

**ROGUE RIVER - SISKIYOU
NATIONAL FOREST

ROADS ANALYSIS**

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Pacific Northwest Region**

Rogue River – Siskiyou National Forest

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Roads Analysis Rogue River - Siskiyou National Forest

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I. Introduction

A. Executive Summary

The Rogue River and Siskiyou National Forest Roads Analysis document is a tool to be used by interdisciplinary teams and decision makers that will serve as an aid to reach more informed recommendations and decisions regarding management of the Forest Transportation System.

This analysis does not make road-by-road management decisions or recommendations. It does provide, in concert with corporate GIS and associated data tables, an evaluation regarding environmental concerns and access needs for each road segment. The General Recommendations section of the document provides guidance to users (target audience is the project planning teams) about how to access and utilize the information gathered. The suggested process developed through this analysis is meant to replace a variety of current methods of roads analyses being used by Forest project planning teams.

Future road management decisions may include whether to keep a road open or to decommission it; if kept open, what level of maintenance and what standard of design should be applied, and if decommissioned what method should be employed. Weighing the benefits of access against the environmental cost can be extremely complex, with many factors to be considered.

A team of resource specialists completed this Roads Analysis. The team determined the most significant environmental and access factors affecting future road management decisions. By utilizing the most significant factors to weigh the benefits against the costs of a road, a good first screening may be achieved. Prior to making specific road management recommendations, fine-tuning by project planning teams must be accomplished by validation of information, and by evaluating additional considerations.

The recommended project Roads Analysis process is intended to provide an objective and consistent approach to evaluate road segments, allowing the decision maker the knowledge that road management recommendations do not vary because of the analysis process, or because factors change from one project team to the next.

Through solicitation of public comments, the team found many who desired roads to be kept open. Comments suggested that if you must close a road, try to retain the road prism so that it might be used as a trail or that it might be reopened in the future if the need or agency policy should change. (See Appendix B – Public Involvement)

Another piece of information that may be of value to the planning teams and decision makers is a summary rating/prioritization of sub-watersheds. Sub-watersheds were given an overall rating of low, medium, or high based on the level of environmental concern in relation to the presence of the existing road system. This provides context that signals where aggressive road management decisions and changes might be indicated.

B. Roads Analysis Overview

Land allocations, associated management strategies, and the road maintenance budget have changed notably during the past decade. It has been determined that Road Analyses are needed on all National Forests and Grasslands to better coordinate our road management programs. The analysis process will provide land managers with a science-based analytical tool to help balance public needs, scientific information, and funding levels when determining the size, purpose, and extent of both existing roads and roads planned for the future.

While the lack of sufficient maintenance funding is ongoing and serious, it is very important that issues are assessed not only from the economic perspective, but also from social and ecological perspectives. The Forest Service is striving to find the appropriate balance between cost, providing access to National Forests and minimizing the impacts to the ecosystem associated with roads. The top priorities of road management are to provide a forest transportation system that is safe, responsive to public needs, and environmentally sound, within a realistic and sustainable funding level.

Roads Analysis is ***not*** a decision making process. Rather, it is designed to provide an assessment of existing forest roads from a landscape perspective. Applying this process will highlight problem areas and opportunities in the road system, allowing land managers the ability to make better decisions toward achieving forest priorities.

C. The Road Maintenance Funding Dilemma

Currently, (and for the foreseeable future) the road maintenance obligations for maintaining 2,550 miles of classified roads on the Rogue River National Forest and 2,765 miles of classified roads on the Siskiyou National Forest exceeds the funding capability by approximately 70 percent. This situation exists in part due to the reduced timber sales program, and the associated purchaser maintenance of timber haul roads. It is necessary to bring Forest costs in line with available funding.

The Forest Road Maintenance goal is to have the Forest Transportation System in balance with the Forest Transportation System maintenance funding, and at the same time, be responsive to the needs of the public and the agency.

Cost reductions may be achieved through a variety of methods including reduction of maintenance levels, and road decommissioning. A more complete discussion on road maintenance costs, including a partial list of cost reduction methods is found in Appendix C to this Roads Analysis.

