or known user group conflicts
	Medium	Moderate amount of non-motorized trail use and/or known user group conflicts
	Low	Low amount of non-motorized trail use and/or known user group conflicts

Benefits		
Issue	Rating	Criteria Guidelines
Motorized Recreation Use	High	Roads that are frequently used for motorized recreation activities (includes driving for pleasure, 4X4, ATV, motorcycle, or snowmobile use).
	Medium	Roads that are occasionally used for motorized recreation activities.
	Low	Roads that are rarely or never (ML1 roads) used for motorized recreation activities.
Recreation Access/Connectivity	High	Roads that provide access to numerous or high value recreation opportunities and/or connectivity to many other motorized routes.
	Medium	Roads that provide access to some recreation opportunities and/or connectivity to some other motorized routes.
	Low	Roads that provide access to limited recreation opportunities and do not provide connectivity to other motorized routes.
Range Management Access (roads only)	High	Roads that provide access to numerous range improvement, or large areas.
	Medium	Roads that provide access to several range improvement, or moderately-sized areas.
	Low	Roads that provide access to few range improvement, or only small areas.
Timber Management Access (roads only)	High	Roads that provide access to areas that periodically undergo management in multiple timber program areas (e.g. timber, biomass, forest products, forest restoration, primarily within the suitable timber base).
	Medium	Roads that provide access to areas that infrequently have active management in more than one resource program area.
	Low	Roads that provide access to areas that rarely have active management or serve only one resource program area.
Fuels Management Access (roads only)	High	Roads that provide numerous opportunities for repeat access and prescribed fire control lines.
	Medium	Roads that provide some opportunities for repeat access and prescribed fire control lines.
	Low	Roads that provide few opportunities for repeat access and little functionality as prescribed fire control lines.
Forest Management Access (trails only)	High	Roads/trails that provide access to areas that periodically undergo management in multiple resource program areas (e.g. timber, range, fuels, fire, minerals, law enforcement etc.).
	Medium	Roads/trails that provide access to areas that infrequently have active management in more than one resource program area.
	Low	Roads/trails that provide access to areas that rarely have active management and serve only one resource program area.
Emergency Access	High	Roads that are frequently used or will likely be needed for emergencies (such as fire suppression, search and rescue, etc.).
	Medium	Roads that are infrequently used or needed for emergencies.
	Low	Roads that are rarely used and will likely not be needed for emergency access.

The same risk and benefit categories were used for all roads, regardless of maintenance level. This was done for simplicity and consistency. However, it is apparent that the benefits for open and closed roads are different. The vast majority of closed roads rated as low for motorized recreation use and recreation access/connectivity because these opportunities are generally not available on closed roads. Many of the closed roads also rated low for emergency access since they may not be readily available for motor vehicle use (i.e. overgrown or have down logs on them). This resulted in a large percentage of the ML1 roads rating as low benefit. The benefit categories could have been changed so as to better reflect the benefits of ML1 roads (such as by listing each forest management program area separately), but it was determined that it was beneficial to see all roads on the district rated with the same criteria so that they can be more directly compared to each other.

This risk and benefit analysis was based on GIS layers available at the time this analysis was being conducted. A spreadsheet was created displaying each road and motorized trail and each risk and benefit category. Once a numerical value was assigned to each category, an average was calculated for each route that is represented by the “overall risk (or benefit) ranking”. Those rankings in the upper 1/3 (with a numerical value of 2.34 or greater) were assessed as “High”, those rankings in the middle 1/3 (with a value between 1.67 and 2.33) were assessed as “Medium”, and those rankings in the middle 1/3 (with a value less than 1.67) were assessed as “Low”. These categories were calculated mathematically and did not consider the severity of the impact beyond the guidelines listed above. In the “Recommendations” column in Appendix F, the IDT recorded their recommendation for any changes to the road. The “Comments” column was used to note additional information about the road. The “Comments” column was also used to note potential future changes to a route where current information is inadequate to definitively make a recommendation.

For more detailed information on the rationale and methodology employed by specialists in the evaluation process, see Appendix C.

#### **4.4 Results of the Risk and Benefit Analysis**

Appendix F contains the Risk/Benefit Analysis spreadsheet, which list the risks and benefits associated with each motorized route on the Columbine Ranger District.

This analysis resulted in nine possible risk/benefit pair categories: High Risk/High Benefit; High Risk/Medium Benefit; High Risk/Low Benefit; Medium Risk/High Benefit; Medium Risk/Medium Benefit; Medium Risk/Low Benefit; Low Risk/High Benefit; Low Risk/Medium Benefit; and Low Risk/Low Benefit.

Table 5 lists the current miles of roads by maintenance level and motorized trails that fell within each risk/benefit category.

Table 5. Miles of Road and Motorized Trail in each Risk/Benefit Category

Risk/Benefit Ratio	Current Miles	Risk/Benefit Ratio	Current Miles
<b>ML1 Roads</b>		<b>ML4 Roads</b>	
High Risk/Low Benefit	5.5	High Risk/Low Benefit	0
High Risk/Medium Benefit	1.4	High Risk/Medium Benefit	0
High Risk/High Benefit	0	High Risk/High Benefit	0
Medium Risk/Low Benefit	113.7	Medium Risk/Low Benefit	0
Medium Risk/Medium Benefit	32.7	Medium Risk/Medium Benefit	6.0
Medium Risk/High Benefit	1.5	Medium Risk/High Benefit	0
Low Risk/Low Benefit	178.0	Low Risk/Low Benefit	0
Low Risk/Medium Benefit	60.4	Low Risk/Medium Benefit	6.9
Low Risk/High Benefit	4.0	Low Risk/High Benefit	13.4
<b>Total</b>	<b>397.3</b>	<b>Total</b>	<b>26.4</b>
		<b>TOTAL SYSTEM ROADS</b>	<b>724.3</b>
<b>ML2 Roads</b>		<b>Motorized Trails</b>	
High Risk/Low Benefit	0	High Risk/Low Benefit	0
High Risk/Medium Benefit	0	High Risk/Medium Benefit	0
High Risk/High Benefit	0	High Risk/High Benefit	0.1
Medium Risk/Low Benefit	8.0	Medium Risk/Low Benefit	5.1
Medium Risk/Medium Benefit	34.5	Medium Risk/Medium Benefit	18.2
Medium Risk/High Benefit	11.6	Medium Risk/High Benefit	39.1
Low Risk/Low Benefit	26.6	Low Risk/Low Benefit	10.8
Low Risk/Medium Benefit	89.9	Low Risk/Medium Benefit	15.6
Low Risk/High Benefit	6.4	Low Risk/High Benefit	22.4
<b>Total</b>	<b>177.0</b>	<b>TOTAL MOTORIZED TRAILS</b>	<b>111.3</b>
<b>ML3 Roads</b>			
High Risk/Low Benefit	0.1		
High Risk/Medium Benefit	0		
High Risk/High Benefit	0		
Medium Risk/Low Benefit	1.0		
Medium Risk/Medium Benefit	7.0		
Medium Risk/High Benefit	37.8		
Low Risk/Low Benefit	1.6		
Low Risk/Medium Benefit	30.7		
Low Risk/High Benefit	45.5		
<b>Total</b>	<b>123.7</b>		

# STEP 5. DESCRIBING OPPORTUNITIES AND SETTING PRIORITIES

## 5.1 Purpose

The purpose of this step is to:

- List recommendations for roads and motorized trails
- Determine the minimum road system
- Describe future actions

## 5.2 Opportunities for Roads and Motorized Trails

Opportunities for changing the transportation system include the following options:

### Change Jurisdiction

Opportunities may exist to convert some roads under Forest Service jurisdiction to another jurisdiction, such as a County or other government agency, thus shifting the maintenance responsibility to them. This could, however, require an initial investment to bring the road up to a designated standard prior to transfer of jurisdiction. This option is not applicable to motorized trails because all of Columbine's motorized trails are within interior Forest areas with no question of jurisdiction.

### Close to Public Motorized Use

Opportunities may exist to convert some roads that are currently open to public motorized use to ML1 roads, if they are deemed needed for forest management, but of little benefit to public use. This could effectively reduce the cost of maintaining the roads. There may be initial costs to ensure that these roads are made to be self-maintaining hydraulically before converting them to ML1 roads, and to install gates. This option is not applicable to motorized trails because there is no "ML1" administrative-use-only classification for trails.

### Change Maintenance Level

Opportunities may exist to either lower or raise the Maintenance Level of some roads. Lowering the ML can decrease maintenance requirements and costs, while still leaving the road open to public motorized use. In some instances, lowering the ML would be a database correction to match the existing condition and usage of the road on the ground. Other opportunities may exist to raise the ML of a road to match the existing condition and usage of a road. This could raise the maintenance costs of the road. This option is not applicable to motorized trails because they are not classified by ML.

### Convert to Another Use

Opportunities may exist to convert some roads to another use, such as a motorized or non-motorized trail, thus eliminating the need to use resources to maintain it as a road. This option, however, would shift the cost of maintaining the converted road to another program area, such as trails. Opportunities may also exist to convert some motorized trails to non-motorized trails.

### Remove from Motorized System

Opportunities may exist to remove some roads and motorized trails from the system. Doing so would reduce the long-term maintenance costs to the Forest Service. This could involve a variety of actions on the ground, depending on the site-specific situation of each route:

- Some system roads may be needed only by a special use permit holder, or may exist on private property to which the Forest Service has no legal access. These roads would not be rehabilitated or decommissioned because they would still be used by those private parties. These roads may require an initial cost of gate installation to prevent public motorized use, and administrative costs of processing special use permits.
- Other roads and motorized trails may have resource issues or little identified need, and could be removed from the motorized system, but do not require physical closure actions. This may be because they are already overgrown, slumped in, or have otherwise become impassible.
- Opportunities may exist to physically decommission some roads, if the road is not needed. There may be one-time costs to decommission roads. Decommissioning could involve various levels of physical closure, ranging from a berm or rock barrier to full ripping and seeding. Motorized trails would probably be converted to a non-motorized trail rather than completely removed from the trail system.

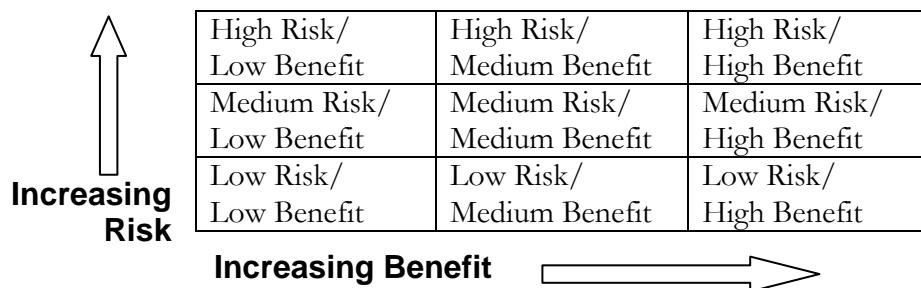
### Aggressive Storm-proofing

Installation of well-designed drainage dips at regular intervals can ensure long-term stability with reduced future maintenance costs. The benefits of expending maintenance funds to do this should be compared with the potential costs of future maintenance and repairs that would be needed if the drainage dips were not installed.

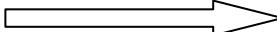
## 5.3 Recommendations for Roads and Motorized Trails

General recommended actions for roads and motorized trails that fall within each of the nine risk/benefit categories (Table 6) are described below. These are general recommendations and are not necessarily applicable to all routes that fall within each category. See Appendix F for recommendations specific to each route. For the Columbine Ranger District, not all risk/benefit categories are represented.

*Table 6. Risk/Benefit Categories*



	High Risk/ Low Benefit	High Risk/ Medium Benefit	High Risk/ High Benefit
Increasing Risk	Medium Risk/ Low Benefit	Medium Risk/ Medium Benefit	Medium Risk/ High Benefit
	Low Risk/ Low Benefit	Low Risk/ Medium Benefit	Low Risk/ High Benefit

**Increasing Benefit** 

### High Risk/Low Benefit – Close or Take off System

High Risk/Low Benefit routes should be closed to public motorized use (ML1) or taken off the system due to their high level of risk and low level of benefit. There 5.6 miles of road in this category.

**High Risk/Medium Benefit – Close or Mitigate/Maintain**

High Risk/Medium Benefit routes should be either closed to public motorized use (ML1) or given a high priority for mitigation of resource impacts and maintenance. There 1.4 miles of road in this category.

**High Risk/High Benefit – Mitigate/Maintain**

High Risk/High Benefit routes should receive the highest priority for maintenance and mitigation. These routes have high benefits and should therefore be retained, while mitigation of resource impacts and frequent maintenance should occur as soon as possible to reduce the risk level. The Columbine Ranger District does not have any roads in this category. There is 0.1 mile of motorized trail in this category.

**Medium Risk/Low Benefit – Close, Take off System, or Mitigate/Maintain**

Medium Risk/Low Benefit routes should be considered for closure to public motorized use (ML1), to take off the system, or for mitigation or maintenance. There 122.7 miles of road in this category. There are 5.1 miles of motorized trail in this category.

**Medium Risk/Medium Benefit – Mitigate/Maintain**

Medium Risk/Medium Benefit routes should receive mitigation and maintenance, though secondary in priority to routes with high benefits or high risks that are being maintained on the system. There 80.2 miles of road in this category. There are 18.2 miles of motorized trail in this category. It is recommended that these routes be routinely maintained in order to reduce the risks.

**Medium Risk/High Benefit – Mitigate/Maintain**

Medium Risk/High Benefit routes should be given a high priority for maintenance and mitigation. These routes have high benefits and should be retained, while mitigation of resource impacts and regular maintenance should occur to reduce the risk level. There 50.9 miles of road in this category. There are 39.1 miles of motorized trail in this category.

**Low Risk/Low Benefit – Maintain, Close, or Take off System**

Low Risk/Low Benefit routes should be evaluated for maintaining, closing to public motorized use (ML 1), or removal from the system. Since the risks are low, they are not a priority for these activities. There 206.2 miles of road in this category. There are 10.8 miles of motorized trail in this category.

**Low Risk/Medium Benefit – Maintain**

Low Risk/Medium Benefit routes should be retained in light of their importance to the public and/or management and their relatively low resource risk. Since the risks are low, they are not a priority for maintenance, but should be maintained adequately to avoid deterioration. There 187.9 miles of road in this category. There are 15.6 miles of motorized trail in this category.

**Low Risk/High Benefit – Maintain**

Low Risk/High Benefit routes have high benefits and should be retained. Since the risks are low, they are not a priority for maintenance, but should be maintained adequately to avoid deterioration. There 69.3 miles of road in this category. There are 22.4 miles of motorized trail in this category.

## 5.4 Motorized Trail System

See Appendix F for a list of each motorized trail, its risk and benefit rankings and recommendations. The table below summarizes the changes to the District's motorized trail system, should the TAP recommendations be adopted.

*Table 7. Recommended Changes in System motorized Trail Miles*

Trail Type	Current Miles	Recommended Miles	Net Difference
Single Track	45.5	32.7	-12.8
50" or less wheeled	65.8	78.3	+12.5
<b>Total</b>	<b>111.3</b>	<b>11.0</b>	<b>-0.3</b>

It should be noted that this trail analysis was confined primarily to the existing motorized trail system. This was due simply to the fact that only the existing motorized system could be analyzed in sufficient detail in the TAP. Consideration of site-specific additions to the system are reserved for subsequent analyses wherein concrete proposals and being presented and can be adequately analyzed.

Opportunities for expansion and enhanced connectivity may exist in some areas on the Columbine District. It is recommended that subsequent travel management planning endeavors include, as appropriate, consideration of opportunities to improve and/or expand the existing motorized trail system. Specifically, it has been suggested that the lower Missionary Ridge area may hold opportunities to expand the motorized trail system using an existing system of closed roads.

## 5.5 Minimum Road System

The minimum road system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36CFR219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance. (36CFR 212.5(b))

Roads included in the minimum road system serve the Forest Service mission by providing access for Forest management activities, recreational opportunities, and utilization of Forest resources. The minimum road system includes roads designated for public motorized use (ML2-5) as well as administrative-use roads (ML1) that are necessary for forest management.

Recent funding allocations are adequate to perform annual maintenance on many, but not all, roads on the Columbine District. The deferred maintenance costs are considerably higher than the appropriated funding. See Appendix B for more information on road maintenance costs. There is no precise number of miles of road that can be maintained under any given future budget scenario. By Forest Service policy (FSM 7705), passenger car roads open to public use (ML 3-5) are subject to the Highway Safety Act; and roads need to be maintained to prevent significant resource damage. However, beyond those requirements, there is a range of how well roads must be maintained and, therefore, a range of how many miles can be maintained with any given budget level. Nonetheless, it appears likely that future allocations will be inadequate to maintain the existing system to the

prescribed level; and therefore reducing the size of the road system will allow for better maintenance.

There is no minimum road system that is static over time. The recommended minimum road system developed in this process represents the best estimate of a current minimum road system. It is difficult to know what routes may be needed in the future. Therefore, the minimum road system may be revised in the future as conditions warrant.

Federal regulations require the Agency to identify roads that are no longer needed to meet forest resource management objectives and those that should be decommissioned or considered for other uses, such as conversion to trails. Roads that are not part of the recommended minimum road system are roads that are no longer needed, as best identified at this point in time; the list of roads that are no longer needed might include roads that will be part of the minimum road system identified in the future. Future NEPA analyses for various projects will consider the recommendations in this travel analysis report and will implement or revise the recommendations based on more site specific information.

## 5.6 Process Used to Develop the Minimum Road System

In addition to the information produced in the Risk/Benefit Analysis Spreadsheet, the IDT considered issues such as the following in making recommendations on which roads should be part of the minimum road system:

- Are there any non-system or unmapped routes that should be part of the road system?
- Is a Forest system road redundant with another road that leads to the same area? If so, one of the roads is likely not needed.
- Is a Forest system road located properly (i.e., in drainage bottoms, steep slopes, erodible soils)?
- Does the route create unacceptable resource impacts?
- If resource impacts are acceptable, is a Forest system road needed for public or administrative use?
- Is there an overriding need to use the road for administration of resources, or conversely, is there an overriding need to close the road because of resources issues?

The logic used by the staff specialists in forming recommendations asked whether there are resource reasons not to designate a route (risks), and whether there will be access or recreational needs provided by designating such a route (benefits). Generally, if there are benefits provided and no resource reasons not to designate, the route was recommended for designation. Generally, if there are resource reasons not to designate that cannot be mitigated or are not cost effective to mitigate, then the route was recommended to be removed from the road system. In some cases, routes were identified as not needed simply because they were redundant with other routes. In this manner, benefits and risks were compared in developing recommendations for the minimum road system.

The recommendations resulting from this final step of integrating all the considerations can be found in the spreadsheet in Appendix F.

## 5.7 Columbine Ranger District Recommended Minimum Road System

The results include changes to roads that are open to public motorized use (ML2-5) as well as to roads that are closed to public motorized use (ML1). Roads that are not needed are recommended to be removed from the system through several different methods. Some roads are recommended to be added to the system.

The mileages for the minimum system compared with the existing condition are shown in the table below. In addition, the recommended road system is depicted on maps in Appendices D and E. Appendix F contains road-by-road recommendations.

*Table 8. Recommended Changes in System Road Miles*

Maintenance Level	Current Miles	Recommended Miles	Net Difference
5	<1	<1	0
4	26.4	16.1	-10.3
3	123.6	103.2	-20.4
2	177.1	194.9	+17.8
Sub-Total (Open Roads)	327.1	314.2	-12.9
1	397.3	258.0	-139.3
<b>Total</b>	<b>724.4</b>	<b>572.2</b>	<b>-152.2</b>

The IDT based their recommendations on risks to natural and cultural resources, and benefits to recreation use, forest management access, and emergency access. The recommended net decrease in overall road miles results from a number of possible actions: converting roads to trails, converting segments to County jurisdiction (no loss of public use), taking private jurisdiction roads off system (no loss of use for private landowners), and removing roads from the system (most of which are ML1, already closed to the public).

One of the inherent tasks of the TAP was to thoroughly examine the data and GIS mapping layer of the INFRA database. This examination revealed a number of inconsistencies in identifying roads needed for long-term forest management activities. In some areas, more roads than necessary for adequate management were shown; in other areas, too few were shown, even though there were numerous non-system roads in place. In a few instances, existing roads were not shown in the database at all. Some of these existing routes that are needed for long-term forest management or currently being used by the public with no unacceptable impacts were recommended to be added to the system. No new road construction needed for long-term forest management was recommended. The IDT recommends that approximately 183 miles of system roads could be decommissioned, closed, or removed from the system, and that approximately 31 miles of existing non-system and unmapped roads be added; this is a net decrease of approximately 152 miles over the existing system. This net decrease is primarily within the ML1 category of roads, which are closed to public motorized use; for this reason, the decrease in calculated open road density would be minuscule.

There are approximately 9.0 miles of the roads recommended in this TAP to be added to the system that fall within the 2001 President's Roadless Rule Inventoried Roadless Area (IRA). These roads are all existing road prisms that in some cases are already being used; the changes would primarily be changes in the database only with no changes on the ground. These recommendations are based on the assumption that the 2001 IRA mapped inventory will eventually be replaced by the more updated and refined inventory that was done for the proposed Colorado Roadless Rule. It is understood that if the 2001 IRA inventory, as currently mapped, is permanently adopted, the recommendations for those roads would be to leave them off the system.

