

## Adequacy of Soil-related NEPA Analysis

Sierra Club/Alliance for the Wild Rockies

### **Concerns expressed by objectors:**

Several issues raised by the Sierra Club/Alliance for the Wild Rockies pertain to how soils were addressed in the NEPA process. Specifically there was a concern that the NEPA analysis lacked site specificity and required quantitative analysis. Some of these concerns include:

- The FEIS does not examine the impacts of proposed management actions on the six soil functions identified in the FSM, nor does it quantify impacts on future timber yield due to cumulative soil damage.
- The FEIS presents no quantified analyses of the impact of past management activities on soil quality and productivity. The adequacy of stated soil quality standards to address soil damage is therefore unknown.
- The LMP does not assess the cumulative impact (current or projected) of log landings and does not set a limit for total DSC from landings.

### **Remedies proposed by objectors:**

Concerns were stated but no specific remedies offered.

## **REVIEW FINDINGS**

### **WHAT IS REQUIRED BY LAW, REGULATION AND/OR POLICY?**

The Multiple Use, Sustained Yield Act of 1960 directs the Secretary of Agriculture to carry out “harmonious and coordinated management of the resources without impairment of the productivity of the land”. The Act specifies that “Sustained yield means achieving and maintaining into perpetuity a high-level annual or regular periodic output of renewable resources without impairment of the productivity of the land.” The Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 requires the maintenance of productivity of the land and the protection and, where appropriate, improvement of the quality of the soil and water resources. The Act specifies that “substantial and permanent impairment of productivity must be avoided”. The Forest Service Manual 2550 – Soil Management directs soil resource management on National Forest System lands. The objectives of this National direction are to (1) maintain or restore soil quality on National Forest System land and (2) manage resource uses and soil resources on National Forest System lands to sustain ecological processes and function so that desired ecosystem services are provided in perpetuity (page 284, FEIS). Forest Service Manual 2520 – Watershed Protection and Management, R-6 Supplement No. 2500.98-1 provides regional direction related to soil quality management, protection, and restoration. All alternatives are in compliance with soil management direction in Forest Service 2550 – Soil

Management along with any amendments and regional supplements (page 417, FEIS VOLUME 1).

### **WHAT IS IN THE FOREST PLAN AND THE FEIS?**

The FEIS describes the overall soil resource on the Forest. It characterizes soil impacts related to the various alternatives defined in the Forest Plan qualitatively for the purpose of comparing alternatives. Both the negative and positive impacts of past management on soil productivity are described in the FEIS, although qualitatively, which is appropriate (page 416, FEIS). The FEIS discusses proposed forest-wide direction for soil quality and productivity, and current Regional Soil Standards and Guidelines, applicable to all alternatives aimed at protecting inherent soil quality. The FEIS provides an accounting of indicators that could be measured or evaluated (depending on the soil and site characteristics) to determine if desired conditions are being achieved at a project level (page 418 and 419). The FEIS further states “Activities that affect dynamic soil quality can rebound relatively quickly. In contrast, inherent soil quality describes the summation of a site’s potential to support growth based on bedrock, climate, and rate of soil development. When management activities impact inherent soil quality a longer recovery term is necessary” (pages 420 and 421). The soil quality standards and guidelines included or referenced in the FEIS and in the LMP are designed to protect inherent soil quality.

### **ASSESSMENT**

Quantifying the impacts of past or future management is generally not appropriate given the scale and intent of the LMP. Quantitative analysis may be needed to support the project-level planning and design phases resulting from implementation of the LMP. To appropriately quantify impacts of management activities requires site-specific information. The Forest Plan is not intended to define specific projects and their locations, but provides a framework and guidance for their development and implementation. In regards to the specific concern expressed regarding log landings, they are accounted for in the soil quality standards employed during project design and implementation. They are a detrimental soil condition that is subject to limitation in the standards unless they are effectively restored to a naturally functioning condition.

#### **Potential instructions (if applicable):**

None proposed.