Setting priorities for the annual and cyclic road maintenance work will optimize the use of current maintenance funds throughout the Forest. **District Rangers will work with the Forest Engineer, Road Managers, and resource specialists to identify the road system that can be maintained within the future expected budget.** These road maintenance priorities will be informed by the Forest Roads Analysis.

D. Scope of this Analysis

The Rogue River National Forest initiated a landscape-scale Roads Analysis on the Cascade Mountains portion of the Forest that includes the Prospect, Butte Falls, and part of the Ashland Ranger Districts (referred to in this document as the **Cascade Mountains Area**), and the Siskiyou Mountains portion of the Forest that includes the Applegate and the remainder of the Ashland Ranger Districts (referred to in this document as the **Siskiyou Mountains Area**). The Forest Roads Analysis was divided this way to reflect the significantly different environments and management issues that exist on either side of Interstate 5.

Concurrently, the Siskiyou National Forest initiated a landscape-scale Roads Analysis on the western portion of the Forest (referred to in this document as the **Pacific-Powers Area**) that includes the Powers, Gold Beach, and Chetco Ranger Districts, and the East side of the Forest (referred to in this document as the **Two Rivers Area**), including the Illinois River and Galice Ranger Districts.

These processes combined scientific analysis and public input. Scientifically, Roads Analysis examines the biological, social, physical, and economic information that is essential to making sound management decisions affecting Forest Service roads, with a focus on managing entire ecosystems versus single species or outcomes. Public input is critical to help the Forest Service understand current uses and concerns related to the Forest Transportation System. It is the key to understanding the social element. The Forest actively engaged the public and other federal, state, local, and tribal partners in the Roads Analysis process.

E. Management Direction

Current direction for road management on the Rogue River National Forest is found in the 1990 Land and Resource Management Plan (LRMP) for the Rogue River National Forest which states, in part, to “Provide safe, efficient, environmentally sound access for the movement of people and materials involved in the use and management of National Forest lands.” Detailed road management direction is contained in each management area set of standards and guidelines.

Direction for road management on the Siskiyou National Forest is found in the 1989 Land and Resource Management Plan (LRMP) for the Siskiyou National Forest which states as one of the Forest Management Goals: “Plan, design, operate, and maintain a safe and economic transportation system to provide efficient access for the movement of people and materials involved in the use and protection of National Forest Lands” (Chapter IV, page 2). Forest-Wide Standards and Guidelines provide direction for transportation planning, road construction and reconstruction, road maintenance and road closure (pages IV-56 through IV-58).

The 1994 Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl (Northwest Forest Plan) amended the 1990 LRMP for the Rogue River N.F. and the 1989 LRMP for the Siskiyou N.F.

This document provides direction to decommission roads in Key Watersheds and restore watersheds in part through management of the road system with a variety of possible treatments including closing and stabilizing roads; upgrade roads by modifying road drainage systems to reduce the extent to which the road functions as an extension of the stream network, and reconstruct stream crossings to reduce the risk and consequences of road failure or washing out at the crossings. “Road construction in Late-Successional-Reserves... generally is not recommended...” (C-16) In Riparian Reserves, “... achieve consistency in road design, operation, and maintenance necessary to attain Aquatic Conservation Strategy (ACS) objectives.” (C-32)

On January 12, 2001, the U.S. Department of Agriculture, Forest Service, developed manual direction (FSM 7700) to address both the access benefits and ecological costs of road-associated effects, give priority to reconstructing and maintaining needed roads and decommissioning unneeded roads, or, where appropriate, converting them to less costly and more environmentally beneficial other uses. Responsible officials are directed to use a Roads Analysis process to ensure that road management decisions are based on identification and consideration of social and ecological effects. Roads Analysis: Informing Decisions About Managing the National Forest Transportation System (FS-643) has been provided as guidance for conducting a science based roads analysis. The objective is to manage forest transportation system facilities to provide user safety, convenience, and efficiency of operations in an environmentally responsible manner and to achieve road related ecosystem restoration with the limits of current and likely funding levels.