Under the recommended system, the maintenance needs will be less than for the current system because there would be less total miles. Because many of the roads recommended to be added to the system are within the 7E Management Area, and they all fall within the suitable timber base, it is understood that the area is expected to be managed for wood product production. This type of

management use requires a system of access roads that exist for the long-term, to be used in multiple entries over the years. Because of this, it is preferable to have ML1 system roads that receive at least minimal maintenance, than to have temporary roads built and rehabilitated multiple times in the same general locations. The ID team believes that this minimum road system will result in a more efficient transportation system that will protect soil and watershed health in a manner that is more desirable than the existing situation.

The recommended minimum road system focuses on logical reductions in ML2 and ML1 roads by removing redundant or unneeded roads, while providing a more efficient long-term transportation system that meets Forest Plan resource management goals and objectives while better protecting forest resource health and sustainability. Use of roads beyond this designated system should be short-term and temporary, such as access for fire suppression or prescribed burning, or temporary timber sale roads. Improving the ground cover, reducing erosion, reducing maintenance needs and discouraging unauthorized use are desired conditions which can be achieved by implementing the minimum system. In the future, there may be opportunities to transfer maintenance responsibilities and jurisdiction on portions of the Beaver Meadows, Sauls Creek, and East Florida roads to County governments, further reducing Forest Service financial obligations.

## 5.8 Future Actions

The minimum road system and other suggestions discussed in this document for the Columbine Ranger District are recommendations only. As stated previously, future NEPA analyses that include public involvement may carry forward for implementation, reject, or change the recommendations in this report, and provide the basis for making specific route-related decisions. These future decisions will include consideration of the minimum road system along with other factors such as environmental, social, and economic implications. These NEPA analyses, in combination with strategic prioritization of anticipated allocated funding, will determine how this report is implemented or modified. As additional information is gathered in the future, this information may result in future modifications to the recommendations in this TAP.

It should be noted that road maintenance needs and expenses must be considered together in developing the minimum road system. The road maintenance costs in Appendix B indicate that the appropriated funding is adequate to perform annual maintenance on many, but not all, roads on the Columbine District. The deferred maintenance costs are considerably higher than the appropriated funding. As a result, most of the deferred maintenance needs are not currently being addressed. However, creating a road system to match the available funds by simply decommissioning or removing roads from the system will not result in a road system that meets the access needs for public and administrative purposes. Actions such as continuing to verify and update the INFRA inventory and database, lowering the maintenance levels of system roads as appropriate, converting roads to trails as appropriate, and removing unneeded roads from the system will get us closer to achieving a fully functional, affordable minimum road system.

Similarly, while funding for the District's trail program has been insufficient in recent years to cover actual maintenance and repair costs—which has resulted in the accumulation of additional deferred maintenance—establishing a trail system that is solely based on fluctuating annual appropriations would not be practical (or even possible), nor would it address public access concerns (motorized or non-motorized). Rather, subsequent analyses and projects should seek to balance resource and funding concerns with recreation concerns in a way that maximizes the effectiveness—financial and otherwise—of the system under analysis. Items to consider to this end include improved, sustainable trail design, seasonal closures, re-designation of existing routes, closure of additional non-sustainable or unneeded routes, grants for maintenance, “Adopt-a-Trail” programs, and the employment of youth corps trail crews. Each of these strategies will most certainly help to balance

the risks and benefits associated with the Columbine District's trail system, and taken as a whole, will result in a more cost-effective system.

As recommendations in this TAP for removing roads or motorized trails from the system are implemented through future NEPA analyses and decisions (or different recommendations are adopted), assessments for physical actions to be taken on each route will need to be completed. Each route has its own set of circumstances and there is no action that would fit all situations equally; therefore site specific analyses would need to be conducted to determine the best course of action to close each route.

There are a variety of tools and methods that could be used, ranging from simple signing to full re-contour and tree planting. For example, a road that is not receiving any use and has already re-vegetated may not need any physical work performed on it at all. Some roads can be effectively decommissioned by placing traffic barriers at the beginning only, such as berms or boulders. Other roads may require a fence with extended wing fences to prevent illegal traffic. Finally, some roads may require ripping the entire length or re-contouring to discourage use. Topography, soil type, vegetation, usage patterns, budgets, and many other factors will influence the best method for closure of a particular road. Decisions to close, decommission, or remove a road from the system may be made in a NEPA decision, but the exact method to be used may not be made until later when funding or opportunity arises. If this is the case, implementers must ensure that Forest Service specialists (e.g. Archeologist, Biologist, and Hydrologist) are involved in the design of the actions to be taken.

There are also a variety of methods to get these closures accomplished. The actual work could be done by in-house or contract crews using appropriated dollars, by using K-V moneys generated from timber receipts, or by special appropriations such as ARRA funds. The work could also be accomplished by a permittee as a condition of their permit, such as a timber sale contract, powerline special use permit, or other type of permit. Volunteer groups may also help to implement road closures.

Likewise, prioritization of physical work to close or decommission roads is dependent on many factors and cannot be established at a broad scale at this time. Those decisions should be part of project-level NEPA decisions. Factors such as other activities occurring in the area at the time, changing public usage patterns, funding for specific projects, and natural events such as fires will influence priorities.

## **STEP 6. REPORTING**

This document serves as the Travel Analysis Process Report for the Columbine Ranger District. It displays the recommended minimum road system as well as route-by-route recommendations for roads and motorized trails.

# APPENDIX A – MANAGEMENT AREA GUIDANCE

## Excerpts from Current Forest Plan for Management Areas within the Columbine Ranger District

### Forest-wide General Direction

Riparian Area Management: Locate and construct arterial and collector roads to maintain the basic natural condition and character of riparian areas. Incorporate structures which provide for fish passage in all new roads and trails crossing perennial streams which support a fishery.

Close all newly constructed roads to public motorized use unless documented analysis shows: a) Use does not adversely impact other resources; b) Use is compatible with the ROS class established for the area; c) They are located in areas open to motorized use; d) They provide user safety; e) They serve an identified public need; f) The area accessed can be adequately managed; or g) Financing is available for maintenance or coop-maintenance can be arranged.

Manage road use by seasonal closure if: a) Use causes unacceptable damage to soil and water resources due to weather or seasonal conditions; b) Use conflicts with the ROS class established for the area; c) Use causes unacceptable wildlife conflict or habitat degradation; d) Use results in unsafe conditions due to weather conditions; e) They serve a seasonal public or administration need; f) Area accessed has seasonal need for protection or nonuse; or g) Use causes unacceptable damage to the road prism due to weather or seasonal conditions.

Keep existing roads open to public motorized use unless: a) Financing is not available to maintain the facility or manage the associated use of adjacent lands; b) Use causes unacceptable damage to soil and water resources; c) Use conflicts with the ROS class established for the area; d) They are located in areas closed to motorized use and are not “designated routes” in the Forest travel management direction; e) Use results in unsafe conditions unrelated to weather conditions; f) There is little or no public need for them; g) Use conflicts with wildlife management objectives; or h) Use causes unacceptable damage to the road prism.

Closed or restricted roads may be used for and to accomplish administrative purposes when: a) Prescribed in management area direction statements; b) Authorized by the Forest Supervisor; and c) In case of emergency.

Construct and reconstruct arterial and collector roads to meet multiple resource needs.

Construct and reconstruct local roads to provide access for specific resource activities such as campgrounds, trailheads, timber sales, range allotments, mineral leases, etc., with the minimum amount of earthwork.

Maintain all roads to the following minimum requirements: a) All arterial and open collectors – level 3; b) All open local roads – level 2; and All closed roads – level 1. Level 1 maintenance includes upkeep of drainage structures and vegetation cover necessary to prevent erosion.

Maintain structures, bridges, cattleguards, etc., to be structurally sound and safe for use.

### Management Area 1A (Existing and Proposed Developed Recreation Sites)

Management emphasis is for developed recreation in existing and proposed campgrounds, picnic grounds, trailheads, visitor information centers, summer home groups, and water-based support facilities. Proposed sites (sites scheduled for development in the Plan) are managed to maintain the site attractiveness until they are developed.

Maintain roads to accommodate high constant, uninterrupted use.

Maintain roads to maintenance levels 4 or 5, depending on the experience level provided at individual developed sites.

#### **Management Area 1B (Winter Sports Sites)**

Management emphasis provides for downhill skiing on existing sites and maintains selected inventoried sites for future downhill skiing recreation opportunities. Management integrates ski area development and use with other resources management to provide healthy tree stands, vegetative diversity, forage production for wildlife and livestock, and opportunities for non-motorized recreation.

Design and locate local roads in the permitted area: a) to facilitate management of tree stands and wildlife as well as recreation; and b) with the minimum of mileage and earthwork.

#### **Management Area 2A (Semi-primitive Motorized Recreation Opportunities)**

Management emphasis is for semi-primitive motorized recreation opportunities such as snowmobiling, four-wheel driving, and motorcycling both on and off roads and trails. Motorized travel may be restricted or seasonally prohibited to designated routes to protect physical and biological resources.

General Direction for Dispersed Recreation - Emphasize semi-primitive motorized recreation opportunities. Increase opportunities for primitive road motorized trail use. Specific land areas or travel routes may be closed seasonally or year-round for compatibility with adjacent area management, to prevent resource damage, for economic reasons, to prevent conflicts of use, and for user safety. Manage use to allow low to moderate contact with other groups and individuals.

Manage local constant roads for dispersion of recreationists, hunter access, and pleasure driving.

Do not exceed an average open local road density of 1 mile/square mile in fourth-order watersheds.

Manage local intermittent roads to accommodate light use. Close to public use.

Construct roads to enhance motorized recreation use, 4x4 vehicles, trail bikes and snowmobiles.

Roads will not exceed design guides specified in FSM 7721.3 for local roads. Construct all roads with no gravel support.

Maintain roads to provide quality semi-primitive motorized opportunities and for public safety.

a. Maintain local constant roads to maintenance level 3 when used for project activities and to maintenance level 2 for general motorized use.

b. Maintain local intermittent roads to maintenance level 2 when open for project activities.

Maintain existing motorized routes or construct routes needed as part of the transportation system. Provide loop routes of one-half to one day's travel time with at least one-half the total route located within the semi-primitive motorized ROS class and utilizing primitive local roads and/or trails suitable for motorized trail bike travel.

a. Do not exceed an average motorized trail density of 4 miles per square mile on fourth-order watersheds.

b. Do not exceed an average motorized trail density of 2 miles per square mile in nonforested areas of fourth-order watersheds.

#### **Management Area 2B (Rural and Roaded-Natural Recreation Opportunities)**

Management emphasis is for rural and roaded-natural recreation opportunities. Motorized and non-motorized recreation activities such as driving for pleasure, viewing scenery, picnicking, fishing,

snowmobiling, and cross-country skiing are possible. Conventional use of highway-type vehicles is provided for in design and construction of facilities. Motorized travel may be prohibited or restricted to designated routes, to protect physical and biological resources.

Provide roaded natural or rural recreation opportunities along Forest arterial, collector and local roads which are open to public motorized travel. Manage recreation use to provide moderate to high incidence of contact with other groups and individuals. Where arterial, collector or local roads or areas are closed to public motorized recreation travel, provide for dispersed non-motorized recreation with a moderate to high incidence of contact with other groups and individuals in a roaded natural or rural setting.

Prohibit motorized travel off system roads and trails except for designated areas, corridors, parking areas and camping areas.

Close roads and trails to motorized travel when the surface would be damaged to the degree that resulting runoff into adjacent water bodies would exceed sediment yield threshold limits.

Manage public use of roads with techniques such as, seasonal closure, time of day closures, etc.

Manage local constant roads for medium to high use (SADT above 50) and construct to all season standard.

Manage the area for a moderate density (one-half to one mile/square mile) of constant roads.

Manage local intermittent roads to accommodate light use (SADT 0-20). Close local roads to public use. Designate routes and areas which can be periodically opened to gathering firewood and operating oversnow vehicles.

Construct roads for dispersion of recreationists and pleasure driving. Construct or reconstruct local constant roads with full gravel support. Abate dust on high use (SADT above 195) roads.

Construct local intermittent roads with no gravel support.

Maintain roads to provide quality motorized recreation opportunities and for public safety. Maintain local constant roads to maintenance levels four and five. Maintain local intermittent roads to maintenance level two when open for project activities.

On all nonforested areas, motorized trail and local road density is not to exceed 4 miles per square mile.

### **Management Area 3A (Semiprimitive, Nonmotorized Recreation in Roaded or Non-roaded Areas)**

Management emphasis is for semi-primitive non-motorized recreation in both roaded and unroaded areas. Recreation opportunities such as hiking, horseback riding, hunting, cross-country skiing, etc., are available. Seasonal or permanent restrictions on human use may be applied to provide seclusion for wildlife such as nesting for raptorial birds, big game rearing areas, and mammals (mountain lion, wolverine, etc.) with large home ranges. Investments in compatible resource uses such as livestock grazing, mineral exploration and development, etc., occur; but roads are closed to public use.

Emphasize semi-primitive non-motorized recreation opportunities. Specific land areas or travel routes may be opened seasonally and with specific authorization to accomplish resource management activities. The area is never open for motorized recreation activities except for specifically identified motorized corridors through the area.

Provide facilities such as foot and horse trails, single lane local intermittent roads with primitive surface used as trails, development level 1 and 2 campgrounds, and necessary signing.

Local roads may be constructed for non-recreation purposes. Construct all roads with no gravel support.

Close local roads to public motorized use except for specifically identified motorized corridors through the area.

Maintain roads to minimum level necessary for administration and resource management entry. Maintain local intermittent roads to maintenance level 2 when open for project activities. Maintain local roads to level 1 during periods when access for resource utilization is not required.

#### **Management Area 4B (Habitat for Management Indicator Species)**

Management emphasis is on the habitat needs of one or more management indicator species. Species with compatible habitat needs are selected for an area. The goal is to optimize habitat capability, and thus numbers of the species. The prescription can be applied to emphasize groups of species, such as early succession dependent or late succession dependent, in order to increase species richness or diversity.

Recreation and other human activities are regulated to favor the needs of the designated species. Roaded-natural recreation opportunities are provided along Forest arterial and collector roads. Local roads and trails are either open or closed to public motorized travel. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open; semi-primitive non-motorized opportunities are provided on those that are closed.

Manage human recreational activities so they do not conflict with habitat needs of selected indicator species.

Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and nonmotorized opportunities will be available until planned resource activities are implemented.

Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts.

Manage road use to provide for habitat needs of management indicator species including road closures and area closures, and to maintain habitat effectiveness.

Manage local constant roads to accommodate medium – light seasonal use. Regulate seasonal public use by closure if roadbed damage will occur and where travel conflicts with natural wildlife movements.

Manage the area for a moderate density (one-half to one mile/square mile) of constant roads.

Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use.

Construct transportation facilities to provide maximum economy of timber harvest and safety for the public while giving priority consideration to wildlife needs. Avoid winter range areas and unique wildlife habitats. Construct or reconstruct local constant roads with gravel support needed for timber operations and hauling. Construct local intermittent roads with no gravel support unless needed to extend logging seasons.

Maintain roads for a mix of resource uses and public safety. Maintain local constant roads to maintenance level 3. Maintain local intermittent roads to maintenance level 2 when open for project activities.

**Management Area 5B (Big-Game Winter Range in Forested Areas)**

Management emphasis is on forage and cover on winter ranges. Winter habitat for deer, elk, bighorn sheep, and mountain goats is emphasized. Treatments to increase forage production or to create and maintain thermal and hiding cover for big game are applied.

New roads other than short-term temporary roads are located outside of the management area. Short term roads are obliterated within one season after intended use. Existing local roads are closed and new motorized recreation use is managed to prevent unacceptable stress on big game animals during the primary big game use season.

Restrict use to resolve people/wildlife conflicts, favoring wildlife in such conflicts.

Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and nonmotorized opportunities will be available until planned resource activities are implemented.

Do not provide parking or trail head facilities during winter.

Allow new roads in the management area only if needed to meet priority goals outside the management area or to meet big game goals on the management area. Obliterate temporary roads within one season after planned use ends.

New permanent or temporary roads constructed in the management area must meet the following criteria: 1) There is no feasible alternative to build the road outside the area, and the road is essential to achieve priority goals and objectives of contiguous management areas, or to provide access to land administered by other government agencies or to contiguous private land; 2) The State Fish and Wildlife agency has been fully involved in the road location, planning and alternative evaluation; 3) Planned management of road use during winter will prevent or minimize disturbance of wintering big game animals, or will allow hunting and other management activities needed to meet wildlife management objectives; 4) Roads are constructed to the minimum standards necessary to provide safety for the road use purpose; 5) Roads cross the winter range in the minimum distance feasible to facilitate the necessary use; and 6) Road traffic and road cut or fill slopes must not block big game movement in delineated migration routes or corridors.

Manage the area for a low density (zero to one-half mile/square mile) of constant roads.

Close existing roads, prohibit off-road vehicle use and manage non-motorized use to prevent stress on big game animals.

Opening of existing roads during winter can be approved if the following criteria are met: 1) There is no reasonable alternative for owners or managers of contiguous private land or public land to reach their lands during winter; 2) Road use, off-road vehicle use, or non-motorized use of the area is essential and is the minimum necessary to meet priority resource management goals and objectives; and 3) The State Fish and Wildlife Agency is fully involved in planning human use of area during winter.

**Management Area 6B (Livestock Grazing)**

This area is managed for livestock grazing. Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive non-motorized and roaded natural.

Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and non-motorized opportunities will be available until planned resource activities are implemented.

Restrict use to resolve people/livestock conflicts, favoring livestock in such conflicts.

Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur and where travel conflicts with livestock grazing.

Manage the area for a moderate density (one-half to one mile/square mile) of constant roads.

Manage local intermittent roads to accommodate light use (SADT 10-50). Close to public use.

Construct roads to accommodate livestock management with a mix of other resource activities. Design most facilities for multi-resource use. Construct or reconstruct local constant roads to 75% modified gravel support. Construct local intermittent roads with no gravel support unless needed to extend logging seasons.

Maintain roads for a mix of resource uses and public safety. Maintain local constant roads to maintenance level 3. Maintain local intermittent roads to maintenance level 2 when open for project activities.

**Management Area 7E (Wood-Fiber Production and Utilization)**

Management emphasis is on wood-fiber production and utilization of large roundwood of a size and quality suitable for sawtimber. Roaded-natural recreation opportunities are provided along Forest arterial and collector roads. Semi-primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive non-motorized opportunities are provided on those that are closed.

Provide roaded natural recreation opportunities as an overall objective. Both semi-primitive motorized and nonmotorized opportunities will be available until planned resource activities are implemented.

Emphasize opportunities for dispersed motorized recreation and direct people to lesser-used areas.

Manage local constant roads to accommodate medium-light seasonal use (SADT 10-50). Regulate seasonal public use by closure if roadbed damage will occur.

Manage the area for a high density (one to three miles/square mile) of constant roads.

Manage local intermittent roads to accommodate light use (SADT 0-20). Close to public use.

Construct roads to support timber management activities along with a mix of other resource activities. Design most facilities for multi-resource use. Construct or reconstruct local constant roads to 75% modified gravel support. Construct local intermittent roads with no gravel support unless needed to extend logging seasons.

Provide parking areas for dispersed recreationists along system roads.

Maintain roads to support timber management activities along with a mix of other resource activities. Maintain local constant roads to maintenance level 3. Maintain local intermittent roads to maintenance level 2 when open for project activities.

**Management Area 9A (Riparian Area Management)**

Emphasis is on the management of all of the component ecosystems of riparian areas. These components include the aquatic ecosystem, the riparian ecosystem (characterized by distinct vegetation), and adjacent ecosystems that remain within approximately 100 feet measured horizontally from both edges of all perennial streams and from the shores of lakes and other still water bodies.

Vehicular travel is limited on roads and trails at times when the ecosystems would be unacceptably damaged.

Semi-primitive non-motorized, semi-primitive motorized, roaded natural and rural recreation opportunities can be provided.

Proposed new land-use facilities (roads, campgrounds, buildings) will not normally be located within floodplain boundaries for the 100-year flood. Protect present and all necessary future facilities that cannot be located out of the 100-year floodplain by structural mitigation (deflection structures, riprap, etc.).

Locate roads and trails outside riparian areas unless alternative routes have been reviewed and rejected as being more environmentally damaging.

**Management Area 10C (Special Interest Areas – Falls Creek)**

Emphasis is on management of areas of unusual scenic, historical, geological, botanical, zoological, paleontological, or other special characteristics to protect and where appropriate, foster public use and enjoyment of these areas.

Develop transportation system only to enhance cultural resource interpretive or maintenance opportunities.

Construct no new roads.

Construct no new roads.

**Management Area 10D (Wild and Scenic Rivers)**

Management emphasis is on river segments designated as a component of the National Wild and Scenic River System and those recommended for designation. "Wild Rivers" are managed to be free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and water unpolluted. "Scenic Rivers" are managed to be free of impoundments with shorelines or watersheds still largely primitive and shorelines largely undeveloped but accessible in places by roads. "Recreational Rivers" are managed to be readily accessible by road or railroad, and to maintain developments that may have occurred along the shoreline and impoundments or diversions that may have occurred in the past.

