Appendix A

Scientific Background, Legal Guidance, and Current Plans

(Comparable to Eastside Appendix 1-1)

This Appendix contains the following items:

- *Scientific Background*
- *Legal Guidance*
- *Current Plans and Their Approval Dates*

Scientific Background

Increased scientific understanding of ecosystem processes and functions has led to better awareness that many forest, rangeland, riparian, and aquatic ecosystems in the Columbia River Basin are becoming less resilient. Among the recent research, studies, and reports on ecosystem functions and processes, conservation biology, ecosystem health, and species viability are selected major studies listed here. In addition to these publications, new information produced by the Interior Columbia Basin Ecosystem Management Project Science Integration Team, discussed below, also contributed to the development of this EIS. For a complete list of literature cited in this EIS, see Chapter 5.

Major Studies

- ***Spring 1993.*** Richard Everett, Paul Hessburg, Mark Jensen and Bernard Bormann completed an **"Eastside Forest Ecosystem Health Assessment,"**commissioned by the U.S. Congress, which documented changes in eastside ecosystems and proposed an initial process for developing landscape prescriptions for management. This report, published in 1994 (Everett et al. 1994), focused largely on forest ecosystem health in six river basins.
- ***September 1993.*** The Eastside Forests Scientific Society Panel released an executive summary of the congressionally commissioned **"Interim Protection for Late-Successional Forests, Fisheries, and Watersheds for National Forests East of the Cascade Crest in Oregon and Washington."** The panel's mandate was to broadly review the status of all eastside forests and their associated resources. The complete report was published in 1994 (Henjum et al. 1994).
- ***November 1993.*** A scientific workshop, **Assessing Forest Ecosystem Health in the Inland West**, was convened in Sun Valley, Idaho to assess the current state of scientific knowledge about the health of forests in the Inland West. The goal was for 35 participating scientists and managers to produce a current, accurate, credible synthesis of information, from across disciplines, about forest ecosystem health. The full publication (Sampson and Adams 1994) contains an overview paper, five synthesis papers, and 16 individual scientific papers.
- ***December 1993.*** Jay O'Laughlin, Director of the Idaho Forest, Wildlife and Range Policy Analysis Group, and others published Report No. 11: **"Forest Health Conditions in Idaho."** The report addresses how sustaining healthy forest ecosystems might proceed in Idaho.
- ***March 1994.*** An Environmental Assessment (EA) was issued for the **Implementation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California, commonly known as "PACFISH"** (USDA Forest Service and USDI Bureau of Land Management 1994)**.** The EA calls for the FS and the BLM to implement interim direction for habitat management to conserve Pacific salmon, steelhead, and sea-run cutthroat trout throughout their range in Oregon, Washington, Idaho, and California. The EA also said that this interim direction is to be followed by longer-term management direction to address anadromous fish habitat conservation in these states. The decision record is expected to be signed early in 1995.
- ***May 1994.*** A draft environmental impact statement on **Rangeland Reform** was released, proposing changes in grazing regulations for all BLM- and Forest Service-administered lands. The provisions of this proposed rule are necessary to ensure proper administration of livestock grazing on public rangelands and bring about reform in rangeland management for the improvement, protection, and proper function of rangeland ecosystems. The Final EIS was issued in December 1994 (USDI Bureau of Land Management 1994b).

- ***October 1994.*** The **Western Forest Health Initiative** report was released (USDA Forest Service 1994). The team, established by Forest Service Chief Jack Ward Thomas, was chartered to identify Forest Service priority activities to restore western forested ecosystems health. The report identifies project priorities over the next 24 months for forest health, including reduction of catastrophic changes in key ecosystem structure, composition, and processes; restoration of critical ecosystem processes; and restoration of stressed sites.

Science Integration Team

The Science Integration Team (SIT) was composed of Federal employees from the Forest Service, BLM, Environmental Protection Agency (EPA), U.S. Geological Survey (USGS), and U.S. Bureau of Mines. Contractors were brought in for specific tasks and assignments. SIT headquarters were located in Walla Walla, Washington, with detached analysis units in Missoula and Kalispell, Montana; Boise, Moscow, and Coeur d'Alene, Idaho; Portland and Corvallis, Oregon; Seattle, Spokane and Wenatchee, Washington; and Reno and Las Vegas, Nevada. Its purpose was to develop a Framework for Ecosystem Management, a Scientific Assessment of the Interior Columbia Basin, and a Scientific Evaluation of EIS Alternatives. The SIT was organized around the functional groups of Landscape Ecology (physical and vegetative resources), Terrestrial Resources, Aquatic Resources, and Economics and Social Sciences. A staff of Geographic Information System (GIS) specialists supported the spatial and data processing needs of the science staffs.

Scientific Assessment

The ICBEMP scientific assessment resulted in two major documents. *An Assessment of Ecosystem Components in the Interior Columbia Basin Including Portions of the Klamath and Great Basins* (Quigley and Arbelbide 1996) presents information gathered and brought forward as Staff Area Reports (STARs) by five functional groups ~ Landscape Ecology, Terrestrial, Aquatics, Social, and Economics ~ through an examination of historical and current conditions and trends. An *Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin and Portions of the Klamath and Great Basins* (Quigley, Graham, and Haynes 1996) integrates the information identified in the staff area reports, and uses integrity indices to examine the extent of ecological risk and departure from historical and potential vegetation conditions. It also discusses probable outcomes of management under various possible futures.