F. Approach

The Rogue River and Siskiyou National Forests chose to utilize portions of the Umpqua and Olympic National Forests’ Roads Analysis models. These models evaluate the cost of potential environmental impact against the benefit of the access provided.

For this analysis, the major environmental cost issues were determined to be aquatic, terrestrial wildlife and the botanical environments. The factors driving the aquatic issue are large wood, sediment, listed and sensitive fish passage, and Key Watersheds, while the factors driving the terrestrial wildlife issue are late-successional fragmentation, travel/migration corridors, wildlife harassment, and Threatened and Endangered (TES) listed species. Factors for the botanical issue include noxious weeds, Port-Orford-Cedar root disease, and TES listed plants. These factors, of course, varied somewhat from one analysis area to another.

The major access benefit issues identified reflect access needs for vegetation management, recreation, fire, range facilities, cost share and other public agency roads, special uses, and road maintenance facilities. The factors driving the vegetation management issue relate to vegetative condition and planned projects. Recreation factors include needs for recreation in developed, dispersed, trailhead, and cultural-historic sites. Fire factors identified access needs for protection, suppression, and facilities. Range facilities include guzzlers, corrals and cabins. The cost share factor involves shared easements between the Forest Service and private lands. Geographic Information System (GIS) was used to map and model the factors. Factors for road maintenance are access for rock quarries, water sources, waste areas, and borrow sites. Again, there is variation in these issues and factors from one analysis area to another.

Using sixth-field sub-watershed boundaries and road numbers, the roads were divided into road segments. The road segments were intersected electronically with the environmental (cost) and access (benefit) factors listed above. Each road segment was rated high, medium, or low relative to how it interacted with each environmental and access factor. A cumulative score for each road segment was determined based on the summation of all the environmental factors, and access needs. This cumulative rating was translated to a summary rating of low, medium, or high for each road segment. For an example of this process, see Tables VI-1 and 2 (for the Cascade Mountains Area) in the Recommendations chapter.

Access benefits described above represent some social and economic issues, but information provided by the public for this analysis provides additional social and economic considerations (See Appendix B – Public Involvement). There are additional factors to consider that could not readily be modeled in GIS but are identified in this document (Appendix D – Additional Road Management Analysis Factors).

G. Analysis Process

The following bullets describe the process used by the Roads Analysis interdisciplinary teams to develop the road-by-road segment evaluation.

- The Interdisciplinary team (IDT) identified the most important issues (access benefits or needs, and environmental costs or concerns) affected by road management decisions.
- The issues were represented by sets of sub factors that could be described and measured through available GIS data.
- The IDT members assigned a rating of high, medium, and low relative to the proximity of the road to the factor of concern (see subsection C - Issues and Factors, for each Roads Analysis area).
- Roads were broken into segments by sub-watershed (6th field HUC).
- Road segments received a score for each factor of 1, 2, or 3 corresponding to low, medium, or high assigned rating.
- Environmental factors were added for each segment to provide subtotals and then by issue and to provide a grand total for all environmental issues.
- Access factors were also provided a score by road segment with subtotals by issue and a grand total for all access needs.
- The grand totals were then assigned a high, medium, or low rating by dividing the total range of scores into three equal parts. These ratings are visually displayed in the Summary Rating map (for an example, see Map VI-2, in the Recommendations chapter).
- Example Tables VI-1 and 2 (for the Cascade Mountains Area) in the Recommendations chapter, are available for each Roads Analysis area that show ratings not only in summary but also by factor and by issue.

- A road segment rated high for access needs and low for environmental concern would logically be kept open. A road rated low for access needs and high for environmental concerns would logically be considered for closure or decommissioning. A road rated high for access need and high for environmental concern would logically require mitigation of the environmental concern in order to be left open for access needs. There are six other possible combinations described in the Recommendations chapter.
- The electronic GIS data used for the summary ratings must be used only as a first screen. The information must be validated and a list of other considerations described in the Recommendations chapter; these must also be part of the information used to make recommendations also see Appendix F).