

Gifford Pinchot National Forest Roads Analysis

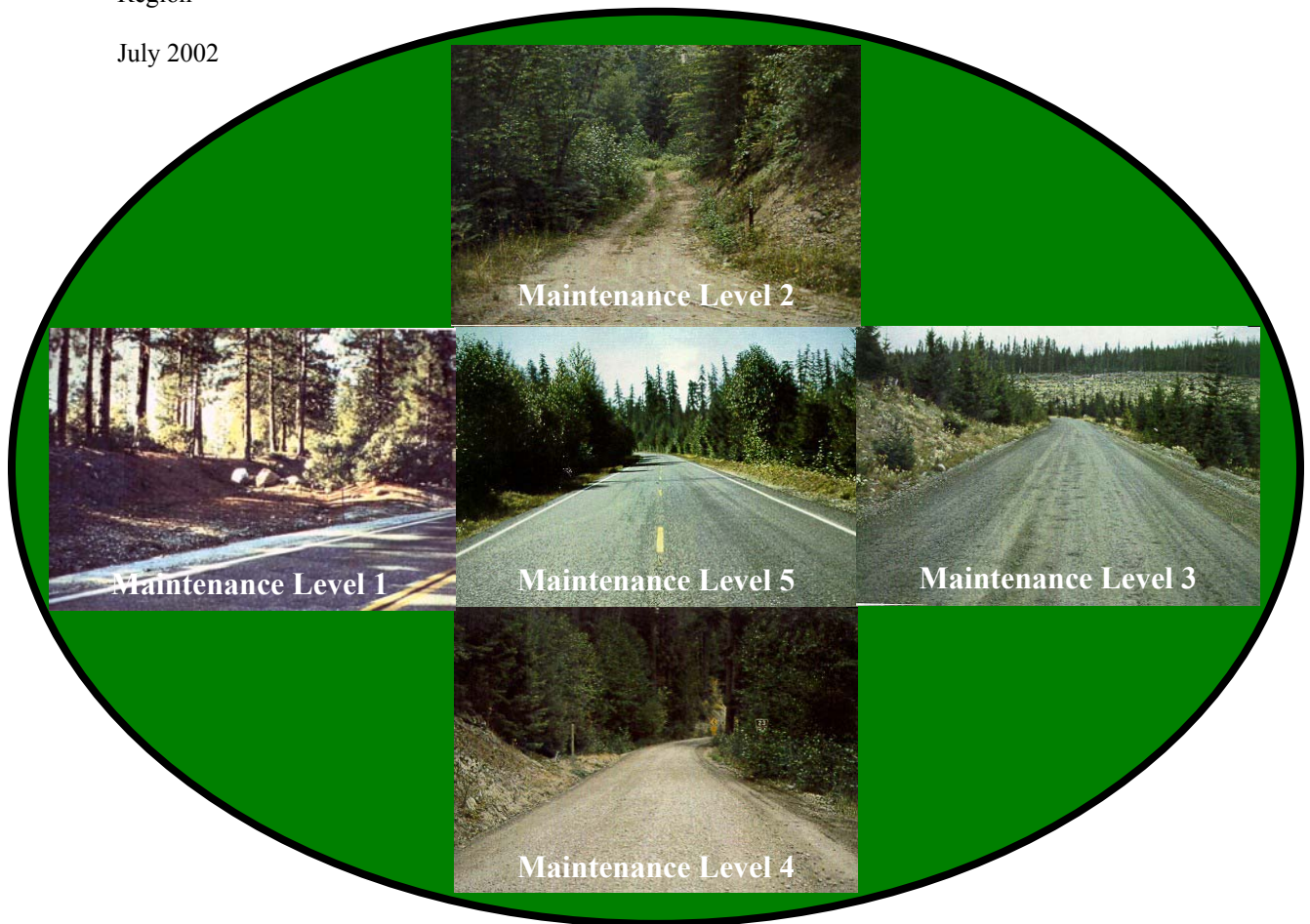
Executive Summary

United States
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Executive Summary

Roads Analysis Overview

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.

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

Scope of this Analysis

The Gifford Pinchot National Forest decided to conduct a Forest-wide Roads Analysis that encompasses all existing classified Forest Development Roads (formerly referred to as "permanent" or "system" roads). The process combines 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.

Approach

The Gifford Pinchot Forest-wide Roads Analysis provides road management opportunities and recommendations that update the current Access and Travel Management (ATM) Plan for Forest

Roads. This plan was completed in 1994 and has been updated prior to Roads Analysis to reflect the numerous subsequent decisions that have been made relating to road management. This approach was selected because the ATM plan has generally been used to communicate to the public our current road management and the desired future road management within the Forest. It was developed using a public involvement process (albeit, applied somewhat inconsistently across the Forest), and incorporates road management terminology that is easily understood and applicable to public uses of Forest roads.

The Gifford Pinchot Roads Analysis process addresses three major factors regarding roads: access needs, aquatic ecosystem risks, and terrestrial ecosystem risks. Each of these categories was analyzed using several components to provide a broad measure of the effects or influence of roads.

