

# Chapter III Affected Environment

## A. Introduction

This Chapter describes the existing environment that will be affected by implementation of any of the alternatives. It discusses physical and biological characteristics of natural resources existing on the Forest and the demand for those resources. It also describes the social, cultural, and economic setting for the Forest.

## 1. How This Chapter is Organized

Discussion of the affected environment begins with a description of geological and biological resources of the Forest. This is followed by discussion of development and use of these natural resources and the influences that human activities have had on the ecosystems

The second section of this chapter describes current Forest management of these resources and anticipated use levels. Following each discussion of a particular resource management strategy, the relationship between the management of that resource and other resources is described. For example, following discussion of timber management, the influence that other resources have on the management of timber is described. These interrelationships provide the basis for the effects of alternatives described in Chapter IV.

## 2. Summary of Changes from Draft to Final

Several important changes concerning the affected environment on the Malheur National Forest have occurred since the Draft Environmental Impact Statement was released. A summary of changes related to affected environment is listed below.

*Management Indicator Species* This section has been expanded to include several additional species as indicators of management practices. Also, three species have been dropped as management indicators for the Malheur National Forest.

*Habitat Effectiveness Index (HEI):* Use of HEI modeling has replaced the cover/forage ratio descriptions for relating the elk habitat conditions of the Forest. HEI adds to cover/forage modeling by incorporating physical and biological indicators of cover quality and spacing, as well as open road densities to determine quality of big-game habitat.

*Soils Update:* This section has been expanded to account for a variety of historical events that have affected the soils resource. Grazing, logging, road construction and mining impacts are described. Soil conditions on the Forest are described in greater detail.

*Wild and Scenic Rivers* The discussion of Wild and Scenic Rivers was revised after reanalyzing Forest river systems in response to public comments. Upon passage of the Oregon Omnibus Wild and Scenic Rivers Act in 1988, the Malheur and North Fork Malheur Rivers were added to the wild and scenic rivers system.

*Water Resources Update.* A detailed discussion of the water resources, water quality monitoring, and the affected environment of the Malheur National Forest is given in this Chapter. Climate, topography, and their interactions are discussed in greater depth, including potential management implications.

*Riparian Ecosystems Update:* This section has been developed more fully since issuance of the Draft Environmental Impact Statement. Riparian zones are defined, their importance emphasized, and riparian management implications are described.

*Vegetation Condition Update* The discussion about current vegetation conditions on the Malheur National Forest has been updated. Tree information (including old growth), range, and other nonforested vegetation types are described using current information (1989).

*Diversity Discussion Added:* A section about "Diversity of Plant and Animal Communities" has been included in Chapter III. This summary describes current diversity concepts at the landscape ecology level and how natural and human-caused activities may influence those patterns.

## B Physical and Biological Setting

### 1 The Malheur National Forest

The Forest is one of 19 National Forests that make up the Pacific Northwest Region, Region 6, of the National Forest System. Region 6 includes lands within Oregon and Washington and is headquartered in Portland, Oregon.

The Forest's 1,459,422 acres are located in eastern Oregon, approximately equidistant from the borders of Washington, Idaho, and Nevada (see Figure III-1.) The Strawberry Mountain Range, part of the Blue Mountains, extends east to west through the center of the Forest. The Forest spans an elevational range of 3,300 to 9,038 feet, which results in a diverse and productive landscape of grasslands, sage, and juniper, forests of pine, fir, and other tree species, and mountain lakes and meadows.

The northern part of the Forest is drained by the John Day River System into the Columbia River Basin. The southern part of the Forest is drained principally by the Silvies River system into the Great Basin, and by the Malheur River system into the Snake River.

Malheur NF lands are in Grant (1,119,161 acres), Harney (293,876 acres), Baker (45,786 acres), and Malheur (599 acres) counties. The Forest is within a day's drive of Portland, Oregon. Principal access routes are U.S. 26 and U.S. 395, which are winding, two-lane, rural roads. There are two main population centers: the John Day Valley from Dayville to Prairie City, and a 5-mile radius around Burns.

The administrative breakdown of the Forest consists of four Ranger Districts: Prairie City, with offices in Prairie City, Long Creek, with offices in John Day, Bear Valley, also headquartered in John Day; and Burns, with offices in Hines. The Forest Supervisor's Office is located in John Day. The ties between the Forest and the local communities are described in more detail in Section C, Social and Economic Setting.