Provide the following recreation opportunities in the respective river segments:

Wild river segments: Semi-primitive non-motorized recreation in an unmodified setting.

Scenic river segments: Semi-primitive motorized recreation in an essentially unmodified setting.

Recreational river segments: Roaded natural recreation in a general unmodified setting.

Wild river segments: Close existing trails to motorized vehicle use.

**Management Area 1.11 (Wilderness – Pristine)**

Natural processes and conditions have not and will not be measurably affected by human use. These areas provide opportunities for solitude; travel in these environments require knowledge and skills, without dependence on management presence (trails, signs).

Prohibit man-made structures and facilities.

**Management Area 1.12 (Wilderness – Primitive)**

These areas of wilderness feature natural environmental conditions and offer a moderate degree of solitude. Natural processes and conditions have not been and will not be significantly affected by human activity (use). Areas are managed to protect ecological conditions with effects of human activity minimized.

Locate and design required access roads within the management area for authorized activities to minimize the biophysical and visual impact, and to facilitate restoration. Roads will not be authorized: on slopes steeper than 60%; in areas of high erosion hazard; in areas of high geologic hazard; in areas of low visual absorption capacity that are unlikely for successful restoration; and in areas which would adversely affect threatened and endangered plant and animal species.

Convert roads not needed for authorized activities to trails, or if they are not needed as part of the transportation system, restore them to the established VQO.

Construct or reconstruct trails only when needed to meet objectives of the wilderness transportation system.

**Management Area 1.13 (Wilderness – Semi-primitive)**

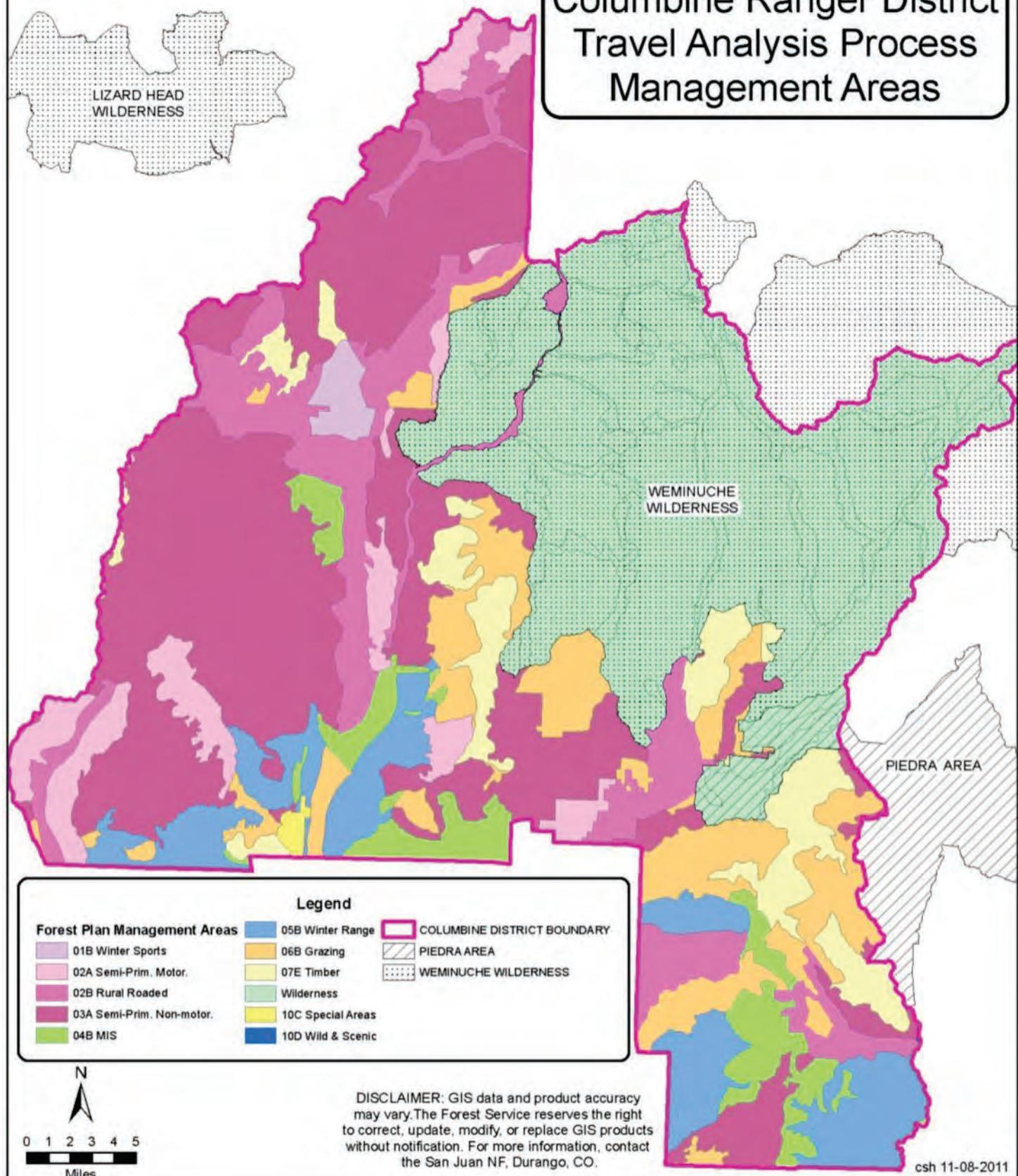
These environments are adjacent to primary access points and/or popular destination points. Day use is often the primary type of use. Encounters with other users will be moderate to frequent, caused by spatial and temporal concentration of recreational use. Areas are managed to protect natural conditions while providing for use and enjoyment of the recreational and natural features.

Locate and design required access roads within the management area for authorized activities to minimize the biophysical and visual impact, and to facilitate restoration. Roads will not be authorized: on slopes steeper than 60%; in areas of high erosion hazard; in areas of high geologic hazard; in areas of low visual absorption capacity that are unlikely for successful restoration; and in areas which would adversely affect threatened and endangered plant and animal species.

Convert roads not needed for authorized activities to trails, or if they are not needed as part of the transportation system, restore them to the established VQO.

Construct or reconstruct trails only when needed to meet objectives of the wilderness transportation system.

## Columbine Ranger District Travel Analysis Process Management Areas



## APPENDIX B – ROAD AND TRAIL MAINTENANCE COSTS

Maintenance is the act of keeping fixed assets (such as roads or trails) in acceptable condition. It includes preventive maintenance normal repairs, replacement of parts and structural components, and other activities needed to preserve a fixed asset so that it continues to provide acceptable service and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. (Financial Health – Common Definitions for Maintenance and Construction Terms, September 29, 1998)

Maintenance includes both annual maintenance and deferred maintenance. Annual maintenance is work performed to maintain serviceability, or repair failures during the year in which they occur. It included preventative and/or cyclic maintenance performed in the year in which it is scheduled to occur. Unscheduled or catastrophic failures of components or assets may need to be repaired as a part of annual maintenance. (Financial Health – Common Definitions for Maintenance and Construction Terms, September 29, 1998)

Deferred maintenance is maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. When allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, increased costs to repair, and decrease in asset value. (Financial Health – Common Definitions for Maintenance and Construction Terms, September 29, 1998)

### Road Maintenance Budget

The San Juan National Forest appropriated budget allocation for road maintenance and management of roads averaged \$1,385,000 over the years 2008-2010. Of this amount, approximately 40% goes towards road maintenance activities Forest-wide, and one-third of that, or approximately 13% (about \$200,000) goes towards all road maintenance activities on the Columbine District, including annual and deferred maintenance.

In prior years, appropriated road funding was supplemented by road construction and maintenance work performed by timber purchasers through the commercial timber sale program. This program has steadily declined over the past 20 years thus increasing demands on appropriated dollars for road maintenance.

### Road Annual Maintenance

Annual road maintenance costs may be calculated by two methods, the INFRA database or the estimated actual costs as determined by the San Juan National Forest engineering staff. These estimated actual costs include Forest-wide costs associated with the force account road crew (salary, purchase of heavy equipment, fleet costs, fuel, maintenance, and overhead) and the costs related to county cooperative agreements (dust abatement, asphalt patching, and cost for counties to blade the roads). Annual maintenance work accomplished through contracts is not included in the estimated actual costs. FY2010 accomplishment miles were used for a baseline on how much work the crew could do annually. The costs were then divided by accomplished miles resulting in an average Forest-wide cost per mile by maintenance level for annual maintenance. The following is a description of the estimated actual annual road maintenance costs for each maintenance level as determined by the SJNF engineering staff.

Maintenance Level 1 Roads:

ML1 roads are closed to public motorized use. They are used infrequently for administrative purposes. Basic custodial maintenance is performed to prevent damage to adjacent resources and to perpetuate the road for future resource management needs. Emphasis is normally given to maintaining drainage facilities and runoff patterns. No maintenance other than a condition survey may be required so long as no potential exists for resource damage. Most of these roads are in a stable, revegetated condition with functioning drainage, however, a few have drainage and erosion problems. In general terms these roads cost very little to maintain. Installation and maintenance of closure devices such as gates, berms, and boulders is needed on these roads. Condition surveys are done very infrequently. Maintenance needs on ML1 roads are identified by the Districts when inspections reveal site specific issues. Currently the force account crew spends approximately five weeks of equipment and operator time correcting drainage problems and maintaining and installing closure devices on an annual basis, which equates to approximately \$14,025. This results in approximately 5% (57 miles) of ML1 roads maintained Forest-wide for an annual cost per mile of \$246.

Maintenance Level 2 Roads:

ML2 roads are open for use by high clearance vehicles. Passenger car traffic, user comfort, and user convenience are not considerations. Warning signs and traffic control devices are not provided with the exception that some signing may be posted at intersections. Motorists should have no expectations of being alerted to potential hazards while driving these roads. Maintenance consists of maintaining the road prism for passage of high-clearance vehicles, maintaining drainage facilities, removing/repairing slides and slumps, brushing, cutting fallen trees off the roads, and installing/repairing seasonal closure gates. ML2 roads range from rocky roads that require little maintenance to incised roads in erosive soils that require frequent attention. Some of these roads require armoring of drainage dips to handle the traffic loads and minimize resource impacts. Condition surveys are done only sporadically. Currently, a minimum of 10% of the ML2 roads are maintained Forest-wide on an annual basis. Work typically includes reshaping dips, filling in deep ruts, pulling lead-off ditches, and maintaining culverts. Currently the force account crew spends approximately one full season of equipment and operator time maintaining ML2 roads on an annual basis, which equates to approximately \$85,180. In FY2010, 127 miles of ML2 roads were maintained Forest-wide for an annual cost per mile of \$671.

Maintenance Level 3 Roads:

ML3 roads are open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Warning signs and traffic control devices are provided to alert motorists of situations that may violate expectations. These roads are typically surfaced with aggregate but can be native surface. A combination of drainage dips and culverts provide drainage. Potholing or washboarding may occur. These roads are subject to the requirements of the Highway Safety Act. Maintenance guidelines include replacing the base course and surfacing as needed, surface blading, cleaning ditches, cleaning/replacing culverts, cleaning/replacing cattleguards, clearing fallen trees off the roads, controlling the vegetation to provide for sight distance, repairing/removing slides and slumps, installing/maintaining regulatory signs per the Manual on Uniform Traffic Control Devices (MUTCD), and installing/repairing seasonal closure gates.

Surface blading and ditches: Currently the force account crew blades these roads a minimum of once per year. Higher traffic roads require blading more than once per year. Cooperative agreements with the counties (Schedule A) help to keep running surfaces smooth. Severe washboarding and potholing can create a safety hazard causing drivers to lose control of their vehicles. The aggregate surface on some of the roads has deteriorated to a point that they are no longer bladeable. Gravel that should be replaced every ten years has now gone beyond the 20 year mark. Site specific surveys indicate that although the road surface is deteriorating, resource impacts are generally not occurring. Ditches are pulled only when the drainage is no longer functioning.

Culverts, cattleguards and gates: All the ML3 roads are evaluated on an annual basis by the force account crew. Plugged culvert inlets, full catch basins, full cattleguards, and bent or broken gates are cleaned or repaired. Slumps, slides, and boulders in the road are removed and culverts are replaced when necessary.

Signing: The sign crew is responsible for installing, replacing, and straightening regulatory, warning, and guide signs on the Forest. The new MUTCD guidelines require that the retro-reflectivity requirements are met on these signs by 2015.

Dust abatement: Currently, \$93,639 is spent annually applying magnesium chloride to select ML3 roads Forest-wide.

All of the above costs equate to approximately \$520,419 on an annual basis. The costs of the counties blading ML3 roads is approximately \$52,888 annually. In FY2010, 599 miles of ML3 roads were maintained Forest-wide for an annual cost per mile of \$957.

#### Maintenance Level 4 Roads:

ML4 roads are open roads that provide a moderate degree of user comfort and convenience at moderate travel speeds. Most roads are double lane and aggregate surfaced. However, some roads may be single lane with turnouts. Some roads may be paved and/or dust abated. MUTCD is applicable. These roads are subject to the requirements of the Highway Safety Act. The force account crew maintains very few miles of these roads, opting instead for the county cooperative agreements to maintain them. To compensate the counties for this work, the Forest pays for dust abatement and surface rock. The average cost paid to the counties on ML4 roads is \$41,650 on an annual basis. The costs of the counties blading these roads is approximately \$52,888 annually. In FY 2010, 79 miles of ML4 roads were maintained Forest-wide for an annual cost per mile of \$1,197.

#### Maintenance Level 5 Roads:

ML5 roads are open roads that provide a high degree of user comfort and convenience. These roads are normally double lane with paved surfaces. However, some may be aggregate surfaced and dust abated. MUTCD is applicable. Annual blade patching costs approximately \$25,000 Forest-wide. Roads generally are chip sealed every ten years for \$80,000 per mile (\$36,364 per year). In FY2010, 22 miles of ML5 roads were maintained Forest-wide for an annual cost per mile of \$1,500.

#### **Road Deferred Maintenance**

Beginning in 1999, the Forest conducted road condition surveys to determine the actual cost of maintaining the road system to standard. Work items were also recorded to determine the cost of road maintenance deferred in previous years due to lack of funding. Finally, road improvement work necessary to bring the roads up to the desired maintenance level was identified and documented in INFRA. The INFRA database is used by the Forest as a bookkeeping tool to document and track deferred maintenance needs on National Forest System Roads. An example illustrated here is aggregate replacement on a ML3 road: a four inch depth aggregate lift costs approximately \$80,000 per mile, and for tracking purposes is assumed to be required every 10 years. In practice, a particular road may need aggregate replacement more or less often, and a suitable aggregate surface may often be adequately maintained by spot surfacing and by application of dust abatement which extends surfacing life and protects the investment while providing for safe access and resource protection. Detailed surveys and investigation are required on aggregate surfaced roads in optimizing aggregate replacement and investment; utilizing appropriate surface maintenance procedures is also key to maximizing surfacing life and ensuring maximum return on the surfacing dollar. Thus, deferred maintenance numbers in INFRA may not be indicative of the actual funding needed for adequate road maintenance.

Deferred maintenance costs were determined from the INFRA database as of October 2011. Average District-wide \$/mile were determined using only those roads for which costs had been entered into

INFRA. There are many miles of ML1 and ML2 roads for which cost information is not available in INFRA.

### Road Maintenance Costs

Annual and deferred maintenance costs for both the existing road system and the recommended minimum road system are displayed in the tables below. These are average and approximated costs. The costs vary widely from road to road based on site specific conditions. The “Annual \$/mile” was calculated by dividing the \$/mile by the maintenance interval. The “Total \$” columns for both annual and deferred maintenance were calculated by multiplying total miles by the Annual \$/mile. Currently, it is anticipated that the engineers’ estimated actual costs provide a low estimate and that the INFRA costs provide a high estimate. The actual maintenance costs are likely between the two numbers.

*Table B-1: Annual Maintenance Costs for Existing Road System*

Maintenance Level	Total Miles (Columbine District)	Engineers’ \$/mile (Forest-wide average)	INFRA \$/mile (Columbine District average)	Maintenance Interval	Engineers’ Annual \$/mile*	INFRA Annual \$/mile*	Engineers’ Total \$	INFRA Total \$
1	397	\$246	\$2000	20 years	\$12	\$100	\$4764	\$39700
2	177	\$671	\$3500	5 years	\$134	\$700	\$23718	\$123900
3	124	\$957	\$7000	Annually	\$957	\$7000	\$118668	\$868000
4	26	\$1197	\$10000	Annually	\$1,197	\$10000	\$31122	\$260000
5	0.2	\$1500	\$45000	See below	\$1,500	\$45000	\$300	\$9000
Total	724						\$178,572	\$1,300,600.00

\*Calculated for a 5 year interval on Level 2 roads and a 20 year interval on Level 1 roads. Costs for Level 5 roads include blade patching annually and chip sealing every 10 years.

*Table B-2: Annual Maintenance Costs for Minimum Road System*

Maintenance Level	Total Miles (Columbine District)	Engineers’ \$/mile (Forest-wide average)	INFRA \$/mile (Columbine District average)	Maintenance Interval	Engineers’ Annual \$/mile*	INFRA Annual \$/mile*	Engineers’ Total \$	INFRA Total \$
1	258	\$246	\$2000	20 years	\$12	\$100	\$3096	\$25800
2	195	\$671	\$3500	5 years	\$134	\$700	\$26130	\$136500
3	103	\$957	\$7000	Annually	\$957	\$7000	\$98571	\$721000
4	16	\$1,197	\$10000	Annually	\$1,197	\$10000	\$19152	\$160000
5	0.2	\$1,500	\$45000	See below	\$1,500	\$45000	\$300	\$9000
Total	572						\$147,249	\$1,052,300

\*Calculated for a 5 year interval on Level 2 roads and a 20 year interval on Level 1 roads. Costs for Level 5 roads include blade patching annually and chip sealing every 10 years.

*Table B-3: Deferred Maintenance Costs*

Maintenance Level	Existing Road System			Minimum Road System		
	Total Miles (Columbine District)	INFRA \$/mile (Columbine District average)	Total \$	Total Miles (Columbine District)	INFRA \$/mile (Columbine District average)	Total \$
1	397	\$2000	\$796,000	258	\$2000	\$516,000
2	177	\$20,000	\$3,540,000	195	\$20,000	\$3,900,000
3	124	\$75,000	\$9,300,000	103	\$75,000	\$7,725,000
4	26	\$100,000	\$2,600,000	16	\$100,000	\$1,600,000
5	0.2	\$0	\$0	0.2	\$0	\$0
Total	724		\$16,236,000.00	572		\$13,741,000.00

The appropriated funding is adequate to perform annual maintenance on many, but not all, roads on the Columbine District. The deferred maintenance costs are considerably higher than the appropriated funding. As a result, most of the deferred maintenance needs are not currently being addressed. This TAP will inform subsequent site specific NEPA analyses that may carry forward for implementation, reject, or change the recommendations in this report. These NEPA analyses, in combination with strategic prioritization of anticipated allocated funding, will determine how this report is implemented or modified. As additional information is gathered in the future, this information may result in future modifications to the recommendations in this TAP.

### **Other Road Maintenance Funding Sources**

Other funding sources supplement the appropriated funding. The Forest Service, the counties, and the State of Colorado have signed agreements (Schedule A) whereby the counties are paid to perform road maintenance on Forest Service roads (primarily blading of Level 3 and 4 roads). The counties are funded to perform this work through State of Colorado allocations of the Highway User Tax Funds. The work performed by the counties partly offsets the deficit in appropriated road maintenance funding.

Commercial undertakings such as timber sales, oil and gas wells, hauling from private lands, etc. have been charged a percentage of road maintenance costs or have conducted road maintenance actions as part of the project. Road maintenance is provided through these activities for the locations and timeframes when the commercial activity takes place.

A limited amount of road maintenance or decommissioning has occurred after timber sales are complete through the collection of Knudsen-Vandenberg (KV) funds for sale area improvement.

Recently, American Recovery and Reinvestment Act (ARRA) funding has been utilized for surface replacement on paved roads, surface rock replacement on graveled roads, gate purchases and installation, and road decommissioning. In addition, Forest Service Legacy Funding has also been secured for these activities.

### **Trail Maintenance**

The San Juan National Forest budget allocation for the maintenance and management of trails (motorized and non-motorized) has averaged around \$360,000 for the last several years. These appropriations are divided amongst the three Districts and the Supervisor's Office according to established allocation criteria based largely on total trail miles. The Columbine District has historically received approximately 30% of the Forest allocation, or around \$100,000 per year.

Annual operations and maintenance costs for the District's motorized trail system are estimated to be around \$54,000, plus an additional \$263,000 for non-motorized trails, as documented in the INFRA database which utilizes a variety of costing factors to determine maintenance costs. As the annual cost to maintain the entire District trail system to standard is higher than the amount appropriated and allocated to the District, annual trail maintenance targets have historically been reduced to reflect inadequate funding. The District has been able to increase its annual trail maintenance targets despite declining budgets through the expanded use of volunteers and partnering organizations. Priorities for trail maintenance are set on the local level, with no predetermined method for dividing resources between motorized and non-motorized trails, and summer and winter trails. With roughly 50% of trails being maintained to standard each year, the majority of system trails receive maintenance at least once every other year, with the most popular and heavily used trails receiving maintenance yearly.