The components associated with the need for access included vegetation management, fire prevention and suppression, forest administration, recreation and other public uses, and private easements and rights-of-way. Road maintenance costs were used to illustrate the economic perspective of access needs.

Aquatic ecosystem risks were associated with water quality impacts of surface erosion and mass wasting from roads, stream channel processes and habitat conditions related to stream crossings and roads within Riparian Reserves, cumulative modifications to stream flow from roads, and fish passage barriers.

The components of terrestrial ecosystem risks were identified as roads within big game winter range, proximity of roads to special or unique habitats, proximity of roads to Threatened and Endangered or other protected wildlife species, fragmentation of interior forest, and Forest Plan standards and guidelines relating to road/trail crossings or the proximity of roads to trails.

Analysis of the road system utilized existing information, primarily from GIS and related databases. For analysis purposes the road system was divided into analysis segments; with each segment representing a road or portion of a road that is currently being managed the same along its entire length. Based on the analysis, every road segment was then given a rating of high, moderate or low for each of the three factors outlined above based on specific criteria associated with each factor.

In consideration of the ratings for each of the three factors and, in some cases, the current road management, each road was then assigned a recommendation for future road management and a relative priority for road maintenance or other activity to address potential environmental impacts. The recommendations provide a balance between the need for access and the effects of the road on the environment. The recommendations ranged from keeping a road open and maintained for passenger cars to decommissioning the road (removing it from the road system). As stated earlier, these recommendations are not decisions, but are intended to help identify opportunities and priorities for road management during site-specific roads analysis for individual projects. More thorough, site-specific project analysis of roads may arrive at different conclusions regarding these same factors or may propose various road management alternatives to address these and other issues identified during project analysis.

Public Involvement

The beginning of the roads analysis process for the Gifford Pinchot National Forest was announced to the public, other agencies, adjacent landowners and the tribes in January 2002. Announcements of upcoming public meetings were published in local newspapers and provided to other local media, and published in the Forest newsletter. In February, public meetings were held in Morton, Vancouver, and Stevenson, with a follow-up meeting in Stevenson at the request of a group of local interested individuals. Information regarding the analysis process, current road status and instructions for providing input to the process were provided at these public meetings. In addition, this information was posted on the Forest internet website. Over 100 comments were received either by mail, telephone or e-mail.

General comments from the public or other groups were used to verify and revise the issues used in the analysis. Comments relating to the desire to keep specific roads open were incorporated into a category of access needs. No specific “weighting” or other differentiating process was given to roads that were commented on more than once, since the public input process was not a sampling and, thus, had no statistical validity on which to base such a weighting. Public comments regarding the desired closure or decommissioning of specific roads were not used in the analysis. ID Team recommendations for closure or decommissioning were based on the access need for the road combined with potential resource impacts identified during the analysis. Public comments of this sort (to close or decommission a road) would be better suited to individual project analysis where various alternatives could be analyzed site-specifically.

Recommendations

1. Road Management

The recommendations from the Forest-wide Roads Analysis are updates to the 1994 Access and Travel Management Plan (ATM Plan), as modified by subsequent road management decisions. Specifically, the “Desired Future Condition” identified for each road segment in the ATM plan is replaced with the recommendation from this Roads Analysis, along with the Maintenance Level that is proposed. In addition, a Priority is added, based on the degree of aquatic risk identified. This priority is intended to help identify those road segments that appear to need treatment first, whether the treatment is closure, decommissioning, or simply road maintenance. This would be useful when planning road management with limited funding. What funds are available could then be targeted to the higher priority roads. Terrestrial risk was not seen as needed to establish priority, at least in comparison to aquatic risk. Unlike aquatic risks, terrestrial risks would not be expected to result in potentially deteriorating resource conditions, or even catastrophic loss, if left untreated.

The road management codes used in the ATM Plan were slightly modified based on this Roads Analysis. Two problems identified by the ID Team in the ATM codes were those for “Closing Naturally” (code CN) and “Closed with a Device” (code CD). Roads identified as closing naturally were those that may or may not be currently open, but were not being maintained due to limited budgets or other reasons. This served the purpose of describing the current condition

of the road but is inappropriate for a “desired future condition.” Therefore, all of the roads with this road management in the ATM Plan were recommended to be open, closed or decommissioned based on the findings of Roads Analysis. The code CN was eliminated as one of the possible recommendations.

Roads coded in the ATM Plan as closed with a device included both administrative closures (road closed to the public –usually with a gate- but open for administrative traffic) and those closed and blocked to eliminate all vehicle traffic. This made it difficult to determine whether the road needed to be maintained, or was stabilized in a self-maintaining condition to reduce or eliminate resource impacts. This distinction is important, particularly for determining whether the road meets the requirements of the Memorandum of Understanding with the State Department of Ecology regarding the Clean Water Act. Two new road management strategies, closed to public, administrative traffic only (code CA) and closed and stabilized (code CS) were added to better describe these two situations.

