Summary

The Need for Roads Analysis

An optimum road system supports land management objectives; for the Forest Service, those objectives have markedly changed in recent years. How roads are managed must be reassessed in light of those changes. Expanding road networks have created many opportunities for new uses and activities in national forests, but they have also dramatically altered the character of the landscape. The Forest Service must find an appropriate balance between the benefits of access to the national forests and the costs of road-associated effects to ecosystem values. Providing road systems that are safe to the public, responsive to public needs, environmentally sound, affordable, and efficient to manage is among the agency's top priorities. Completing an assessment of road systems for all national forests is a key step to meeting this objective.

Characteristics of the Process

Roads analysis is an integrated ecological, social, and economic approach to transportation planning, addressing both existing and future roads—including those planned in unroaded areas. Roads analysis is intended to be based on science. Analysts should locate, correctly interpret, and use relevant existing scientific literature in the analysis, disclose any assumptions made during the analysis, and reveal the limitations of the information on which the analysis is based. Finally, the analysis report should be subjected to critical technical review.

The analysis is designed to be scaleable, flexible, and driven by road-related issues important to the public and to managers. It uses a multiscale approach to ensure that these issues are examined in context. And it provides a set of analytical questions to be used in fitting analysis techniques to individual situations. Roads analysis is intended to complement and integrate existing laws, policy, guidance, and practice into the analysis and management of roads on the national forests. Roads analysis as described here is primarily a stand-alone procedure, but the conceptual framework and resources for analysis may be readily integrated into any analytical process in which the roads are examined.

The detail of the analyses must be appropriate to the intensity of the issues addressed. Where ecosystem analyses or assessments are completed, roads analysis will use that information rather than duplicating these efforts. Roads analysis may be integrated as a

component of watershed analyses, landscape assessments, and other analyses supporting existing decision processes.

Roads analysis neither makes decisions nor allocates lands for specific purposes. Line officers, with public participation, make decisions. Technical analysts conduct analyses that inform the decisionmaking role about effects, consequences, options, priorities, and so on. Roads analysis provides information for decisionmaking by examining important ecological, social, and economic issues. Roads analysis helps implement forest plans by identifying management opportunities that can lead to site-specific projects. It can also identify needed changes in forest plans to be addressed in amendments or revisions.

By completing roads analysis, national forests will generate maps and narratives that display and describe management opportunities for changing current road systems to better address future needs, budgets, and environmental concerns. A report from each analysis will provide details of potential changes and other information relevant to managing national forest programs and projects.

The Six Steps

Roads analysis comprises six steps aimed at producing needed information and maps. Line-officer participation is essential to the process. Although the analysis consists of six sequential steps, the process may require feedback and iteration among steps over time as the analysis matures. The amount of time and effort spent on each step will differ, based on specific situations and available information. The process provides a set of possible road-related issues and analysis questions, the answers to which can inform the choices made about future road systems. Line officers and interdisciplinary teams can determine the relevance of each question, incorporating public participation as deemed necessary by line officers.

Step 1 — Setting up the analysis. The analysis must be designed to produce an overview of the road system. Line officers will establish appropriate interdisciplinary teams and identify the proper analytic scales. The interdisciplinary team will develop a process plan for conducting the analysis. The output from this step will include assignment of interdisciplinary team members, a list of information needs, and a plan for the analysis.

Step 2 — Describing the situation. The interdisciplinary team will describe the existing road system in relation to current forest plan direction. Products from this step include a map of the existing road system, descriptions of access needs, and information about physical, biological, social, cultural, economic, and political conditions associated with the road system.

Step 3 — Identifying issues. The interdisciplinary team, in conjunction with line officers and the public, will identify important road-related issues and the information needed to address these concerns. The interdisciplinary team will also determine data needs associated with analyzing the road system in the context of the important issues, for both existing and future roads. The output from this step includes a summary of key road-related issues, a list of screening questions to evaluate them, a description of status of relevant available data, and what additional data will be needed to conduct the analysis.

Step 4 — Assessing benefits, problems, and risks. After identifying the important issues and associated analytical questions, the interdisciplinary team will systematically examine the major uses and effects of the road system including the environmental, social, and economic effects of the existing road system, and the values and sensitivities associated with unroaded areas. The output from this step is a synthesis of the benefits, problems, and risks of the current road system and the risks and benefits of building roads into unroaded areas.

Step 5 — Describing opportunities and setting priorities. The interdisciplinary team and line officers will identify management opportunities, establish priorities, and formulate technical recommendations that respond to the issues and effects. The output from this step includes a map and descriptive ranking of management options and technical recommendations.

Step 6 — Reporting. The interdisciplinary team will produce a report and maps that portray management opportunities and supporting information important for making decisions about the future characteristics of the road system. This information sets the context for developing proposed actions to improve the road system and for future amendments and revisions of forest plans.