Deferred trail maintenance and capital improvement needs for motorized the Columbine District is currently estimated to be \$210,000, plus an addition \$509,000 needed for non-motorized trails as

documented in the INFRA database. These numbers, however, do not reflect the considerable work undertaken during the 2010-2011 field seasons to offset trail deferred maintenance as part of the ARRA-funded trail projects, and will be adjusted in the future as condition surveys document accomplishments. Efforts are made annually to address deferred maintenance items, both system-wide and through intensive reconstruction projects. Limitations in funding continue to hamper these efforts, especially relating to the larger reconstruction needs. That being said, considerable strides have been made in recent years to offset deferred maintenance on motorized trails through funding obtained by the Colorado State Trails OHV grant program. The District competed for and received grants for heavy trail maintenance and reconstruction and will continue to utilize this beneficial program to address deferred maintenance needs, as well as other sources of funding and labor not directly tied to standard appropriations, such as Forest Service Legacy Road and Trail funds, partnering trail maintenance organizations, and volunteer groups and individuals.

## APPENDIX C - RISK/BENEFIT ANALYSIS RATIONALE AND METHODOLOGY

### RISKS

#### Condition/Maintenance and Repair Costs

Road and motorized trails are rated based on their existing condition. Routes in good condition are meeting the standards for the route. Although all routes require annual or routine maintenance, routes in poor condition also have deferred maintenance and repair needs in order to bring them back up to standard. Routes in poor condition may also be causing soil and watershed impacts as discussed below.

A risk rating of 3 was assigned to routes currently in poor condition and with high levels of deferred maintenance and repair needs as based on the presence of three or more of the following conditions: washboarding; surface deterioration; landslides; roadbed slumping; slope raveling; drainage problems; rutting or gulling; mud holes; poor condition drainage structures or culverts; and design deficiencies. A risk rating of 2 was assigned to routes with moderate levels of deferred maintenance and repair needs as based on the presence of two or more of the above conditions. A risk rating of 1 was assigned to routes that are in fair or better condition with little or no deferred maintenance and repair needs, no existing damage, or one of the above conditions present.

#### Water Resources

Motorized use can affect water resources primarily by sediment being transported off road and trail surfaces into streams or wetlands. Open roads are devoid of vegetation and have compacted surfaces. A variety of drainage structures are used where they cross drainages and stream channels, such as fords, culverts, and log culverts. Areas of poor drainage can develop mud holes which are deepened and churn up sediment every time vehicles pass through them. Poor route location and inadequate drainage when the route was constructed can exacerbate watershed impacts. For example a route that is adjacent to and parallels a stream is more likely to have poor drainage and direct sediment inputs to the stream than a route that is located further away from the stream and contours along a slope. Drainage structures need to be maintained on a regular basis in order to remain fully functional. Inadequate maintenance can result in increased sediment being transported to streams or wetlands. Closed roads are mostly vegetated and have fewer impacts to water resources, although drainage structures can fail and cause sediment to be introduced to streams or wetlands if the roads are not inspected periodically and maintained as needed.

A risk rating of 3 was assigned to routes located in close proximity to surface water and/or with a history of drainage problems or sediment being transported off the road or trail. A risk rating of 2 was assigned to routes that have some vegetated buffer between the route and surface water and/or have some history of drainage problems or sediment being transported off the route. A risk rating of 1 was assigned to routes that are distant from surface water and/or have a minimal history of drainage problems or sediment being transported off the route.

### Soil/Geologic Hazards

Motorized use can affect soils primarily by causing erosion and loss of soil. Erosion from roads and trails is increased in areas with soils with high erosion ratings, steep slopes, or routes with steep gradients. Poor route location, inadequate drainage structures, and inadequate maintenance can exacerbate soil impacts. Closed roads are mostly vegetated and have fewer erosion problems and impacts to soils, although drainage structures can fail and cause erosion if the roads are not inspected periodically and maintained as needed.

Roads and trails can either be affected by or cause impacts to geologic hazards, such as landslides, slumps, mudflows, or rockfalls. Poorly located routes can exacerbate landsliding. Routes can also be damaged by landslides, slumps, mudflows, or rockfalls, thereby increasing maintenance and repair costs.

A risk rating of 3 was assigned to routes with a history of road damage from landslides, slumps, mudflows, rockfall, retaining wall failure, gullying, soils that are unstable or extremely susceptible to erosion. A risk rating of 2 was assigned to routes that have a history of minor route damage from soil or geologic hazards. A risk rating of 1 was assigned to routes with no history of damage from soil or geologic hazards.

### Wildlife Resources

Three risk ratings were identified for wildlife resources. The three ratings were low, moderate, or high, with a single risk rating provided for each route analyzed. The ratings focus on risks to habitat rather than risks to species as there are many species utilizing the diversity of habitats across the Columbine Ranger District, and species response to disturbance associated with motorized use varies tremendously. A single risk rating that focuses on disturbance impacts to species would not suffice for all species, and a single risk rating that considers risks to both habitat and species would be difficult as individual routes are located in multiple habitats used by multiple species. Risk ratings focus on impacts to wildlife habitat based on road densities and use in a given area as explained below.

The effects of motorized use on wildlife habitat depend on several important factors including their location within suitable habitat, densities within suitable habitat, and amount and type of use occurring. Roads and trails provide access into areas that provide opportunities for an array of recreational use such as firewood collection, rock and mineral collection, collection of medicinal and edible plants, camping in dispersed and in designated areas, and other motorized and non-motorized uses year-round. Roads and trails also provide access and opportunities for an array of forest management activities such as timber management, wildland and prescribed fire management, livestock grazing, oil and gas exploration, lands and special uses, and other activities. Recreational and forest management activities have the ability to negatively or positively affect wildlife habitat depending on their overall affect to key habitats (riparian and wetlands) and habitat attributes utilized for foraging, breeding, and security such as trees and shrubs, grass-forb vegetation, snags, and downed logs and other woody debris.

Based on the above rationale, areas with high road and motorized trail densities are expected to receive higher levels of public and administrative use. In this scenario, there is higher probability of direct and indirect impacts to habitat or habitat attributes utilized by species for breeding, foraging, and security resulting in high risk to the resource. In contrast, areas with low road densities are expected to receive less use; therefore, the degree and probability of impacting habitat and/or key habitat attributes is expected to be less resulting in low risk to the resource. Areas with moderate

road densities are expected to receive moderate levels of public and administrative use, therefore resulting in moderate risk to the resource.

#### Ecological Resources

Motorized use could impact ecological resources by crushing or uprooting vegetation (resulting in deformation or mortality to plants and loss of ground cover), by removing plants and litter (resulting in mortality to plants and loss of ground cover), by causing soil erosion or soil compaction, and by introducing and/or spreading invasive plants that compete with native plants for space, water, and nutrients. These impacts (which are often associated with unauthorized cross-country travel) could adversely affect the composition, structure, and function of the ecosystems in which they occur, and (in addition to affecting general ecological resources) could adversely affect sensitive ecological resources including rare plants, rare plant communities, alpine ecosystems, riparian area/wetland ecosystems, and aquatic ecosystems.

The risk of these impacts occurring is high where there are high road densities, high levels of motorized use, and high concentrations of sensitive ecological resources because more roads likely means more motorized use and more use likely means more impacts, and because high concentrations of sensitive ecological resources means more potential for affects to these resources. The risk of these impacts occurring is low where there are low road densities, low levels of motorized use, and low concentrations of sensitive ecological resources because less roads likely means less motorized use and less use likely means less impacts, and because low concentrations of sensitive ecological resources means less potential for affects to these resources. The risk of these impacts occurring is medium where there are moderate road densities, moderate levels of motorized use, and moderate concentrations of sensitive ecological resources because moderate road densities likely means moderate motorized use and moderate use likely means moderate impacts, and because moderate concentrations of sensitive ecological resources means moderate potential for affects to these resources.

#### Invasive Species

Motor vehicle use has the potential to spread invasive species by dispersing the seed source. The three risk ratings identified for invasive species were low, moderate, or high, with a single risk rating provided for each road and trail analyzed. Risk ratings were tied to both the size and distribution of existing noxious weed populations, as well as the potential for spread of invasive species. The invasive species considered for this analysis are the plant species listed on the Colorado Noxious Weed List.

Risk level 1 was assigned to routes with only a few, small known noxious weed populations, or no known noxious weed populations. These populations do not appear to be spreading. Risk level 2 was assigned to routes with several known noxious weed populations, of any size. These populations have the potential to spread. Risk level 3 was assigned to routes with numerous, often large and contiguous, known noxious weed populations. These populations are often known to be spreading.

### Cultural Resources

Continued use and maintenance of roads and motorized trails has the potential to affect historic properties. Impacts are most commonly found within the route disturbance itself as sites are exposed and damaged through use. Specific site types outside of the road area can also be adversely affected by the presence and use of routes (e.g., rock art panels, structures, Traditional Cultural Properties). Many roads and trails have been in use since before the National Historic Preservation Act (1966) was passed or were constructed as standards for NHPA analysis were in development; many have not been formally inventoried for the presence of cultural resources according to modern standards. Roads and trails which have already resulted in significant ground disturbance through their construction and maintenance (Road Maintenance Level 3 and higher) have already probably done the damage they are going to do to any sites which were located within the route prism.

Continued use and maintenance of these routes has generally been considered exempt from field analysis as actions that “*do not have the potential to cause effects on historic Properties*” as per 36 CFR 800.3(a) and (a)(1). Generally ML 3 roads (and higher) were considered exempt from further analysis and were awarded a “low” risk rating. However, sites may still exist and be impacted by continuing road use and maintenance along less improved dirt roads and motorized trails. The procedure used to award risk ratings along ML 1 and 2 roads during the current analysis involved consulting GIS map layers and other available information to determine if a road or area had been inventoried for cultural resources according to modern standards (pedestrian inventory with transects of approximately 15 meters). Site records for resources located in or near routes were consulted to determine if formal determinations of eligibility to the NRHP had been made for cultural resources along routes. In cases where resources along ML 1 and 2 roads qualified as historic properties (or in the case of some trails were considered likely to qualify as historic properties) risks were considered “high.” In cases where eligibility recommendations for sites along roads/trails were not available and/or there was inadequate inventory, risks were rated as “unknown.” Only in cases where there was adequate inventory along a road and no “needs data” or “eligible” sites were known to exist along the road, were ML 1 or 2 roads or trails awarded a risk rating of “low.”

The cultural resource risk analysis was based on GIS layers available at the time this analysis was being conducted. The majority of roads and trails within the analysis area do not have adequate inventory available to assess risks. These roads are classified as “unknown.” The “unknown” category is not weighted in the risk analysis.

Additionally, historic maps were consulted to determine if a trail was historic; making it highly likely that it would qualify as an historic property. In the event a trail was an historic trail, risks were rated as “high.” Analysis was otherwise identical to that used in road analysis for a Level 1 & 2 road.

### Jurisdiction (roads only)

Roads that access private property where the majority of traffic on the road is related to the private property are better suited as County roads. Roads that provide access to multiple private parcels or large private development(s) were generally rated as 3. Roads that provide access to few private parcels were generally rated as 2. Roads that have no private access were generally rated as 1.

#### Rights-of-Way Acquisition (roads only)

Rights-of-way issues occur when private entities desire to use Forest Service Roads to access private property, and when the Forest Service does not hold an easement for roads providing access to National Forest System lands that cross private lands. It is critical for the Forest Service or counties to acquire easements where a formal deeded right-of-way does not exist for public access. Roads that have multiple or complex unresolved right-of-way issues are rated as 3. If only simple issues are unresolved, the rating is 2. If no unresolved right-of-way situations exist, the rating is 1.

#### Social Conflict (motorized trails only)

The use of motor vehicles on trails is often viewed by some non-motorized trail users as disruptive to their recreational pursuits and experiences. Providing recreation opportunities for motorized users that minimize these types of user group conflicts is a challenge for land managers and planners. Social conflict, therefore, represents a potential risk associated motorized trails. To evaluate the level of risk, trails were assigned a rating of high (3) where there is heavy non-motorized use of the trail and/or instances of user group conflicts are common; a rating of moderate (2) where there is moderate non-motorized use of the trail and/or instances of user group conflicts are occasional; and a rating of low (1) where non-motorized use of the trail is low and instances of user group conflicts are rare. Non-motorized use levels and social conflict assessments were based on the combined professional judgment and field experience of the District specialists, as there was little quantitative use data available to the specialists at the time of analysis.

### **BENEFITS**

#### Motorized Recreation Use

Roads and motorized trails are used for various types of motorized recreation including driving for pleasure, 4-wheel driving, ATV and motorcycle riding, and snowmobile riding. To evaluate the general level of benefit provided by each route to motorized recreationists, each route was assigned a benefit rating of 1, 2, or 3, according to its present level of use for recreation purposes. Routes that are frequently used for motorized recreation purposes were rated as 3, routes that are occasionally used for motorized recreation were rated as 2, and routes that are seldom or never used for motorized recreation were rated as 1. Use levels were based on the combined professional judgment and field experience of the District specialists, as there was little quantitative data on actual road or trail usage on the District available to the specialists at the time of analysis.

#### Recreation Access/Connectivity

Roads and motorized trails are often used to provide motor vehicle access to recreational activities occurring off roads, such as hiking, camping, hunting, firewood gathering, rock collecting, etc. Roads and trails also can provide important connectivity to other roads and motorized trails. To evaluate the level of this type of benefit, routes were assigned a rating of 3 if they provided access to numerous or high value recreation opportunities and/or connectivity to many other motorized routes, a rating of 2 if they provided access to some recreation opportunities and/or connectivity to other motorized routes, and a 1 if they provided access to limited recreation opportunities and/or connectivity to other motorized routes.

#### Range Management (roads only)

Range management utilizes constructed features such as fences, gates, cattleguards, stock ponds, etc., to facilitate livestock distribution, regulate grazing impacts, and maintain livestock health and productivity. Roads and motorized trails are used to more efficiently move equipment and supplies into new construction projects, to access existing facilities for maintenance or reconstruction, or to remove unneeded or obsolete facilities. Routes that provide access to numerous range

improvements, or large or critical areas are rated as 3. Routes that provide access to several range improvement, or moderately-sized areas are rated as 2. Routes that provide access to few range improvement, or only small or non-critical areas are rated as 1.

#### Timber Management Access (roads only)

Roads provide motorized access to areas that periodically undergo various forest management activities such as timber harvest, biomass production or mastication, sale of miscellaneous forest products such as firewood, posts and poles or cones, reforestation, timber stand improvements, and forest restoration treatments. The Forest Plan contains direction to construct and maintain roads to support timber management activities along with a mix of other resource activities. Within those lands comprising the suitable timber base where a high forest cover is to be maintained, Forest Plan direction also established planned re-entry schedules of 10-40 years depending upon the forest cover type.

Roads that provide access to areas that periodically undergo management in multiple timber program areas (e.g. timber, biomass, forest products, forest restoration), primarily within the suitable timber base) were rated a 3. Roads that provide access to areas that infrequently have active management in more than one resource program area were rated a 2. Roads that provide access to areas that rarely have active management or serve only one resource program area were rated a 1.

#### Fuels (roads only)

Fuels treatments involve removal or treatment of forest vegetation (fuels) through various means such as timber harvest, removal of biomass, mastication (mowing) of brush and small trees, and prescribed burning. To be most effective, it is usually recommended that mechanical treatments be followed with one or more prescribed burns. Once an area is treated, repeated prescribed fire treatments are often desired for both fuels management and ecosystem restoration and maintenance. Forests of ponderosa pine and warm-dry mixed conifer within the Wildland Urban Interface (WUI) are the primary target of these initial fuels and restoration treatments. Roads and motorized trails can provide ready access for deployment of prescribed burning personnel and equipment such as engines, dozers, and crew rigs, and often serve as permanent fire containment lines.

Routes that provide numerous opportunities for repeat access and prescribed fire control lines are rated a 3. Routes that provide some opportunities for repeat access and prescribed fire control lines are rated a 2. Routes that provide few opportunities for repeat access and little functionality as prescribed fire containment lines are rated a 1.

#### Forest Management Access (trails only)

Motorized trails are used in various forest management activities such as vegetation management, wildland and prescribed fire management, range management, oil and gas development, lands and special uses. These types of management activities were combined into one rating factor for trails, whereas, they were rated individually for roads; this is because motorized trails are not used for management purposes nearly to the extent that roads are. Motorized trails that provide access to areas that periodically undergo management in multiple resource program areas were generally rated as high (3). Routes that provide motorized access to areas that infrequently have active management in more than one resource program area were generally rated moderate (2). Routes that provide motorized access to areas that rarely have active management or serve only one resource program area were rated low (1).

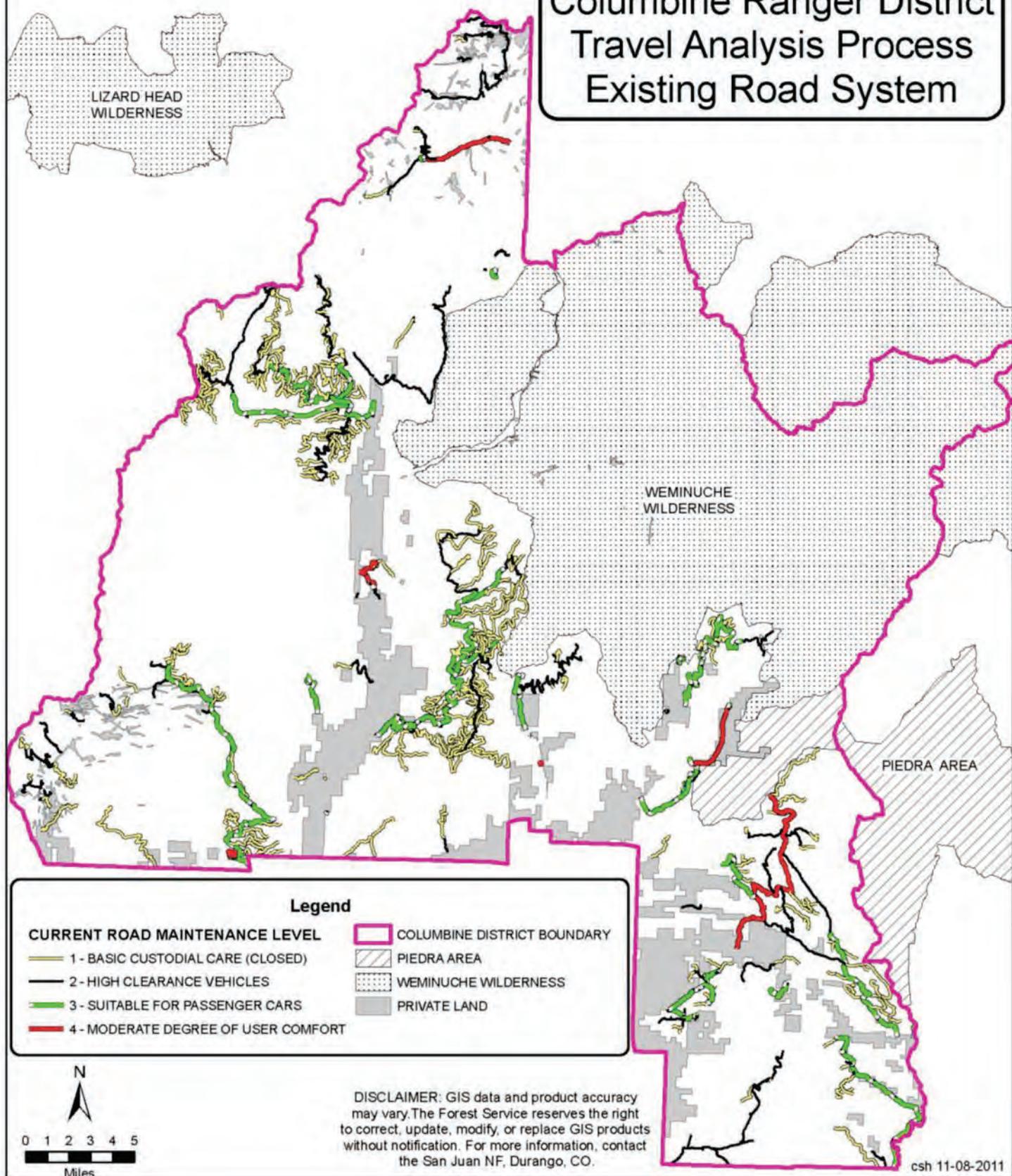
#### Emergency Access

Roads and motorized trails were rated as to their benefit for motor vehicle use for emergency access, primarily fire suppression and search and rescue. To evaluate the general level of benefit provided by each route to emergency access, each route was assigned a benefit rating of 1, 2, or, 3 according to its past use or expected future use for emergency access. Routes that receive high public use, provide access to areas with high public use, or provide access to or are adjacent to private property generally were rated as 3, routes that receive moderate public use, provide access to areas with moderate public use, or provide access to or are adjacent to sparsely populated private property generally were rated as 2, and routes that receive little or no public use, provide access to areas with low public use, or do not provide access to or are adjacent to private property generally were rated as 1. Past and expected future emergency access use levels were based on the combined professional judgment and field experience of the District specialists, as there was little quantitative data on actual emergency access usage on the District available to the specialists at the time of analysis.