The road management recommendations, therefore, fall into one of the following seven categories:

- OP – Open to passenger cars
- OH – Open to high-clearance vehicles
- SO – Seasonally open
- CA – Closed to public, administrative traffic only
- CS – Closed and stabilized
- DE – Decommission
- RT – Road to trails conversion

The following table shows the miles of road recommended for each of the road management categories.

Recommended Road Management	Miles
OP – Open to passenger cars	636
OH – Open, high-clearance vehicles	941
SO – Seasonally open	1,226
CA – Closed to public, admin. only	194
CS – Closed and stabilized	673
DE – Decommission	697
RT – Road to trails conversion	47

2. Road Maintenance

Road maintenance is divided into the following five categories:

Level 1 – Closed to all traffic

Level 2 – Open and maintained for high-clearance vehicles

Level 3 – Open and maintained for passenger cars; low level of comfort

Level 4 - Open and maintained for passenger cars; moderate level of comfort

Level 5 - Open and maintained for passenger cars; high level of comfort

Levels 3 through 5 are considered highways, and are subject to regulations of the National Traffic Standards Safety Act. These standards require signing, brushing to maintain sight distance, and other maintenance required for user safety.

The following table shows the miles of road recommended for each of the road management categories.

Recommended Maintenance Level	Miles
Level 1	673
Level 2	2,177
Level 3	517
Level 4	188
Level 5	113

3. Economics

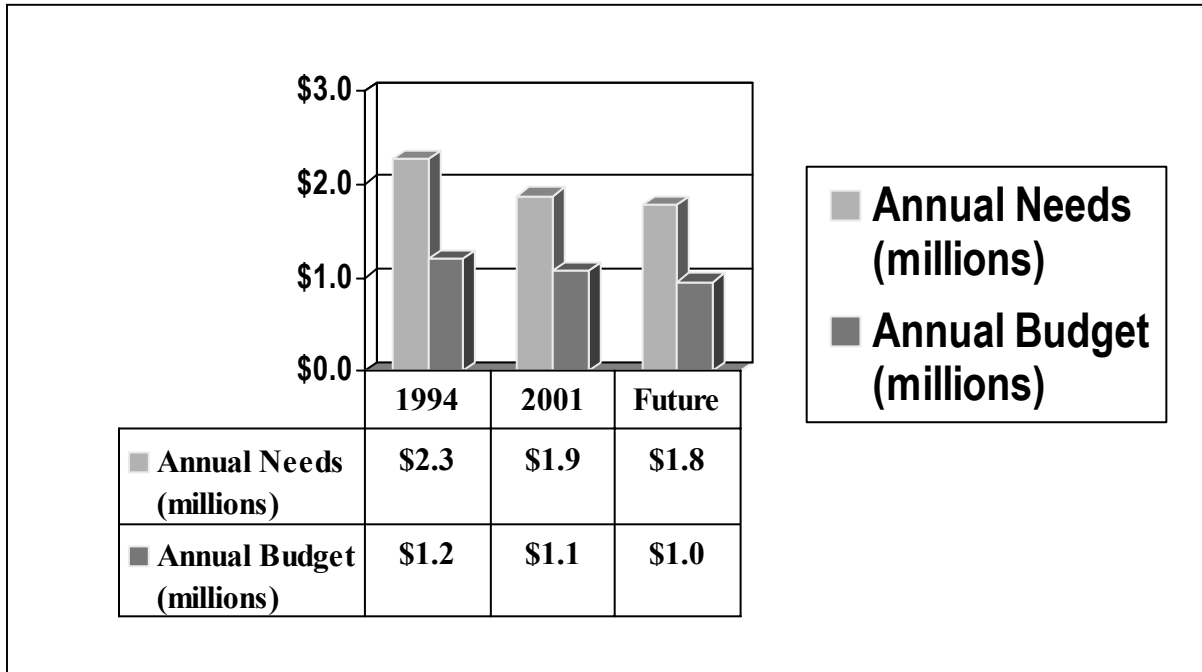
The economics of the current road system compared to the road system that would result from implementing all of the road management recommendations were based on the estimated costs of maintaining the entire forest road system. The estimated annual needs for forest road maintenance were calculated using the total miles of road in each maintenance level times the following BFES road maintenance costs: (expressed in dollars per mile per year)

- Maintenance Level 1 – \$86
- Maintenance Level 2 – \$171
- Maintenance Level 3 – \$987
- Maintenance Level 4 – \$2,632
- Maintenance Level 5 – \$3,290

The current Forest road maintenance budget (and the future budget based on anticipated changes in funding levels) was then compared to the total estimated costs for maintaining the road system.

The results are illustrated in the following graph from the public meetings Powerpoint presentation:

**Road Maintenance Needs vs. Budget
(Constant 2001 Dollars)**



The Forest Leadership Team will develop a strategy during the coming year to address the gap between the annual maintenance needs and the annual road maintenance budget. Possible solutions to closing the gap include alternative funding sources such as county payments and additional project funded maintenance that has been at historically low levels, primarily due to the lack of timber sales being sold or operated.