Chapter IV Environmental Consequences

A. Introduction

In Chapter I, the purpose of and need for this planning process was described. Planning questions were identified which delineated the scope and intensity of analysis. The alternatives being analyzed were described in Chapter II. Those alternatives were created around the various ways of resolving the planning questions. In Chapter III, the environment that will be affected by those alternatives was described. Chapter IV presents a discussion of what the effects on the environment would be if the alternatives were carried out. The consequences discussed in this chapter include the positive and negative effects that are part of determining net public benefits. (Net public benefits are defined in Chapter II.)

The environment, as discussed here, needs to be distinguished from program outputs. The environment includes such things as wildlife habitat, soils, vegetation, recreational opportunities, community stability, etc. Program outputs include such things as timber harvest and grazing levels. Program outputs are presented in detail in Chapter II (primarily in Table II-5) and will not be repeated again here except as they relate to environmental consequences.

Environmental consequences can be beneficial or adverse, direct or indirect, cumulative or single, and may be short-term or long-term. This information provides the scientific and analytic basis for the comparison of alternatives in Chapter II. Alternatives are primarily different combinations of land management areas. The effects of the alternatives are largely determined by the effects of Management Area direction and the number of acres assigned to each management area.

The role of standards is very important in considering environmental consequences since standards are the primary mitigation measures for any activity on the Forest. Some standards are effective Forest-wide, others are specific to a Management Area. They give program and project implementation direction and will be addressed in subsequent analysis of site-specific projects tiered to this Final Environmental Impact Statement. The Forest Standards are identified in the Forest Plan. Standards that differ from those recommended for the Forest Plan are described in Appendix D.

Much of this analysis is based on computer modeling which simulates the complex physical, biological, and economic interrelationships of the Forest and human environment. Many predictions are based on average values and are, at best, rough estimates. An important part of implementing the Final Forest Plan will be monitoring the accuracy of these predictions to provide new and improved information for future planning. In some cases, there simply is not enough information available about these interrelationships. Research needs have been identified in the hope that additional information will be made available in those areas as well.

B. Summary of Changes from Draft to Final EIS

Several changes have been made to this chapter since the Draft Environmental Impact Statement was released in August of 1987. The following is a summary of the changes related to environmental consequences.

Updated and expanded coverage of key topics has been added to the discussions on environmental effects from mining and mineral exploration, vegetation and forage conditions, effects on the anadromous and non-anadromous fisheries resources of the Forest, and impacts on riparian conditions and forage utilization. In addition, discussions of the potential timber harvest outputs and effects have been expanded to include ponderosa pine outputs over time, timber harvest rotation lengths, management intensity, and timber outputs by alternative.

There has been a reassessment of livestock strategy in less than desirable conditions within riparian zones and the effects of management practices on big game The cover-to-forage ratio method previously used to estimate potential elk habitat has been replaced by a Habitat Effectiveness Index (HEI)

Five alternatives presented in the draft EIS have been dropped in this FEIS Due to the lack of public interest following release of the draft EIS, Alternatives D, E, F-departure, G and H are not brought forward in FEIS chapter discussions In response to public comments, Alternatives B and C are modified and Alternative I has been added to this FEIS, as newly-developed alternatives In addition, the baseline 10-year period used to gauge outputs and effects between all alternatives has been updated to the 1980-1989 time period Consequently, past timber sales, harvests, and experienced costs are now presented at recently-experienced levels

Lastly, a new cumulative effects analysis is discussed along with a summary of qualitative rankings of alternatives for several key resource indicators. These rankings are tied to both direct and indirect effects on resources, over a 50-year planning horizon, and the potential risk to the specific Forest resource

C. How This Chapter is Organized

This chapter is organized by affected resources The environmental consequences (effects) that do not vary between alternatives are discussed first Then, the effects of the alternatives on the various resources of the Forest are discussed

D. Effects That Do Not Differ Between Alternatives

1 Prime Farmlands, Rangelands, and Forest Land

There are no prime farmlands within or adjacent to the Forest All alternatives are in keeping with the intent of Secretary of Agriculture Memorandum 1827 for prime rangeland, farmland, and forest land

2 Wetlands and Floodplains

Wetlands and floodplains comprise approximately 5 percent of the Forest land Executive Orders 11990 and 11988 require protection of wetlands and floodplains Timber harvesting, grazing, and road construction are activities that have the greatest potential for affecting them in all alternatives No significant adverse effects are anticipated, as adherence to standards and mitigation measures should prevent all but minor and temporary impacts on these areas Because of the small area involved, differences between alternatives may not be measurable The effects on specific wetlands and floodplains will be evaluated during the analysis of site-specific projects (See Forest Plan, Chapter IV, Section F.)

3. Urban Environments

Situated in rural eastern Oregon, more than 100 miles from the nearest urban area, none of the alternatives would have a direct effect on any urban area The existence of the Forest for urban dwellers' enjoyment may be an indirect effect Management of the Forest also contributes to the national economy which indirectly affects urban dwellers as well.

4. Threatened and Endangered Species

There are no Threatened or Endangered plant species on the Forest Sensitive plant and animal species habitats are protected through Standards (Forest Plan, Chapter IV, Section E) The only Threatened or Endangered wildlife species on the Forest are the bald eagle and the American peregrine falcon. The USDI Fish and Wildlife Service concurs with this finding (USDI, FWS, 1988) Bald eagles roost in specific areas along the southern edge of the Forest during the winter only. These areas will be managed under Management Area 5 in each alternative. (See the Forest Plan for a complete