## **APPENDIX D - EXISTING ROAD SYSTEM MAP**

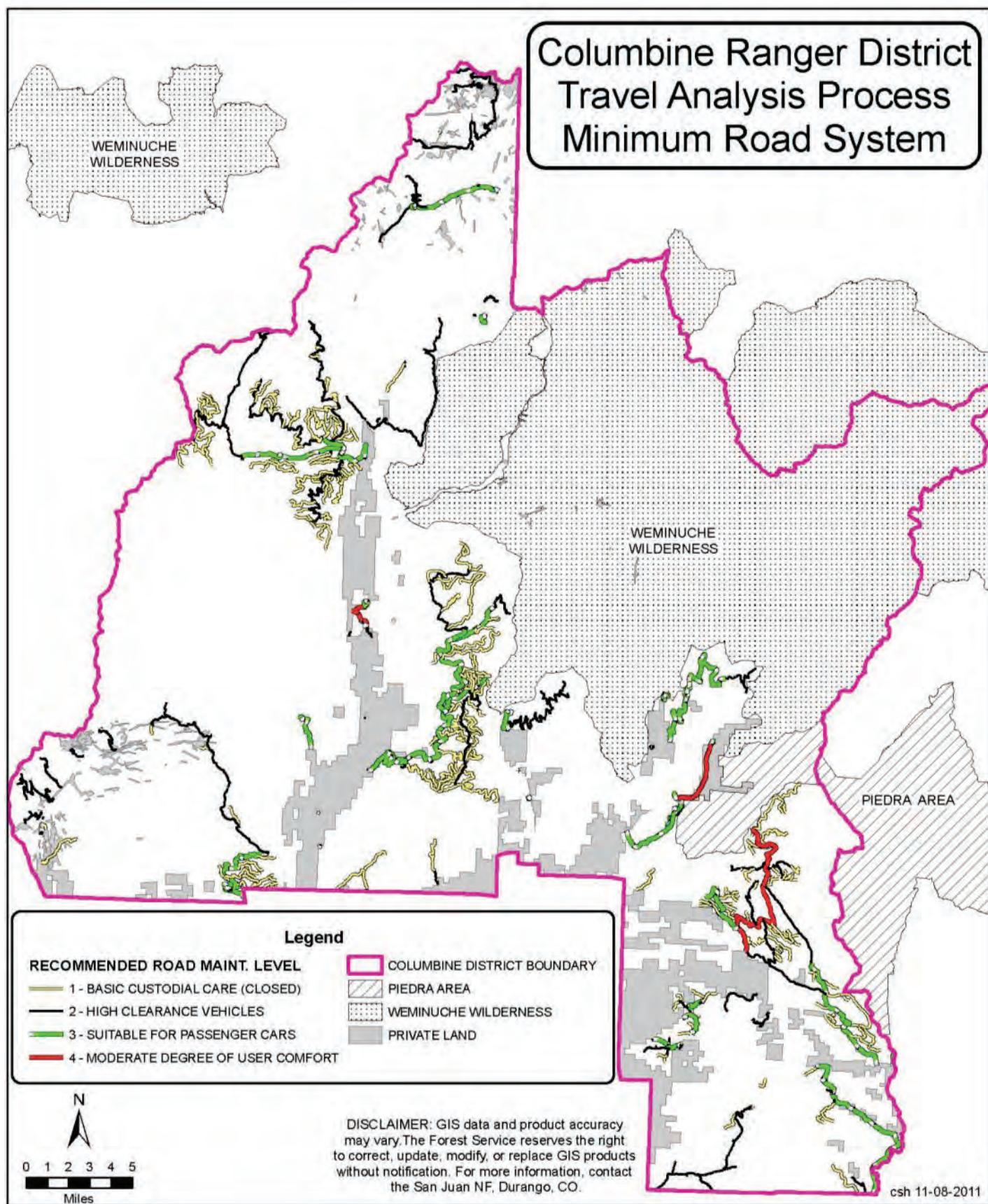
*Existing Road System Map*  
Map next page

# Columbine Ranger District Travel Analysis Process Existing Road System



## **APPENDIX E - RECOMMENDED MINIMUM ROAD SYSTEM MAP**

*Minimum Road System Map*  
next page



## **APPENDIX F – ROAD RISK/BENEFIT SPREADSHEETS**

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	RISK CRITERIA								BENEFIT CRITERIA								OVERALL BENEFIT RATING					
						ROAD CONDITION	WATER RES.	SOILS/ GEOL.	WILDLIFE	ECOL. RES.	INVASIVE SPECIES	CULTURAL	SOCIAL CONFLICT	JURISD.	RIGHT OF WAY	RISK AVERAGE	RISK RATING	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS		
Single Track	NON-MOTORIZED TRAIL	550	CLEAR CREEK	7.16	NO	3	3	3	2	0	1	u	1	0	0	2.17	M	2	2	0	0	0	0	1	2	1.75 M	
Single Track	NON-MOTORIZED TRAIL	521	CORRAL DRAW	5.33	NO	2	2	2	2	0	1	u	2	0	0	1.83	L	2	2	0	0	0	0	1	1	1.50 L	
Single Track	NON-MOTORIZED TRAIL	509	COLUMBINE LAKE	3.23	NO	2	2	3	2	1	1	u	2	0	0	1.86	M	1	2	0	0	0	0	1	1	1.25 L	
CATEGORY SUM				15.73																							
Single Track	Single Track	809	BEAR CREEK SPUR	0.22	NO	1	1	2	2	0	2	U	1	0	0	1.50	M	3	2	0	0	0	0	1	1	1.75 M	
Single Track	Single Track	814	DARK CANYON	2.06	NO	1	1	2	2	0	2	1	1	0	0	1.50	L	3	2	0	0	0	0	1	1	1.75 M	
Single Track	Single Track	518	JONES CREEK	4.03	NO	1	2	2	2	0	2	1	3	0	0	2.00	M	3	3	0	0	0	0	2	2	2.50 H	
Single Track	Single Track	514	HERMOSA CREEK	9.41	NO	1	2	2	2	0	2	1	3	0	0	2.00	M	3	3	0	0	0	0	3	3	3.00 H	
Single Track	Single Track	522	PINKERTON-FLAGSTAFF	6.78	NO	2	1	3	3	0	2	1	3	0	0	2.33	L	3	3	0	0	0	0	3	3	3.00 H	
Single Track	Single Track	516	DUTCH CREEK	5.92	NO	1	3	2	2	0	2	1	3	0	0	2.17	M	3	3	0	0	0	0	3	3	3.00 H	
Single Track	Single Track	810	BEAR CR. LOOP	0.74	NO	1	1	2	2	0	2	U	1	0	0	1.50	L	3	2	0	0	0	0	2	1	2.00 M	
Single Track	Single Track	810	BEAR CR. LOOP	0.38	NO	1	1	2	2	0	2	U	1	0	0	1.50	L	3	2	0	0	0	0	2	1	2.00 M	
Single Track	Single Track	810	BEAR CR. LOOP	0.21	NO	1	1	2	2	0	2	U	1	0	0	1.50	M	3	2	0	0	0	0	2	1	2.00 M	
CATEGORY SUM				29.77																							
ATV Trail	Single Track	522	PINKERTON-FLAGSTAFF	0.09	NO	2	2	3	2	0	2	1	2	0	0	2.17	H	3	2	0	0	0	0	3	3	2.75 H	
CATEGORY SUM				0.09																							
ATV Trail	ATV Trail	683	LITTLE BULL CREEK	4.01	NO	3	3	3	2	1	2	1	1	0	0	2.14	M	2	2	0	0	0	0	2	1	1.75 M	
ATV Trail	ATV Trail	672	GREEN CANYON	4.02	NO	2	3	3	2	0	2	3	2	0	0	2.33	M	3	3	0	0	0	0	3	3	3.00 H	
ATV Trail	ATV Trail	681	RESERVOIR CANYON	2.32	NO	2	2	3	2	0	2	1	2	0	0	2.17	L	3	3	0	0	0	0	3	2	2.75 H	
ATV Trail	ATV Trail	816	RIDGE SADDLE	0.10	NO	1	1	2	2	0	2	U	2	0	0	1.67	M	3	3	0	0	0	0	1	1	2.00 M	
ATV Trail	ATV Trail	697	BALDY LOOP	3.73	NO	2	1	2	2	0	2	1	1	0	0	1.67	L	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	615.A	TURKEY CRK	2.48	NO	1	1	2	3	1	2	1	1	0	0	1.57	M	2	3	0	0	0	0	3	2	2.50 H	
ATV Trail	ATV Trail	712	LANGE CANYON	0.76	NO	3	3	3	2	0	2	1	1	0	0	2.33	M	3	2	0	0	0	0	2	2	2.25 M	
ATV Trail	ATV Trail	530	RUNLETT PARK	2.99	NO	1	1	2	2	0	2	U	2	0	0	1.67	M	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	811	BERI VIEW	0.48	NO	2	1	2	2	0	3	U	1	0	0	1.83	L	3	2	0	0	0	0	1	1	1.75 M	
ATV Trail	ATV Trail	717	ROCKY CANYON	1.32	NO	2	2	1	2	0	2	1	1	0	0	1.67	L	2	1	0	0	0	0	2	1	1.50 L	
ATV Trail	ATV Trail	711	FIRST NOTCH CONNECT	0.53	NO	1	1	1	2	0	2	1	1	0	0	1.33	L	3	2	0	0	0	0	2	2	2.25 M	
ATV Trail	ATV Trail	702	JUNGLE CONNECT	0.22	NO	1	1	1	2	0	2	1	1	0	0	1.33	L	3	1	0	0	0	0	2	1	1.75 M	
ATV Trail	ATV Trail	717	ROCKY CANYON	0.73	NO	2	2	1	2	0	2	1	1	0	0	1.67	L	2	1	0	0	0	0	2	1	1.50 L	
ATV Trail	ATV Trail	701	HORIZON LOOP	2.51	NO	1	1	2	2	0	2	3	2	0	0	1.67	L	3	3	0	0	0	0	1	1	2.00 M	
ATV Trail	ATV Trail	715	MEDICINE MINE CAMP	0.26	NO	2	1	2	2	0	2	1	1	0	0	1.67	M	2	2	0	0	0	0	1	2	1.75 M	
ATV Trail	ATV Trail	694	608 CONNECT	0.94	NO	1	1	2	2	0	2	1	2	0	0	1.67	M	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	710	FIRST NOTCH 3	0.45	NO	1	1	1	2	0	2	1	1	0	0	1.33	L	3	2	0	0	0	0	2	2	2.25 M	
ATV Trail	ATV Trail	700	DEVILS SPUR	0.48	NO	1	2	2	2	0	2	1	1	0	0	1.67	L	2	2	0	0	0	0	1	1	1.50 L	
ATV Trail	ATV Trail	718	SKIMMER	1.07	NO	1	1	2	2	0	2	1	2	0	0	1.67	L	3	3	0	0	0	0	1	1	2.00 M	
ATV Trail	ATV Trail	716	MOONLUCK CONNECT	1.14	NO	1	1	1	2	0	2	3	1	0	0	1.33	L	3	2	0	0	0	0	1	1	1.75 M	
ATV Trail	ATV Trail	698	BEAR CREEK	3.98	NO	2	2	1	2	0	2	1	1	0	0	1.67	L	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	666	UTE CREEK	4.85	NO	2	3	3	2	0	2	3	2	0	0	2.33	L	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	514	HERMOSA CREEK	3.50	NO	1	2	2	2	0	2	1	3	0	0	2.00	M	3	3	0	0	0	0	3	3	3.00 H	
ATV Trail	ATV Trail	707	DEVILS HOLE	2.37	NO	1	2	1	2	0	2	1	1	0	0	1.50	L	2	2	0	0	0	0	1	1	1.50 L	
ATV Trail	ATV Trail	682	BULL CREEK	2.88	NO	1	2	3	2	0	2	1	1	0	0	1.83	M	2	2	0	0	0	0	2	2	2.00 M	
ATV Trail	ATV Trail	713	MEDICINE MINE	1.83	NO	2	1	2	2	0	2	1	1	0	0	1.67	M	3	1	0	0	0	0	1	1	1.50 L	
ATV Trail	ATV Trail	807	RIDGE TRAIL	2.48	NO	1	1	2	2	0	2	1	2	0	0	1.67	L	3	3	0	0	0	0	1	1	2.00 M	
ATV Trail	ATV Trail	514	HERMOSA CREEK	5.58	NO	1	3	2	3	0	2	U	3	0	0	2.33	M	3	3	0	0	0	0	3	3	3.00 H	
ATV Trail	ATV Trail	666	Ute Creek	0.61	NO	3	2	3	2	0	2	3	2	0	0	2.33	M	2	2	0	0	0	0	2	1	1.75 M	
ATV Trail	ATV Trail	695	ARBOGAS	0.23	NO	1	1	2	2	0	2	1	1	0	0	1.50	L	2	1	0	0	0	0	2	1	1.50 L	
ATV Trail	ATV Trail	696	ARBOGAS LOOP	0.38	NO	1	1	2	2	0	2	1	1	1	0	0	1.50	L	2	1	0	0	0	0	2	1	1.50 L
ATV Trail	ATV Trail	812	BERI ATV	0.61	NO	1	1	2	2	0	3	U	2	0	0	1.83	L	3	2	0	0	0	0	2	1	2.00 M	
ATV Trail	ATV Trail	812	BERI ATV	1.08	NO	1	1	2	2	0	3	U	2	0	0	1.83	L	3	2	0	0	0	0	2	1	2.00 M	
ATV Trail	ATV Trail	712	LANGE CANYON	0.72	NO	2	2	2	2	0	2	1	2	0	0	2.00	L	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	719	UNCLE CHARLIE	0.19	NO	1	1	2	2	0	2	3	2	0	0	1.50	M	3	3	0	0	0	0	2	2	2.50 H	
ATV Trail	ATV Trail	812	BERI ATV	0.36	NO	1	1	2	2	0	3	U	2	0	0	1.83	L	3	2	0	0	0	0	2	1	2.00 M	
ATV Trail	ATV Trail	808	VALLECITO VIEW	0.47	NO	2	1	1	2	0	2	U	1	0	0	1.50	M	2	2	0	0	0	0	2	1	1.75 M	
CATEGORY SUM				62.68																							
ML1	Non-System	620.N	FIRST NOTCH N	0.35	NO	3	2	2	1	2	2	1	0	1	1	1.75	L	1	2	2	2	2	1	0	1	1.57 L	
ML1	Non-System	150	HIGH POINT	0.44	NO	1	1	2	1	2	1	2	U	0	1	1.25	L	1	1	3	3	3	1	0	1	1.29 L	
ML1	Non-System	160.A2	JUNGLE CANYON A2	0.39	NO	2	2	1	2	1	2	1	0	1	1	1.50	L	3	1	3	3						

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING		
ML1	Non-System	171.H2	MONUMENT HILL H2	0.48	NO	2	1	2	1	1	1	U	0	1	1	1.25	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	571.H	LA PLATA CANYON H	0.72	NO	2	1	2	1	1	1	1	0	1	1	1.25	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	571.F1	LA PLATA CANYON F1	0.40	NO	3	2	2	2	1	1	1	0	1	2	1.75	M	3	2	1	1	1	1	0	2	1.57	L
ML1	Non-System	573	LIGHTNER CRK	6.74	NO	3	3	2	3	1	2	1	0	2	3	2.38	M	1	1	3	1	2	1	0	1	1.43	L
ML1	Non-System	171.P	CAPE HORN	1.00	NO	2	1	1	2	1	2	U	0	1	1	1.38	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	344.B	BEDROCK CRK B	0.24	NO	2	1	1	2	1	1	1	0	1	1	1.25	L	3	2	2	2	1	1	0	1	1.57	L
ML1	Non-System	408	STAR	0.26	NO	1	1	1	2	1	1	1	0	1	1	1.13	L	3	2	2	1	1	1	0	1	1.57	L
ML1	Non-System	571.F	LA PLATA CANYON F	0.33	NO	3	2	2	2	1	1	1	0	1	2	1.75	M	3	2	1	1	1	1	0	2	1.57	L
ML1	Non-System	571.F	LA PLATA CANYON F	0.59	NO	3	2	2	2	1	1	1	0	1	2	1.75	L	3	2	1	1	1	1	0	2	1.57	L
ML1	Non-System	131.C1	NORTH SAULS CRK C1	0.20	NO	1	2	2	2	1	2	1	0	1	1	1.50	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	841.D	BULL CRK	0.38	NO	3	1	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	841.E	BULL CRK	0.39	NO	3	2	2	2	1	2	1	0	1	1	1.75	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	841.A	BULL CRK	0.90	NO	3	1	2	2	1	2	1	0	1	1	1.63	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	615	GOOSE CRK	1.22	NO	2	3	2	3	1	2	3	0	1	1	1.88	M	1	1	1	1	1	3	0	1	1.29	L
ML1	Non-System	580.G2	BLACK CANYON	0.32	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	550.A	HOTEL DRAW A	1.78	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	544.A2	WOODSY WAY A2	0.83	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	544.A	WOODSY WAY A	2.61	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	550.I	CROSS CRK I	0.15	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	579.P	SLICK ROCK	0.28	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.P	GRASSY CRK P	0.82	NO	2	1	1	2	1	2	1	0	1	1	1.38	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	580.J	GRASSY CRK J	0.23	NO	2	2	1	2	1	1	3	0	1	1	1.38	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	579.J	PANDO J	0.84	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	2	1	1	1	1	0	1	1.14	L
ML1	Non-System	581.E	LINE CANYON	1.16	NO	1	3	2	2	1	2	1	0	1	1	1.63	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	550.G	CROSS CRK G	0.83	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	2	1	1	0	1	1.29	L
ML1	Non-System	579.I	PANDO I	0.88	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	I
ML1	Non-System	578.B	TIN CAN BASIN	0.46	NO	2	1	2	2	1	2	1	0	1	1	1.38	L	1	2	1	1	1	1	0	1	1.14	L
ML1	Non-System	550.A2	HOTEL DRAW A2	0.47	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	544.B	WOODSY WAY B	1.16	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.F	LOOP SPUR	1.37	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	614	GRAY ROCK	1.36	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	550.F	HOTEL DRAW F	2.02	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	614.A	GRAYROCK SPUR	1.26	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	564.X	DIVIDE X	0.45	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	550.G3	CROSS CRK G3	0.95	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	580.H1	GRASSY CRK H1	0.13	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	550.G4	CROSS CRK G4	0.57	NO	2	1	2	2	1	2	U	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	550.B	MOTEL	1.49	NO	2	1	2	2	1	2	3	0	1	1	1.50	L	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	594	RELAY CRK SPUR	2.19	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.G6	GRASSY CRK 6	0.20	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	579.Q	Q SPUR	0.25	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	597.J1	PANDO J1 SPUR	0.55	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.E	HOTEL DRAW E	0.33	NO	2	1	2	2	1	2	U	0	1	1	1.50	M	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	580	RELAY CRK	2.96	NO	2	1	2	2	1	2	1	0	1	1	1.50	L	1	2	2	2	1	1	0	1	1.43	L
ML1	Non-System	581.N1	ELBERT CRK BRANCH	0.69	NO	2	2	2	2	1	2	U	0	1	1	1.63	L	3	3	1	2	1	0	3	2.29	M	
ML1	Non-System	027	FORBAY LAKES	0.98	NO	3	3	2	3	3	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	544.C	WOODSY WAY C	0.32	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	203.B2	PINE STUMP B2	0.39	NO	2	3	2	3	1	2	1	0	2	2	2.13	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.C2	SIG CRK LOOP SPUR	0.39	NO	2	1	2	2	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	579.S	HIGH LINE	0.63	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	581.I	PURGATORY LIFT 1	0.32	NO	2	3	2	2	1	2	1	0	1	1	1.75	L	3	3	1	2	1	0	3	2.29	M	
ML1	Non-System	580.H	GRASSY CRK H	0.36	NO	2	2	2	2	1	2	1	0	1	1	1.63	M	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	065	FALLS CRK FIRE ACCESS	1.91	NO	3	1	2	2	1	2	3	0	3	3	2.13	M	1	1	1	1	1	1	0	3	1.57	L
ML1	Non-System	149	HERMOSA PEAK	0.95	NO	2																					

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL		MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING	
															RIGHT OF WAY	RISK RATING	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING	
ML1	Non-System	595	BURNT TIMBER	3.84	NO	3	2	3	2	1	2	1	0	1	1	1.88	M	1	1	3	1	1	1	0	1	1.29	L
ML1	Non-System	076.L	RED RIM L	0.29	NO	2	1	2	3	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	580.C	SIG CRK LOOP	1.48	NO	2	2	2	2	1	2	1	0	1	1	1.63	H	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	581.C	CLIFF	0.21	NO	1	1	1	3	1	2	1	0	1	1	1.38	L	1	1	1	3	1	1	0	1	1.29	L
ML1	Non-System	724.A	MIDDLE MTN A	0.97	NO	2	3	2	1	1	2	u	0	1	1	1.63	L	3	3	1	1	1	1	0	1	1.57	L
ML1	Non-System	599.A	RED CRK A	0.52	NO	3	3	3	2	1	2	u	0	1	1	2.00	M	1	1	2	1	2	1	0	1	1.29	L
ML1	Non-System	724.C	MIDDLE MTN C	1.17	NO	2	3	2	1	1	2	u	0	1	1	1.63	M	1	1	1	2	1	1	0	1	1.14	L
ML1	Non-System	597.C1	EAST FLORIDA C1	0.88	NO	3	2	2	1	1	2	1	0	1	1	1.63	M	2	1	2	1	1	1	0	1	1.29	L
ML1	Non-System	597.A	EAST FLORIDA A	0.19	NO	3	1	1	1	1	2	1	0	1	1	1.38	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	599.B	RED CRK B	0.47	NO	3	3	3	2	1	2	u	0	1	1	2.00	L	1	1	2	1	2	1	0	1	1.29	L
ML1	Non-System	724.F	MIDDLE MTN F	0.21	NO	3	2	2	3	1	2	1	0	1	1	1.88	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	597.B	EAST FLORIDA B	1.24	NO	3	3	2	1	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	795	ROLLING MTN	1.46	NO	3	2	1	3	1	1	3	0	1	2	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	822	BULLION KING	0.49	NO	2	2	2	2	1	2	3	0	2	2	1.88	M	2	2	3	1	1	1	0	2	1.71	M
ML1	Non-System	816	CLEAR LAKE BRANCH 1	0.34	NO	2	3	2	3	1	1	1	0	1	1	1.75	M	2	1	1	1	1	1	0	1	1.14	L
ML1	Non-System	203.1	PINE STUMP 1	1.13	NO	2	2	2	3	1	2	1	0	3	3	2.25	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	083.B	TRUE CRK B	0.47	NO	3	3	2	3	1	2	1	0	1	1	2.00	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	079.A	HORSETHIEF PARK A	0.23	NO	2	1	2	3	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	200	PINE STUMPED	0.92	NO	3	1	2	3	1	2	1	0	3	3	2.25	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	076.I1	RED RIM I	0.27	NO	3	3	2	3	1	2	1	0	1	1	2.00	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	080.A	STEVENS CRK A	1.69	NO	3	2	2	3	1	2	1	0	1	1	1.88	L	1	1	3	1	1	1	0	1	1.29	L
ML1	Non-System	081.C	LIME MESA C	1.09	NO	2	2	2	3	1	2	1	0	1	1	1.75	M	1	1	3	1	1	1	0	1	1.29	L
ML1	Non-System	682.F	SOUTH BEAR F	0.93	NO	2	2	2	3	1	2	1	0	1	1	1.75	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	051	BEAR BENCH MARK	3.21	NO	3	3	2	3	1	2	1	0	1	1	2.00	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	076.N	RED RIM N	0.36	NO	2	3	2	2	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	203.A	PINE STUMP A	0.54	NO	2	3	2	3	1	2	1	0	2	2	2.13	L	1	1	1	1	1	1	0	1	1.00	I
ML1	Non-System	682.C2	BIG BEAR PARK C2	1.25	NO	2	2	2	2	1	2	1	0	1	1	1.63	M	1	1	1	2	1	1	0	1	1.29	L
ML1	Non-System	010	SHEARER CRK	0.89	NO	3	2	2	3	1	2	1	0	1	1	1.88	L	1	1	1	2	1	1	0	1	1.29	L
ML1	Non-System	078.A	PRETTY CRK A	0.92	NO	3	2	3	3	1	2	1	0	1	1	2.00	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	682.C4	BIG BEAR PARK C4	0.98	NO	2	2	2	3	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	682.H	NORTH BEAR	0.76	NO	2	3	2	3	1	2	1	0	1	1	1.88	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	682.G2	LITTLE BEAR G2	0.85	NO	2	2	3	2	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	049.E	WALLACE FERN	0.32	NO	3	1	2	1	1	2	1	0	1	1	1.50	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	079.D	HORSETHIEF PARK D	0.65	NO	2	2	2	1	1	2	1	0	1	1	1.50	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	203.B1	PINE STUMP B1	1.34	NO	2	3	2	3	1	2	1	0	2	2	2.13	M	1	1	3	1	1	1	0	1	1.29	L
ML1	Non-System	076.H	RED RIM H	0.38	NO	2	1	2	2	1	2	1	0	1	1	1.50	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	076.M	RED RIM M	1.17	NO	2	3	2	3	1	2	1	0	1	1	1.88	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	203.B	PINE STUMP B	0.56	NO	2	3	2	3	1	2	1	0	2	2	2.13	L	1	1	3	1	1	1	0	1	1.29	L
ML1	Non-System	595.I	SOUTH BURNT TIMBER	5.35	NO	2	2	2	2	1	2	1	0	1	1	1.63	M	1	1	2	1	1	1	0	2	1.29	L
ML1	Non-System	076.I	RED RIM I	1.51	NO	3	3	2	3	1	2	1	0	1	1	2.00	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	077.A	WALLACE LAKE A	0.37	NO	3	3	2	2	1	2	1	0	1	1	2.00	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	076.E	RED RIM E	0.52	NO	2	1	2	2	1	2	1	0	1	1	1.50	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	077	WALLACE LAKE	3.30	NO	3	2	2	2	1	2	1	0	1	1	1.75	L	1	2	3	1	1	1	0	2	1.57	L
ML1	Non-System	595.G1	BURNT TIMBER G1	0.46	NO	3	2	2	2	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	049.B1	WALLACE BRUSH	0.44	NO	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	083.C	TRUE CRK C	0.93	NO	3	3	2	3	1	2	1	0	1	1	2.00	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	595.G	BURNT TIMBER G	0.77	NO	3	2	2	2	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	079.C	HORSETHIEF PARK C	0.28	NO	2	3	2	1	1	2	1	0	1	1	1.63	M	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	076.M1	RED RIM M1	0.28	NO	3	2	2	3	1	2	1	0	1	1	1.88	L	1	1	1	1	1	1	0	1	1.00	L
ML1	Non-System	070.B	POISON CRK B	1.23	NO	2	3	2	2	1	2	1	0	1	1	1.75	L	1	1	2	3	2	2	0	1	1.71	M
ML1	Non-System	595.J	BLODGETT	0.51	NO	3	2	2	2	1	2	1	0	1	1	1.75	M	1	2	3	2	2	1	0	1	1.43	L
ML1	Non-System	682.B	NORTH FORK ASPEN	0.29	NO	3	2	2	3	1	2	1	0	1	1	1.88	M	1	1	3	2	1	1	0	1	1.00	L
ML1	Non-System	203.1	PINE STUMP 1	0.20	NO	2	2	2	3	1	2	1	0	3	3	2.25	L										

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL						BENEFIT AVERAGE	OVERALL BENEFIT RATING						
															MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS						
ML1 / ATV	ML1 / ATV	135.F1 / 719	BEAVER MDWS F1/UNCLE CHARLIE	0.39	YES	2	1	1	2	2	3	1	0	1	1	1.63	L	3	1	1	1	1	1	0	1	1.29	L	
ML1 / ATV	ML1 / ATV	620.A / 709	FIRST NOTCH A/FIRST NOTCH 2	0.53	YES	1	1	2	2	3	2	U	0	1	1	1.63	M	3	2	3	3	2	1	0	3	1.14	L	
ML1 / ATV	ML1 / ATV	B / 697	Seismic Line / BALDY LOOP	0.73	YES	3	2	2	2	2	1	0	1	1	1.88	M	3	2	3	3	2	1	0	3	2.43	H		
ML1 / ATV	ML1 / ATV	620.F / 709	FIRST NOTCH F/FIRST NOTCH 2	2.01	YES	1	1	2	2	2	2	U	0	1	1	1.50	M	3	1	2	3	3	1	0	2	2.14	M	
ML1 / ATV	ML1 / ATV	620.J / 708	FIRST NOTCH J/FIRST NOTCH 1	0.66	YES	1	1	2	2	2	2	U	0	1	1	1.50	L	3	1	2	3	3	1	0	3	2.29	M	
ML1 / ATV	ML1 / ATV	620.G / 710	FIRST NOTCH G/FIRST NOTCH 3	1.04	YES	1	1	2	2	2	2	1	0	1	1	1.50	L	3	1	2	3	3	1	0	2	2.14	M	
ML1 / ATV	ML1 / ATV	620.E / 708	FIRST NOTCH E / FIRST NOTCH 1	1.36	YES	1	1	2	2	2	2	1	0	1	1	1.50	L	3	1	2	3	3	1	0	2	2.14	M	
ML1 / ATV	ML1 / ATV	620.D / 709	FIRST NOTCH D/FIRST NOTCH 2	0.56	YES	1	1	2	2	2	2	U	0	1	1	1.50	L	3	1	2	3	3	1	0	2	2.14	M	
ML1 / ATV	ML1 / ATV	160.A1 / 717	JUNGLE CANYON A1	2.01	YES	2	3	3	1	2	2	1	0	3	3	2.38	L	1	1	1	1	1	2	1	0	1.29	L	
ML1 / ATV	ML1 / ATV	620.R / 710	FIRST NOTCH R/FIRST NOTCH 3	0.70	YES	1	2	2	2	2	2	U	0	1	1	1.63	H	1	1	3	3	3	1	0	1	1.86	M	
ML1 / ATV	ML1 / ATV	135.F / 719	BEAVER MDWS F/UNCLE CHARLIE	1.46	YES	2	1	1	2	2	3	1	0	1	1	1.63	L	3	1	1	3	3	1	0	2	2.00	M	
ML1 / ATV	ML1 / ATV	131 / 699	NORTH SAULS CRK / BLACK DRAW	0.82	YES	1	1	2	3	1	2	1	0	1	1	1.50	M	3	2	2	1	3	3	0	3	2.43	H	
ML1 / ATV	ML1 / ATV	841 / 682	BULL CRK / BULL CREEK	1.85	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	3	3	1	1	1	3	0	3	2.14	M	
ML1 / ATV	ML1 / ATV	131.D / 712	NORTH SAULS CRK D/LANGE CYN	0.31	YES	3	3	3	3	1	3	1	0	1	1	2.25	L	3	3	3	3	1	2	1	0	2	2.14	M
ML1 / ATV	ML1 / ATV	131.D / 712	NORTH SAULS CRK D/LANGE CYN	0.44	YES	3	3	3	3	1	3	1	0	1	1	2.25	L	3	3	3	3	1	2	1	0	2	2.14	M
ML1 / ATV	ML1 / ATV	608.C / 701	SAULS CRK C / HORIZON LOOP	0.38	YES	1	1	2	2	1	2	1	0	1	1	1.38	L	3	2	1	1	2	3	0	2	2.00	M	
ML1 / ATV	ML1 / ATV	755.A3 / 807	FENDER A3 / RIDGE TRAIL	0.30	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	3	3	1	1	3	3	0	2	2.29	M	
ML1 / ATV	ML1 / ATV	755.A1 / 807	FENDER / RIDGE TRAIL	0.13	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	2	2	3	1	3	3	0	2	2.29	M	
ML1 / ATV	ML1 / ATV	131 / 712	NORTH SAULS CRK / LANGE CYN	0.09	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	3	2	2	1	3	3	0	3	2.43	H	
ML1 / ATV	ML1 / ATV	620.R / 711	FIRST NOTCH R/1ST NOTCH CONN	0.47	YES	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	3	3	3	1	0	1	1.86	M	
ML1 / ATV	ML1 / ATV	620.F / 710	FIRST NOTCH F/FIRST NOTCH 3	0.22	YES	1	1	2	2	2	2	U	0	1	1	1.50	L	3	1	2	3	3	1	0	2	2.14	M	
ML1 / ATV	ML1 / ATV	620.C / 708	FIRST NOTCH C/FIRST NOTCH 1	0.57	YES	1	1	2	2	2	2	1	0	2	1	1.63	L	1	1	2	3	3	1	0	2	1.86	M	
CATEGORY SUM				17.03																								
ML1	ML1	620.M	FIRST NOTCH M	0.35	YES	1	2	2	2	2	2	1	0	1	1	1.63	L	1	1	2	3	3	1	0	1	1.71	M	
ML1	ML1	620.C	FIRST NOTCH C	0.95	YES	1	1	2	2	2	2	1	0	2	1	1.63	L	1	1	2	3	3	1	0	2	1.86	M	
ML1	ML1	604.A	ARBOGAS A	1.44	YES	1	1	1	1	1	1	1	0	1	1	1.00	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	620.L	FIRST NOTCH L	0.72	YES	2	2	2	2	2	2	3	0	1	1	1.75	M	1	1	2	3	3	1	0	3	2.00	M	
ML1	ML1	135	BEAVER MEADOWS	4.40	YES	1	1	1	3	1	3	1	0	1	1	1.50	M	1	1	3	3	3	1	0	3	1.86	M	
ML1	ML1	620.N	FIRST NOTCH N	0.30	YES	3	2	2	1	2	2	1	0	1	1	1.75	L	1	2	2	2	2	1	0	1	1.57	L	
ML1	ML1	604020.A	OBLITERATION CANDIDATE	0.46	YES	2	1	2	2	2	2	U	0	1	1	1.63	M	1	1	2	3	3	1	0	1	1.43	L	
ML1	ML1	604020.0	OBLITERATION CANDIDATE	0.39	YES	2	2	2	2	2	2	1	0	1	1	1.75	L	1	1	3	3	3	1	0	1	1.71	M	
ML1	ML1	620.K	FIRST NOTCH K	1.16	YES	1	1	3	2	3	2	3	0	1	1	1.75	L	1	1	2	3	3	1	0	3	2.00	M	
ML1	ML1	620.P	FIRST NOTCH P	0.62	YES	2	1	2	2	2	2	1	0	1	1	1.63	L	1	1	2	3	3	1	0	1	1.71	M	
ML1	ML1	604.B	ARBOGAS B	0.66	YES	2	1	2	2	2	2	3	0	1	1	1.63	H	1	1	3	3	3	1	0	2	2.00	M	
ML1	ML1	620.H	FIRST NOTCH H	0.50	YES	1	1	2	2	2	2	1	0	1	1	1.50	L	1	1	2	3	3	1	0	2	1.86	M	
ML1	ML1	069	BALDY MTN	0.87	YES	1	2	1	3	1	2	1	0	1	1	1.50	L	3	1	3	1	1	1	0	1	1.57	L	
ML1	ML1	160.B1	JUNGLE CANYON B1	0.81	YES	2	1	1	2	1	2	U	0	1	1	1.38	L	1	1	1	2	1	1	0	1	1.14	L	
ML1	ML1	620.J	FIRST NOTCH J	0.39	YES	1	1	2	2	2	2	U	0	1	1	1.50	L	1	1	2	3	3	1	0	2	1.86	M	
ML1	ML1	802	GRASSY MTN	1.72	YES	2	1	1	3	1	2	U	0	3	2	1.88	L	1	1	3	1	3	1	0	3	1.86	M	
ML1	ML1	604.C	ARBOGAS C	0.68	YES	2	1	1	2	2	2	1	0	1	1	1.50	L	1	1	3	3	3	1	0	2	2.00	M	
ML1	ML1	806	INDIAN MTN	1.23	YES	1	1	1	2	1	2	U	0	1	1	1.25	L	1	1	3	3	3	1	0	1	1.57	L	
ML1	ML1	135.F3	BEAVER MEADOWS F3	0.43	YES	2	1	1	2	2	2	1	0	1	1	1.50	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	537.I	SPRING CRK I	1.17	YES	1	1	2	3	1	2	1	0	1	1	1.50	M	1	1	2	1	1	2	0	3	1.57	L	
ML1	ML1	135.F2	BEAVER MEADOWS F2	0.51	YES	2	1	1	2	2	2	1	0	1	1	1.50	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	171.P	CAPE HORN	1.10	YES	2	1	1	2	1	2	U	0	1	1	1.38	L	1	1	1	2	1	1	0	1	1.14	L	
ML1	ML1	171.E	HIGH PINE	0.99	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	171.D	BURNT PINE	1.19	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	171.A	PINE CHUTE	1.38	YES	1	1	1	3	1	2	3	0	1	1	1.38	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	755.A1	CAPE HORN	0.07	YES	3	2	2	2	1	1	U	0	1	1	1.63	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	608.E	SAULS CRK E	0.18	YES	1	2	2	3	1	2	1	0	1	1	1.63	L	1	1	1	1	1	1	0	2	1.43	L	
ML1	ML1	131.C2	NORTH SAULS CRK C2	0.51	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	1	1	1	2	1	1	0	2	1.86	M	
ML1	ML1	841.G	BULL CRK G	0.25	YES	1	1	2	2	1	2	1	0	1	1	1.38	L	1	1	1	2	1	1	0	1	1.29	L	
ML1	ML1	841.F	BULL CRK F	0.07	YES	1	2	2	2	1	2	1	0	1	1	1.50	M	1	1	1	1	1	1	0				

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL		MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING			
															ECOL. RES.	SOCIAL CULTURAL	JURISD.	RIGHT OF WAY	RISK AVERAGE	RISK RATING									
ML1	ML1	581.Gx		0.10	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1			0.28	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1			0.87	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	578.x		0.10	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	579.D1	HIGHLINE SPUR	0.18	YES	2	1	2	2	1	2	1	0	1	1	1.50	M	1	1	1	2	1	1	0	1	1.14	L		
ML1	ML1	579.D	CASCADE SPUR D	1.29	YES	2	2	2	2	1	2	1	0	1	1	1.50	L	1	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	579.C	PASTURE CRK	3.03	YES	1	2	2	2	1	2	1	0	1	1	1.50	L	1	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	580.B	NEWBOLT	2.60	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	580.B1	NEWBOLT B1	0.76	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	579.A1	RIM SPUR A1	0.67	YES	2	1	2	2	1	2	3	0	1	1	1.38	L	1	1	1	3	1	1	1	0	1	1.29	L	
ML1	ML1	717.B	PETTY CRK BRANCH	1.24	YES	2	2	2	2	1	2	u	0	1	1	1.63	L	1	1	2	1	2	1	1	0	1	1.14	L	
ML1	ML1	579.I	PANDO CRK I	0.89	YES	2	2	2	2	1	2	1	0	1	1	1.63	H	1	1	1	2	1	1	1	0	1	1.14	L	
ML1	ML1	579.B	CASCADE SPUR B	0.61	YES	2	1	1	2	1	2	1	0	1	1	1.38	M	1	1	1	3	1	1	1	0	1	1.29	L	
ML1	ML1	581	ELBERT CRK	0.95	YES	1	1	1	2	1	3	1	0	1	1	1.38	L	1	2	3	3	1	1	1	0	1	1.71	M	
ML1	070	070	CIRCLE DRIVE	7.44	YES	2	2	2	3	1	2	1	0	1	1	1.75	L	1	1	3	3	2	1	0	2	1.86	M		
ML1	ML1	682.F1	SOUTH BEAR F1	0.86	YES	2	1	2	2	1	2	1	0	1	1	1.50	M	1	1	1	2	1	1	1	0	1	1.14	L	
ML1	ML1	578.A	EAST HERMOSA	1.81	YES	1	1	1	2	1	2	1	0	1	1	1.25	L	1	1	2	3	1	1	1	0	1	1.43	L	
ML1	ML1	581.P	PURGATORY P	0.52	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	3	3	1	3	2	1	1	0	3	2.29	M	
ML1	ML1	550.G2	CROSS CRK G2	3.43	YES	2	1	2	2	1	2	u	0	1	1	1.50	L	2	1	1	2	1	1	1	0	1	1.29	L	
ML1	ML1	580.A	CASCADE PIT	0.14	YES	3	1	1	1	2	1	2	1	0	1	1	1.38	L	1	1	1	2	1	1	1	0	1	1.14	L
ML1	ML1	579.E1	LOOP SPUR	0.58	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	1	1	1	2	1	1	1	0	1	1.14	L	
ML1	ML1	580.D	SIG CRK	1.57	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	1	2	1	3	1	1	1	0	1	1.43	L	
ML1	ML1	772.A1	PURGATORY A1	0.49	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	135.B	CLEAR RED	2.39	YES	1	2	2	3	1	2	1	0	1	1	1.63	L	1	1	3	3	1	1	1	0	2	1.71	M	
ML1	ML1	620.S	FIRST NOTCH S	0.71	YES	1	2	2	2	2	2	1	0	1	1	1.63	M	3	1	2	3	3	1	0	1	2.00	M		
ML1	ML1	571.A	OHWILER RIDGE	3.15	YES	2	2	2	1	1	1	u	0	1	1	1.88	M	1	2	1	1	2	1	0	2	1.43	I		
ML1	ML1	608.D	SAULS CRK D	0.15	YES	1	1	2	2	1	2	1	0	1	1	1.38	L	1	1	1	1	1	1	3	0	2	1.43	L	
ML1	ML1	581.P1	PURGATORY P1	0.33	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1			0.36	YES	2	2	2	2	2	1	3	u	0	1	1	1.75	L	3	3	1	3	2	1	0	3	2.29	M	
ML1	ML1			0.51	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1			0.15	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	081.B1	CAMP CRK B1	0.52	YES	2	2	2	2	1	2	1	0	1	1	1.63	M	1	1	1	2	1	1	0	1	1.14	L		
ML1	ML1	137	TANK CRK	0.66	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	2	1	1	1	1	0	1	1.14	L	
ML1	ML1	579.F	GRAYROCK	1.72	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	1	2	2	1	1	1	0	1	1.29	L		
ML1	ML1	595.C	BURNT TIMBER C	0.79	YES	3	2	2	2	1	2	1	0	1	1	1.75	M	1	2	2	1	1	1	0	1	1.29	L		
ML1	ML1	595	BURNT TIMBER	1.14	YES	3	2	3	2	1	2	1	0	1	1	1.88	M	1	1	3	1	1	1	0	1	1.29	L		
ML1	ML1	581.D	DIVINE	0.33	YES	1	2	2	2	1	2	1	0	1	1	1.50	L	1	1	1	2	1	1	0	1	1.14	L		
ML1	ML1	579.G	CAMP CRK	1.10	YES	2	1	1	2	1	2	1	0	1	1	1.38	L	1	1	2	1	1	1	0	1	1.14	L		
ML1	ML1	581.N	ELBERT CRK BRANCH	1.50	YES	2	2	2	2	1	2	u	0	1	1	1.63	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	580.C	SIG CRK LOOP	1.55	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	1	1	1	2	1	0	1	1.14	L		
ML1	ML1	581.J	PURGATORY	1.33	YES	2	2	2	2	1	2	1	0	1	1	1.63	M	3	3	1	3	2	1	0	3	2.29	M		
ML1	ML1	579.M	E. Z. CR.	0.51	YES	2	3	2	2	1	2	1	0	1	1	1.75	L	1	1	1	2	1	1	0	1	1.14	L		
ML1	ML1	550.C	SODA	0.46	YES	2	1	2	2	1	2	1	0	1	1	1.50	M	2	1	1	2	1	1	0	1	1.29	M		
ML1	ML1	581.B	LINE CANYON	1.75	YES	1	1	1	2	1	2	1	0	1	1	1.25	L	1	2	2	3	1	1	1	0	1	1.57	L	
ML1	ML1	579.A2	RIM SPUR A2	0.28	YES	2	1	1	2	1	2	1	0	1	1	1.38	L	1	1	1	2	3	1	1	0	1	1.43	L	
ML1	ML1	580.E1	SHORT CUT	1.01	YES	2	1	1	2	1	2	1	0	1	1	1.38	L	1	2	1	3	1	1	1	0	1	1.43	L	
ML1	ML1	578.A1	E. HERMOSA FORK	1.36	YES	1	1	1	2	2	2	1	0	1	1	1.38	L	1	1	1	2	3	1	1	0	1	1.43	L	
ML1	ML1			0.02	YES	2	2	2	2	1	3	u	0	1	1	1.75	L	3	3	1	3	2	1	1	0	3	2.29	M	
ML1	ML1			0.59	YES	2	2	2	2	1	3	u	0	1	1	1.75	M	3	3	1	3	2	1	1	0	3	2.29	M	
ML1	ML1	049.A	WALLACE WOODS	2.45	YES	3	2	2	2	1	2	1	0	1	1	1.75	M	1	2	1	1	1	1	1	0	1	1.14	L	
ML1	ML1	682.B	NORTH FORK ASPEN	0.92	YES	3	2	2	3	1	2	1	0	1	1	1.88	M	1	1	3	2	1	1	1	0	1	1.43	L	
ML1	ML1	682.D	BEAR CR CABIN	0.91	YES	2	2	2	3	1	2	1	0	1	1	1.75	M	1	1	3	1	1	1	1	0	1	1.29	L	
ML1	ML1	049.A1	WALLACE SPUR	0.49	YES	3	1	2	2	1	2	1	0	1	1	1.63	M	1	2	1	1</								

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	WILDLIFE	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL		MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING	
																RIGHT OF WAY	RISK AVERAGE	RISK RATING										
ML1	ML1	595.E	BURNT TIMBER E	0.89	YES	2	2	2	2	1	2	1	0	1	1	1.63	M	1	1	1	3	2	1	0	1	1.43	L	
ML1	ML1	076	RED RIM	2.26	YES	3	3	2	3	1	3	1	0	1	1	2.13	L	1	2	3	2	2	1	0	2	1.86	M	
ML1	ML1	682.C3	BIG BEAR PARK C3	0.95	YES	2	2	3	2	1	2	1	0	1	1	1.75	M	1	1	1	2	1	1	0	1	1.14	L	
ML1	ML1	076.I1	SPUR	1.59	YES	3	3	2	3	1	2	1	0	1	1	2.00	M	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	595.A2	LONG HOLLOW A2	0.92	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	2	1	2	1	1	0	1	1.29	L	
ML1	ML1	076.G	RED RIM G	0.92	YES	2	2	2	2	1	2	1	0	1	1	1.63	M	1	2	1	1	1	1	0	1	1.14	L	
ML1	ML1	076.J	RED RIM J	1.86	YES	3	2	2	3	1	2	1	0	1	1	1.88	L	1	2	1	1	1	1	0	1	1.14	L	
ML1	ML1	049	WALLACE PARK	2.38	YES	2	2	2	2	1	2	1	0	1	1	1.63	M	1	2	3	3	2	1	0	3	2.14	M	
ML1	ML1	682.E	TANK CRK	1.50	YES	2	1	1	2	1	2	1	0	1	1	1.38	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	676	TRIMBLE GS	0.13	YES	1	2	2	1	1	3	1	0	1	1	1.50	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	079	HORSETHIEF PARK	2.88	YES	2	3	3	3	1	2	1	0	1	1	2.00	M	1	2	1	1	1	1	0	1	1.14	L	
ML1	ML1	081.B	CAMP CRK B	0.59	YES	2	3	2	2	1	2	1	0	1	1	1.75	M	1	1	1	2	1	1	0	1	1.14	L	
ML1	ML1	083.D	TRUE CRK D	0.65	YES	2	1	3	3	1	2	1	0	1	1	1.75	M	1	1	1	2	1	1	0	1	1.14	L	
ML1	ML1	083	TRUE CRK	3.56	YES	2	2	2	3	1	2	1	0	1	1	1.75	M	1	2	3	2	1	1	0	2	1.71	M	
ML1	ML1	076.A1	CERISE RIM	2.22	YES	2	3	2	2	1	2	1	0	1	1	1.75	M	1	2	3	1	1	1	0	1	1.43	L	
ML1	ML1	682.I1	KROGER PARK I1	0.50	YES	2	1	2	2	1	2	1	0	1	1	1.50	M	1	2	1	1	1	1	0	1	1.14	L	
ML1	ML1	682.C	BIG BEAR PARK C	1.81	YES	2	2	1	2	3	1	2	3	0	1	1	1.63	M	1	1	2	3	2	1	0	1	1.57	L
ML1	ML1	682.F	SOUTH BEAR F	0.38	YES	2	2	2	3	1	2	1	0	1	1	1.75	M	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML1	580	RELAY CRK	1.39	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	1	2	2	2	1	1	0	1	1.43	L	
ML1	ML1	772.A	PURGATORY A	0.32	YES	2	1	2	2	1	2	1	0	1	1	1.50	M	3	3	1	3	2	1	0	3	2.29	M	
ML1	ML1	581.I	PURGATORY LIFT 1	0.08	YES	2	3	2	2	1	2	1	0	1	1	1.75	L	3	3	1	3	2	1	0	3	2.29	M	
ML1	ML1	581.L	PURGATORY LIFT3	0.35	YES	2	2	2	2	1	2	2	0	1	1	1.63	L	3	3	1	3	2	1	0	3	2.29	M	
ML1	ML1	578.A2	E. HERMOSA SPUR	0.82	YES	1	1	1	2	2	2	1	0	1	1	1.38	M	1	1	2	3	1	1	0	1	1.43	L	
ML1	ML1	756.A1	SPRING CRK ELECTRONIC SITE 3	0.02	YES	2	1	2	3	1	2	1	0	1	1	1.63	L	1	1	2	1	1	1	0	3	1.57	L	
ML1	ML1	171.C	PINE CONF	0.34	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	632	LOG CHUTE CANYON	0.35	YES	1	1	3	1	2	2	U	0	1	1	1.50	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	632	LOG CHUTE CANYON	0.12	YES	1	1	3	1	2	2	U	0	1	1	1.50	L	1	3	1	3	1	1	0	2	2.00	M	
ML1	ML1	755.A3	FENDER A3	0.12	YES	1	1	2	3	1	2	1	0	1	1	1.50	M	3	3	1	1	3	3	0	2	2.29	M	
ML1	ML1	608.C	SAULS CRK C	0.25	YES	1	1	2	2	1	2	1	0	1	1	1.38	L	3	2	1	1	2	3	0	2	2.00	M	
ML1	ML1	135.F	BEAVER MEADOWS F	0.73	YES	2	1	1	2	2	3	1	0	1	1	1.63	L	3	1	1	3	3	1	0	2	2.00	M	
CATEGORY SUM																												
205.01																												
ML1	ML2	755.A4	BC RICH	0.10	YES	1	1	2	2	1	2	1	1	0	1	1	1.38	M	1	1	1	1	1	1	0	1	1.29	L
ML1	ML2	344.B	BEDROCK CRK B	1.04	YES	2	1	1	2	1	1	1	1	0	1	1	1.25	L	3	2	2	1	1	1	0	1	1.57	L
ML1	ML2	408	STAR	0.28	YES	1	1	1	2	1	1	1	1	0	1	1	1.13	L	3	2	2	1	1	1	0	1	1.57	L
ML1	ML2	171.F	CAPE HORN	0.13	YES	3	1	3	2	2	1	1	u	0	1	1	1.75	L	1	1	1	1	1	1	0	1	1.00	L
ML1	ML2	171.H	MONUMENT HILL H	0.31	YES	2	1	2	1	1	1	1	U	0	1	1	1.25	M	1	2	1	1	1	1	0	1	1.14	L
ML1	ML2	498	COLUMBUS BASIN	0.36	YES	3	1	2	2	1	2	1	0	2	2	1.88	L	1	1	1	1	1	1	0	1	1.00	L	
ML1	ML2	822	PORPHYRY	0.18	YES	2	2	2	2	1	2	3	0	2	2	1.88	M	2	2	3	1	1	1	0	2	1.71	M	
ML1	ML2	816	CLEAR LAKE BRANCH 1	0.05	YES	2	3	2	3	1	1	1	0	1	1	1.75	M	2	1	1	1	1	1	0	1	1.14	L	
ML1	ML2	613.B	FOSSETT GULCH B	0.05	YES	1	1	2	1	1	2	1	0	1	1	1.25	L	1	1	1	1	1	1	0	1	1.29	L	
CATEGORY SUM																												
2.52																												
ML2	Non-System	307	WOMMER	1.22	NO	2	3	3	1	2	2	U	0	3	3	2.38	L	1	1	1	1	2	1	0	1	1.14	L	
ML2	Non-System	171	JUNCTION CRK (CR 204)	1.30	NO	1	1	1	1	2	2	U	0	1	1	1.13	L	2	1	1	1	1	1	0	1	1.14	L	
ML2	Non-System	571.D	LA PLATA CANYON D	1.11	NO	3	1	3	2	1	1	1	0	2	3	2.00	L	1	1	2	1	1	1	0	1	1.14	L	
ML2	Non-System	171.G	ORO FINO	0.52	NO	2	1	2	1	1	1	3	0	2	3	1.63	L	2	1	1	1	1	1	0	1	1.14	L	
ML2	Non-System	571.F	LA PLATA CANYON F	0.02	NO	3	2	2	2	1	2	1	0	1	2	1.75	M	3	2	1	1	1	1	0	2	1.57	L	
ML2	Non-System	571.D	LA PLATA CANYON D	0.51	NO	2	2	1	2	1	1	1	0	2	1	1.50	M	1	1	2	1	1	1	0	1	1.14	L	
ML2	Non-System	574	NEGLECTED MINE	0.07	NO	2	1	2	1	1	1	U	0	2	3	2.00	L	1	1	2	1	1	1	0	1	1.00	L	
ML2	Non-System	578.B	TIN CAN BASIN	0.32	NO	2	1	2	2	1	1	1	0	1	1	1.38	M	1	2	1	1	1	1	0	1	1.14	L	
ML2	Non-System	578.B	TIN CAN BASIN	0.04	NO	2	1	2	2	1	1	1	0	1	1	1.38	L	1	2	1	1	1	1					

COLUMBINE TAP  
APPENDIX F  
INDIVIDUAL ROAD/TRAIL INFORMATION

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	RISK RATING	OVERALL				MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING
															ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	JURISD.	RISK AVERAGE	RISK RATING	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS
ML2	ML2	537.C	RICKENBACKER	0.67	YES	2	3	3	3	1	2	1	0	1	1	2.00	L	1	1	2	1	1	1	2	0	1	1.29	L
ML2	ML2	755.A	WEST CROWBAR	1.38	YES	1	2	2	3	1	2	1	0	1	1	1.63	M	2	3	3	1	3	3	0	2	2.43	H	
ML2	ML2	608.A	SAULS CRK A	0.24	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	1	1	2	1	2	3	0	2	1.71	M	
ML2	ML2	615.A1	SOUTH TURKEY CRK	0.96	YES	1	2	2	3	1	2	1	0	1	1	1.63	M	2	2	1	1	1	1	3	0	2	1.71	M
ML2	ML2	132	LANGE CANYON	2.07	YES	3	2	2	3	1	2	1	0	1	1	1.88	L	3	2	3	1	3	2	0	2	2.29	M	
ML2	ML2	537.B	FERNANDES	1.11	YES	2	2	2	3	1	2	1	0	1	1	1.75	L	1	1	3	1	1	1	3	0	1	1.57	L
ML2	ML2	755.B	GIBSON	0.41	YES	1	1	2	3	1	2	1	0	1	1	1.50	M	2	1	2	1	3	3	0	2	2.00	M	
ML2	ML2	615.A	TURKEY CRK	0.34	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	2	2	3	1	1	1	3	0	2	1.86	M
ML2	ML2	755.C	IBANEZ	0.29	YES	2	2	2	3	1	2	1	0	1	2	1.88	L	2	1	1	1	1	1	2	0	3	1.86	M
ML2	ML2	755.A2	JACKSON	0.13	YES	1	1	2	3	1	2	1	0	1	1	1.50	M	1	1	1	1	1	1	2	0	1	1.43	L
ML2	ML2	131.B	NORTH SAULS CRK B	0.13	YES	1	1	2	2	1	2	1	0	1	1	1.38	L	1	1	1	1	1	1	1	0	1	1.29	L
ML2	ML2	123	ZABEL CANYON	0.66	YES	2	1	2	3	1	3	1	0	1	1	1.75	M	3	3	3	1	1	1	3	0	3	2.43	H
ML2	ML2	755.A1	FENDER	0.29	YES	1	1	2	3	1	2	1	0	1	1	1.50	L	3	3	3	1	3	3	0	2	2.57	H	
ML2	ML2	131.C	NORTH SAULS CRK C	0.60	YES	2	1	2	3	1	2	1	0	1	1	1.63	L	2	2	2	1	3	3	0	3	2.29	M	
ML2	ML2	537	SPRING CRK (CR 335)	7.08	YES	2	2	2	3	1	3	3	0	1	1	1.88	M	2	3	3	1	2	3	0	3	2.43	H	
ML2	ML2	791.A	STAGE COACH BROWNS	0.85	YES	1	2	1	1	1	2	3	0	1	2	1.38	L	1	1	1	1	2	1	0	1	1.14	L	
ML2	ML2	577	HUNTER PARK	0.29	YES	2	3	1	2	1	2	1	0	1	1	1.63	L	3	3	2	1	1	1	1	0	3	2.00	M
ML2	ML2	578	HERMOSA PARK	0.19	YES	2	2	1	1	2	1	1	0	1	1	1.38	M	3	3	2	1	1	1	1	0	3	2.00	M
ML2	ML2	579.C	PASTURE CRK	0.02	YES	1	2	2	2	1	2	1	0	1	1	1.50	L	1	2	1	2	1	1	1	0	1	1.29	L
ML2	ML2	580.G	GRASSY CRK	1.41	YES	2	2	2	1	1	2	1	0	1	1	1.63	L	2	1	2	3	1	1	1	0	1	1.57	L
ML2	ML2	578	HERMOSA PARK	3.19	YES	2	2	2	1	2	3	3	0	1	1	1.75	L	3	3	3	1	1	1	1	0	3	2.14	M
ML2	ML2	817	ENGINEER MTN W. C.	0.31	YES	1	1	1	2	1	2	1	0	1	1	1.25	L	1	2	1	1	1	1	1	0	1	1.14	L
ML2	ML2	783	CASCADE CRK	1.55	YES	3	3	2	3	2	1	3	0	1	2	2.13	L	1	3	1	1	1	1	0	2	1.43	L	
ML2	ML2	550	HOTEL DRAW	4.94	YES	2	2	3	2	1	2	3	0	1	1	1.75	L	3	3	2	2	1	1	1	0	2	2.00	M
ML2	ML2	579	CASCADE DIVIDE	7.85	YES	3	3	2	2	1	2	1	0	1	1	1.88	M	2	2	2	2	1	1	1	0	3	1.86	M
ML2	ML2	578	HERMOSA PARK	3.38	YES	3	3	3	1	2	2	3	0	1	1	2.00	L	3	3	3	1	1	1	1	0	3	2.14	M
ML2	ML2	578	HERMOSA PARK	0.86	YES	2	3	2	1	2	1	3	0	1	1	1.63	M	3	3	3	2	1	1	1	0	3	2.29	M
ML2	ML2	581	ELBERT CRK	8.39	YES	1	1	1	3	2	2	1	0	1	1	1.50	L	2	2	3	3	1	1	1	0	3	2.14	M
ML2	ML2	069	BALDY MTN	1.63	YES	2	1	2	2	1	2	3	0	1	1	1.50	L	2	1	3	3	1	1	1	0	1	1.71	M
ML2	ML2	571.E	LA PLATA CANYON E	1.50	YES	2	1	1	2	1	2	2	0	1	3	1.88	L	3	2	3	1	1	1	1	0	1	1.71	M
ML2	ML2	756	BOUNDARY	1.77	YES	2	2	2	3	1	2	1	0	1	1	1.75	M	2	2	2	1	1	1	3	0	3	2.00	M
ML2	ML2	580	RELAY CRK	1.75	YES	2	1	1	1	1	1	1	0	1	1	1.13	L	2	2	2	3	1	1	1	0	2	1.86	M
ML2	ML2	081	HENDERSON LAKE	2.40	YES	2	3	3	1	1	3	1	0	1	1	2.13	M	2	2	3	1	1	1	1	0	2	1.71	M
ML2	ML2	076	RED RIM	5.84	YES	3	2	2	1	3	1	1	0	1	1	1.88	L	3	2	3	2	3	1	1	0	3	2.43	H
ML2	ML2	772	PURGATORY	0.51	YES	1	2	2	1	1	2	3	0	1	1	1.38	L	2	3	3	1	1	1	1	0	3	2.29	M
ML2	ML2	160	JUNGLE CANYON	0.73	YES	2	1	2	2	1	2	1	0	1	1	1.50	L	2	2	2	3	1	1	1	0	2	2.14	M
ML2	ML2	595.A	LONG HOLLOW A	1.34	YES	2	2	2	2	1	2	1	0	1	1	1.63	L	1	2	2	3	1	1	1	0	2	1.71	M
ML2	ML2	578.B	TIN CAN BASIN	0.65	YES	2	1	2	2	1	2	1	0	1	1	1.38	L	1	2	1	1	1	1	1	0	1	1.14	L
ML2	ML2	852	EAST CRK	0.85	YES	2	2	2	2	1	2	1	0	1	1	1.75	L	2	2	2	1	1	1	1	0	1	1.43	L
ML2	ML2	597	EAST FLORIDA	10.61	YES	3	2	2	1	1	3	1	0	1	1	1.75	L	3	3	3	2	1	1	1	0	3	2.29	M
ML2	ML2	724	MIDDLE MTN	2.55	YES	3	3	3	1	2	2	1	0	1	1	2.13	M	3	3	3	2	1	1	1	0	2	2.14	M
ML2	ML2	597.C	EAST FLORIDA C	0.95	YES	3	2	2	1	1	2	1	0	1	1	1.63	M	2	1	2	1	1	1	1	0	1	1.29	L
ML2	ML2	724.E	MIDDLE MTN E	0.63	YES	2	2	2	3	1	2	1	0	1	1	1.75	L	3	1	2	1	1	1	1	0	1	1.43	L
ML2	ML2	597.E	EAST FLORIDA E	0.07	YES	3	3	3	1	1	2	1	0	1	1	1.88	L	3	1	1	1	1	1	1	0	1	1.29	L
ML2	ML2	071.B	DURANGO HILLS PARKING	0.09	YES	1	1	1	1	1	2	1	0	1	1	1.13	L	3	3	3	1	3	1	1	0	3	2.43	H
ML2	ML2	724.G	BERRI PARK SPUR	0.09	YES	3	3	3	1	1	3	1	0	1	1	2.00	M	3	1	2	1	1	1	1	0	1	1.43	L
ML2	ML2	599	RED CRK	0.69	YES	3	3	3	1	1	3	1	0	1	1	2.00	L	3	2	3	1	1	1	1	0	3	2.14	M
ML2	ML2	597.D	EAST FLORIDA D	0.74	YES	3	2	2	1	1	2	1	0	1	1	1.63	M	2	1	2	1	1	1	1	0	1	1.29	L
ML2	ML2	071	BALDY MTN	0.13	YES	1	1	1	1	2	2	1	0	1	1	1.25	L	3	3	3	1	1	1	1	0	3	2.43	H
ML2	ML2	585.F	GOLDEN HORN DISPERSED	0.16	YES	2	3	1	2	2	2	1	0	1	1	1.75	M	3	3	3	1	1	1	1	0	1	1.57	L
ML2	ML2	583	COAL BANK	0.30	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	2	3	3	1	1	1	1	0	1	1.43	L
ML2	ML2	591	LIME CRK	11.05	YES	2	2	1																				

COLUMBINE TAP  
APPENDIX F  
INDIVIDUAL ROAD/TRAIL INFORMATION

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	RISK AVERAGE	OVERALL RISK RATING	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING				
ML3	County	608	SAULS CRK (CR 527)	1.74	NO	1	1	2	3	1	3	1	0	2	1	1.75	M	2	2	3	1	3	3	0	3	2.43	H	
ML3	County	596	FLORIDA (CR 243)	1.82	NO	2	2	2	1	1	2	1	0	3	2	1.88	L	3	3	3	1	2	1	0	3	2.29	M	
CATEGORY SUM				3.56																								
ML3/SNOW TRAIL	ML3/SNOW TRAIL	620 / SNO-102	FIRST NOTCH/FIRST NOTCH WINTER	7.13	YES	1	2	1	1	2	2	1	0	2	1	1.50	L	3	2	3	3	3	1	0	2	2.43	H	
CATEGORY SUM				7.13																								
ML3 / Single Track	ML3 / Single Track	724 / 810	MIDDLE MTN/BEAR CR. LOOP	0.78	YES	2	2	2	1	1	3	U	0	1	1	1.63	L	3	3	3	2	2	1	0	3	2.43	H	
CATEGORY SUM				0.78																								
ML3 / ATV	ML3 / ATV	131 / 712	NORTH SAULS CRK / LANGE CYN	0.11	YES	1	2	2	3	1	2	3	0	1	1	1.63	L	3	3	3	1	3	3	0	3	2.71	H	
ML3 / ATV	ML3 / ATV	724 / 812	MIDDLE MTN/BERI ATV	0.19	YES	2	2	2	1	1	3	U	0	1	1	1.63	L	3	3	3	2	2	1	0	3	2.43	H	
ML3 / ATV	ML3 / ATV	724 / 812	MIDDLE MTN/BERI ATV	0.11	YES	2	2	2	1	1	3	U	0	1	1	1.63	L	3	3	3	2	2	1	0	3	2.43	H	
CATEGORY SUM				0.40																								
ML3	ML2	171	JUNCTION CRK (CR 204)	11.47	YES	2	1	2	2	1	2	U	0	1	2	1.63	L	3	3	1	1	1	1	0	3	1.86	M	
ML3	ML2	743	RELAY STATION	1.92	YES	2	3	3	2	1	2	3	0	1	2	2.00	L	2	2	3	1	1	2	0	3	2.00	M	
ML3	ML2	580	RELAY CRK	6.79	YES	2	1	1	1	1	2	1	0	1	1	1.25	L	2	2	2	3	1	1	0	3	2.00	M	
ML3	ML2	579	CASCADE DIVIDE	2.50	YES	2	2	2	1	1	2	1	0	1	1	1.50	M	2	2	2	3	1	1	0	3	2.00	M	
ML3	ML2	578	HERMOSA PARK	1.41	YES	3	2	1	1	1	2	3	0	1	3	1.75	L	3	3	3	3	1	1	0	3	2.43	H	
CATEGORY SUM				24.09																								
ML3	ML3	621	LOWER PIEDRA	0.73	YES	1	2	1	1	1	2	1	0	2	1	1.38	L	2	3	1	1	2	1	0	3	1.86	M	
ML3	ML3	755	CROWBAR CRK	1.56	YES	1	1	2	3	1	3	1	0	1	2	1.75	L	3	3	3	1	3	3	0	3	2.71	H	
ML3	ML3	604	BEAR CRK	3.73	YES	1	1	1	1	1	3	1	0	1	1	1.25	L	2	2	3	3	3	1	0	2	2.29	M	
ML3	ML3	171	JUNCTION CRK (CR 204)	7.08	YES	2	1	2	2	1	2	1	0	1	2	1.63	L	3	3	1	3	3	1	0	3	2.43	H	
ML3	ML3	546	KROEGER CG	0.17	YES	2	3	2	2	1	2	1	0	1	1	1.75	L	3	3	2	1	1	1	0	3	2.00	M	
ML3	ML3	131	NORTH SAULS CRK	1.26	YES	1	2	2	3	1	2	3	0	1	1	1.63	L	3	3	3	1	3	3	0	3	2.71	H	
ML3	ML3	613	FOSSETT GULCH	6.52	YES	2	2	2	3	1	2	3	0	1	2	1.88	L	3	3	3	1	2	3	0	3	2.57	H	
ML3	ML3	576.A	HERMOSA CAMPGROUND	0.57	YES	1	1	1	1	1	3	1	0	1	1	1.25	L	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	791.B	CHRIS PARK CG	0.33	YES	1	1	1	1	1	2	1	0	1	1	1.13	L	3	3	1	1	2	1	0	3	2.00	M	
ML3	ML3	576	LOWER HERMOSA (CR 201)	1.90	YES	1	1	1	3	1	3	1	0	2	1	1.63	L	3	3	3	1	3	1	0	3	2.43	H	
ML3	ML3	578	HERMOSA PARK	8.22	YES	3	2	1	1	1	2	3	0	1	3	1.75	L	3	3	3	3	1	1	0	3	2.43	H	
ML3	ML3	698	SIG CR CG	0.25	YES	3	3	3	1	1	2	1	0	1	1	1.88	L	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	580	RELAY CRK	1.20	YES	2	1	1	1	1	2	1	0	1	1	1.25	M	2	2	2	3	1	1	0	3	2.00	M	
ML3	ML3	707	PINE RIVER CG	0.36	YES	1	1	1	1	1	2	1	0	1	1	1.13	L	3	3	2	1	1	1	0	3	1.86	M	
ML3	ML3	724	MIDDLE MTN	4.53	YES	2	2	2	1	1	3	U	0	1	1	1.63	M	3	3	3	2	2	1	0	3	2.43	H	
ML3	ML3	696	TRANSFER PARK CG	0.59	YES	2	2	2	1	1	3	3	0	1	1	1.63	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	701	OLD TIMERS CG	0.26	YES	2	3	3	1	1	3	1	0	1	1	1.88	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	703	NORTH CANYON CG	0.51	YES	2	3	3	1	1	3	1	0	1	1	1.88	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	603	EAST VALLECITO	0.79	YES	1	1	1	1	1	1	3	0	3	1	1.25	M	3	3	3	1	3	1	0	3	2.43	H	
ML3	ML3	243.A1	LEMON DAY USE AREA	0.02	YES	3	3	2	1	1	3	1	0	1	1	1.88	L	2	2	2	1	1	1	0	3	1.29	L	
ML3	ML3	706	VALLECITO CG	1.35	YES	1	1	1	1	1	2	1	0	1	1	1.13	L	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	068	FLORIDA CAMPGROUND	0.49	YES	2	1	2	1	1	3	1	0	1	1	1.50	L	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	702	GRAHAM CRK CG	0.69	YES	2	2	2	1	1	3	1	0	1	1	1.63	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	603	EAST VALLECITO	3.37	YES	2	2	2	1	1	3	1	0	2	2	2.00	L	3	3	3	1	3	1	0	3	2.43	H	
ML3	ML3	243.A	LEMON DAY USE AREA	0.07	YES	1	3	2	1	1	3	1	0	1	1	1.63	L	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	705	MIDDLE MTN CG	0.52	YES	1	2	2	1	1	3	1	0	1	1	1.50	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	704	PINE POINT CG	0.48	YES	2	2	2	1	1	3	3	0	1	1	1.63	L	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	596	FLORIDA (CR 243)	1.53	YES	2	2	2	1	1	2	1	0	3	2	1.88	L	3	3	3	1	2	1	0	3	2.29	M	
ML3	ML3	590.A	ANDREWS LAKE A	0.29	YES	1	1	2	1	2	2	1	0	1	1	1.38	M	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	590	ANDREWS LAKE	0.67	YES	1	1	2	2	1	2	1	0	1	1	1.25	M	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	700	SOUTH MINERAL CG	0.63	YES	1	3	2	2	1	2	1	0	1	1	1.75	M	3	3	1	1	1	1	0	3	1.71	M	
ML3	ML3	585.A	ICE LAKES TH	0.08	YES	1	1	1	1	1	2	1	0	2	1	1.25	L	3	3	1	1	1	1	0	3	1.57	L	
ML3	ML3	081	HENDERSON LAKE	2.73	YES	2	2	2	2	1	3	1	0	1	1	1.75	M	3	3	3	2	1	1	0	3	2.43	H	
ML3	ML3	250.A	EAST ANIMAS CREW QUARTERS	0.09	YES	1	1	1	1	1	1	1	0	1	1	1.00	M	3	3	3	1	1	1	0	3	1.86	M	
ML3	ML3	595	BURNT TIMBER	3.53	YES	3	2	2	2	1	3	1	0	1	1	1.88	M	3	2	3	3	3	1	0	3	2.57	H	
ML3	ML3	682	MISSIONARY RIDGE	19.29	YES	2	1	2	3	1	3	1	0	3	2	2.25	M	3	3	3	3	3	1	0	3	2.71	H	
ML3	ML3	608	SAULS CR (CR 527)	1.65	YES	1	1																					

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CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	WILDLIFE	ECOL. RES.	INVASIVE SPECIES	CULTURAL	SOCIAL CONFLICT	JURISD.	RIGHT OF WAY	RISK AVERAGE	OVERALL RISK RATING	MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING		
NON-MOTORIZED TRAIL	ATV Trail	516	DUTCH CREEK	5.20		0	0	0	0	0	0	xx	0	0	0	0.00		0	0	0	0	0	0	0	0	0.00			
CATEGORY SUM				5.20																									
NON-MOTORIZED TRAIL	ML1/NON-MOTORIZED TRAIL	632010.0 / 150	OBLUT CAND/LOGCHUTES 1	0.24	YES	1	1	1	3	1	2	1	0	1	1	1.38	M	1	3	1	3	3	1	0	2	2.00	M		
NON-MOTORIZED TRAIL	ML1/NON-MOTORIZED TRAIL	NFST 152	LOGCHUTES 3	0.44	YES	2	1	1	3	1	2	1	0	1	1	1.50	M	1	3	1	3	3	1	0	2	2.00	M		
NON-MOTORIZED TRAIL	ML1/NON-MOTORIZED TRAIL	NFST 151	LOGCHUTES 2	0.12	YES	2	1	1	3	1	2	1	0	1	1	1.50	L	1	3	1	3	3	1	0	2	2.00	M		
NON-MOTORIZED TRAIL	ML1/NON-MOTORIZED TRAIL	150	NON-SYSTEM/LOGCHUTES 1	0.25	YES	1	1	1	3	1	2	1	0	1	1	1.38	L	1	3	1	3	3	1	0	2	2.00	M		
CATEGORY SUM				1.06																									
Non-System	ATV Trail	571.F1	NEPTUNE LOOP	0.24	NO	3	2	2	2	1	1	1	0	1	2	1.75	L	3	2	1	1	1	1	0	2	1.57	L		
Non-System	ATV Trail	571.F	LA PLATA CANYON F	0.29	NO	3	2	2	2	1	1	1	0	1	2	1.75	M	3	2	1	1	1	1	0	2	1.57	L		
Non-System	ATV Trail	56		0.20	NO	3	2	2	2	1	1	1	0	1	2	1.75	L	3	2	1	1	1	1	0	2	1.57	L		
CATEGORY SUM				0.72																									
Non-System	ML1	15		0.28	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	2	3	2	1	0	2	1.71	M	
Non-System	ML1	22		0.17	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	3	3	1	1	0	1	1.57	L	
Non-System	ML1	604030.A	OBLITERATION CANDIDATE	0.37	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	620010.0	OBLITERATION CANDIDATE	0.69	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	150030.0	OBLITERATION CANDIDATE	1.15	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	3	3	1	1	0	1	1.57	L	
Non-System	ML1	160010.0	OBLITERATION CANDIDATE	0.69	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	3	3	1	1	0	1	1.57	L	
Non-System	ML1	604031.A	OBLITERATION CANDIDATE	0.33	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	3	1	1	0	1	1.57	L
Non-System	ML1	121		0.30	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	2	1	0	2	1.57	L	
Non-System	ML1	136		0.20	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	3	1	1	3	3	1	1	0	1	1.57	L
Non-System	ML1	601030.0	OBLITERATION CANDIDATE	0.14	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	601020.0	OBLITERATION CANDIDATE	0.11	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	376		0.02	YES	3	2	2	2	2	2	2	U	0	1	1	1.88	L	3	2	3	3	2	1	0	3	2.43	H	
Non-System	ML1	806030.O	OBLITERATION CANDIDATE	0.49	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	2	1	0	2	1.57	L	
Non-System	ML1	160		0.35	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	1	3	3	1	1	0	1	1.29	L
Non-System	ML1	168		0.08	YES	2	2	1	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	3	1	1	0	1	1.57	L
Non-System	ML1	173		0.55	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	2	3	2	1	0	2	1.71	M	
Non-System	ML1	601030.0	OBLITERATION CANDIDATE	0.36	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	135.3C	Rocky Canyon	0.09	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	3	1	2	3	1	1	0	1	1.71	M	
Non-System	ML1	620011.0	OBLITERATION CANDIDATE	0.49	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	223		0.09	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	3	1	1	3	1	1	0	1	1.57	L	
Non-System	ML1	604010.C	OBLITERATION CANDIDATE	0.67	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	2	1	0	1	1.43	L	
Non-System	ML1	806040.O	OBLITERATION CANDIDATE	0.42	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	2	1	0	2	1.57	L	
Non-System	ML1	281		0.48	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	2	1	0	1	1.43	L	
Non-System	ML1	282		0.09	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.57	L	
Non-System	ML1	150020.0	OBLITERATION CANDIDATE	0.15	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	2	3	1	1	0	1	1.43	L	
Non-System	ML1	315		0.18	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	348		0.35	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.57	L	
Non-System	ML1	354		0.67	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	2	3	2	1	0	2	1.71	M	
Non-System	ML1	135.A1		0.30	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	M	1	1	3	1	1	1	0	1	1.57	L	
Non-System	ML1	601020.0	OBLITERATION CANDIDATE	0.42	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	A		0.33	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	1	1	1	3	2	1	0	2	1.57	L	
Non-System	ML1	14		0.10	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	135.3D	Rocky Canyon	0.24	YES	2	2	2	2	2	2	2	U	0	1	1	1.75	L	3	1	2	3	1	1	0	1	1.71	M	
Non-System	ML1	116		0.20	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	202		0.01	YES	2	1	2	2	2	2	2	U	0	1	1	1.63	L	1	1	1	3	2	1	0	2	1.57	L	
Non-System	ML1	376		0.21	YES	3	2	2	2	2	2	2	U	0	1	1	1.88	L	3	2	3	3	2	1	0	3	2.43	H	
Non-System	ML1	B	Seismic Line	0.02	YES	3	2	2	2	2	2	2	1	0	1	1	1.88	M	3	2	3	3	2	1	0	3	2.43	H	
Non-System	ML1	161		0.12	YES	2	1	2	2	2	2	2	1	0	1	1	1.63	M	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	114		0.06	YES	2	1	2	2	2	2	2	1	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	65		0.04	YES	2	1	2	2	2	2	2	1	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	
Non-System	ML1	107		0.18	YES	2	1	2	2	2	2	2	1	0	1	1	1.63	L	1	1	1	3	1	1	0	1	1.29	L	

COLUMBINE TAP  
APPENDIX F  
INDIVIDUAL ROAD/TRAIL INFORMATION

CURRENT MAINTENANCE LEVEL	RECOMMENDED MAINTENANCE LEVEL	ID	NAME	GIS MILES	MIN. RD. SYSTEM	ROAD CONDITION	WATER RES.	SOILS/ GEOL.	WILDLIFE	ECOL. RES.	INVASIVE SPECIES	SOCIAL CULTURAL	RIGHT OF WAY	OVERALL RISK		MOTOR. RECR.	RECR. CONNECT.	RANGE MGT	TIMBER MGT	FUELS MGT	OIL GAS MGT	FOREST MGT	EMERG. ACCESS	BENEFIT AVERAGE	OVERALL BENEFIT RATING		
														AVERAGE	RISK RATING												
Non-System / ATV	ML1 / ATV	604.4D / 696	/ ARBOGAS LOOP	0.17	YES	2	1	2	2	2	2	u	0	1	1	1.63	L	3	1	3	3	2	1	0	1	2.00	M
Non-System / ATV	ML1 / ATV	604.4 / 696	/ ARBOGAS	0.75	YES	2	1	2	2	2	2	u	0	1	1	1.63	L	3	1	3	3	2	1	0	1	2.00	M
Non-System / ATV	ML1 / ATV	604.4C / 695	/ ARBOGAS	0.15	YES	2	1	2	2	2	2	u	0	1	1	1.63	L	3	1	3	3	2	1	0	1	2.00	M
Non-System / ATV	ML1 / ATV	604.4D / 696	/ ARBOGAS LOOP	0.06	YES	2	1	2	2	2	2	u	0	1	1	1.63	L	3	1	3	3	2	1	0	1	2.00	M
Non-System / ATV	ML1 / ATV	160060.0 / 702	OBL CAND. / JUNGLE CONNECT	0.63	YES	2	1	2	2	2	2	U	0	1	1	1.63	M	3	1	1	3	2	1	0	1	1.71	M
Non-System / ATV	ML1 / ATV	135.3 / 717	Rocky Canyon/ROCKY CANYON	0.43	YES	2	2	2	2	2	2	U	0	1	1	1.75	M	3	1	2	3	1	1	0	1	1.71	M
Non-System / ATV	ML1 / ATV	604.4 / 695	/ ARBOGAS	0.50	YES	2	1	2	2	2	2	U	0	1	1	1.63	M	3	1	3	3	2	1	0	1	2.00	M
Non-System / ATV	ML1 / ATV	604.4D / 696	/ ARBOGAS LOOP	0.33	YES	2	1	2	2	2	2	u	0	1	1	1.63	L	3	1	3	3	2	1	0	1	2.00	M
CATEGORY SUM				3.04																							
Non-System	ML2	571020.0	OBLITERATION CANDIDATE	1.41	YES	1	1	1	2	1	1	1	0	1	1	1.13	L	3	2	2	1	1	1	0	1	1.57	L
Non-System	ML2	344030.0		0.95	YES	2	1	1	2	1	2	1	0	1	1	1.38	M	3	2	2	1	1	1	0	1	1.57	L
Non-System	ML2	45	Columbus Camping	0.06	YES	2	1	2	2	2	1	1	0	1	1	1.50	L	3	2	1	1	1	1	0	1	1.43	L
Non-System	ML2	344040.0	BEDROCK SPUR	0.50	YES	2	1	1	2	1	1	U	0	1	1	1.25	L	3	2	1	1	1	1	0	1	1.43	L
Non-System	ML2	344050.0	BEDROCK SPUR to MINE	0.06	YES	2	1	1	2	1	1	U	0	1	1	1.25	L	2	2	1	1	1	1	0	1	1.29	L
Non-System	ML2		BEDROCK SPUR to ALLARD	0.18	YES	2	1	2	2	1	1	1	0	2	2	1.63	L	2	2	1	1	1	1	0	1	1.29	L
Non-System	ML2		MADDEN CAMP SPUR	0.05	YES	3	1	3	2	1	1	1	0	1	1	1.63	L	2	2	1	1	1	1	0	1	1.29	L
Non-System	ML2		Bay City campsite spur	0.02	YES	2	3	2	1	1	3	U	0	1	1	1.75	L	3	2	1	1	1	1	0	3	1.71	M
Non-System	ML2		Olga little campsite spur	0.01	YES	3	3	2	1	1	2	U	0	1	1	1.75	M	3	1	1	1	1	1	0	1	1.29	L
Non-System	ML2	126	Power Substation Road	0.22	YES	1	1	1	1	1	2	1	0	1	1	1.13	M	2	1	1	1	1	1	0	1	1.14	L
Non-System	ML2	148	US 550 Old	0.07	YES	1	1	1	1	1	2	3	0	2	1	1.25	L	2	3	1	1	1	1	0	1	1.43	L
Non-System	ML2	591020.0	OBL CAND. / GRAVEL PIT	0.12	YES	2	1	1	1	1	3	1	0	1	1	1.38	L	2	2	1	1	1	1	0	1	1.29	L
Non-System	ML2	823010.0	OBLITERATION CANDIDATE	0.43	YES	2	2	2	2	2	2	1	0	2	2	2.00	L	2	2	2	1	1	1	0	1	1.43	L
Non-System	ML2		hairpin n of old lime creek rd	0.71	YES	2	3	3	1	1	2	u	0	1	1	1.75	L	2	2	1	1	1	1	0	1	1.29	L
Non-System	ML2		hairpin n of old lime creek rd	0.06	YES	2	3	3	1	1	2	U	0	1	1	1.75	M	2	2	1	1	1	1	0	1	1.29	L
CATEGORY SUM				4.85																							