The *Assessment* drew on information from all lands within the basin, not just Forest Service or BLM lands. Understanding ecosystem components, structures, processes, and functions that operate at multiple geographic and temporal extents and providing context for decisions required that all lands be included in the *Assessment*. Because of the broad level of data resolution used in the *Assessment* and the large geographic extent, the *Assessment* relied primarily on remote sensing or readily available information from third party sources. An effort was made to use as much as possible of the existing information concerning the past and present condition of the basin. To the extent feasible, the SIT relied on existing simulation models to project future conditions of the basin. Where existing models were not available, new models were constructed and simulations made to project future conditions or interpretations, and inferences were made from the information available and model results.

Scientific Framework

The *Framework for Ecosystem Management in the Interior Columbia Basin and Portions of the Klamath and Great Basins* (Haynes, Graham, and Quigley 1996) describes the principles and processes applicable for managing ecosystems in the interior Columbia River Basin at various geographic scales. The *Framework* also includes a discussion of how these principles and goals

might be used to implement ecosystem management within a process of managing risks (with risks defined as activities or events that relate to the likelihood of not reaching desired goals). Focusing on lands administered by the Forest Service or BLM, the *Framework* provides broad concepts and analytical processes recommended for ecosystem analysis, planning, management, and monitoring. The EIS process was consistent with the principles in the *Framework*.

Evaluation of Alternatives

The *Evaluation of EIS Alternatives by the Science Integration Team* (Quigley, Lee, and Arbelbide 1997) analyzes the effects of implementing each alternative management strategy. Outcomes of each alternative were evaluated relative to maintaining and/or restoring forest and rangeland health and productivity; and to maintaining economic, social, and cultural systems (including tribal trust responsibilities). The *Evaluation* provides an estimate of likely outcomes and cumulative effects from the alternatives across the entire project area.

Peer Review and Public Involvement

The scientific documents developed by the SIT were subjected to peer review using a modified blind process. A science review board (SRB) was formed, comprised of six members and two co-chairs. Reviewers were chosen from a list of knowledgeable scientists, land managers, and regulatory personnel by the SRB without direction from the SIT, ensuring an impartial but informed review process. SIT products were received by the SRB co-chairs and forwarded to board members for assignment to outside reviewers. The SRB sought diverse points of view, and forwarded those views to the SIT without integration, attempts at consensus, or accompanying advice. Specific charges of the review board included facilitating the review of scientific approaches and products of the SIT, facilitating the review of products for practicality and management feasibility, and ensuring a broad peer review of products that included diverse opinions.

The public had access to the science collection process through open SIT meetings and workshops and access to written material. During the early phases of the project, regularly scheduled public meeting were held, during which each team gave an update, progress report, shared draft reports, and answered questions. Reports from contractors and other draft materials were made available to the public through a variety of means including printed draft reports, electronic library, and workshops. The SIT made available to the public data layers and maps when the data was stable and documented. A data release policy was adopted and several of the themes were made available during the planning phase.

Legal Guidance

The following statutes and executive orders (as amended) constitute the major legal guidance for planning and management of lands administered by BLM and Forest Service. This list is not all inclusive but does represent the primary legal guidance considered in preparation of this EIS.

American Indian Religious Freedom Act of 1978 (42 USC 1996)
Animal Damage Control Act of 1931, as amended (7USC 426-426b)
Archaeological Resource Protection Act of 1979 (16 USC 470aa)
Bald Eagle Protection Act (16 USC 668)
Clean Air Act (42 USC 7401)
Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 USC 9601)
Endangered Species Act of 1973 (16 USC 1531)
Environmental Quality Improvement Act of 1970 (42 USC 4371)
Executive Order 11514, Protection and Enhancement of Environmental Quality, 1970
Executive Order 11644, Use of Off-Road Vehicles on the Public Lands, 1972

Executive Order 11988, Floodplain Management, 1977
Executive Order 11989, Off-Road Vehicles on Public Lands, 1977
Executive Order 11990, Protection of Wetlands, 1977
Federal Advisory Committee Act (FACA)
Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701)
Federal Water Pollution Control Act/Clean Water Act (33 USC 1251)
Fish and Wildlife Coordination Act (16 USC 661)
Forest and Rangeland Renewable Resources Planning Act of 1974, as amended (16 USC 1601)
Geothermal Energy Act of 1980 (30 USC 1501)
Geothermal Steam Act of 1970 (30 USC 1001)
Land and Water Conservation Fund Act of 1965 (16 USC 4601-4)
Materials Act of 1947 (30 USC 80l)
Migratory Bird Conservation Act (16 USC 715)
Migratory Bird Treaty Act (16 USC 703)
Mineral Leasing Act of 1920 (Mineral Lands Leasing Act) (30 USC 181)
Mining Act of 1872 (30 USC 26)
Mining and Minerals Policy Act of 1970 (30 USC 21a)
National Environmental Policy Act of 1969 (NEPA) (42 USC 4321)
National Forest Management Act (NFMA) (16 USC 1600)
National Historic Preservation Act (16 USC 470)
National Trail Systems Act (16 USC 1241)
Recreation and Public Purposes Act (43 USC 869)
Resource Conservation and Recovery Act of 1976 (42 USC 6901)
Safe Drinking Water Act (42 USC 300f)
Soil and Water Resources Conservation Act of 1977 (16 USC 2001)
Surface Mining Control and Reclamation Act of 1977 (30 USC 1201 et seq.)
Taylor Grazing Act (43 USC 315)
Wilderness Act of 1964 (16 USC 1131)
Wild and Scenic Rivers Act (16 USC 1271)

Current Plans and Their Approval Dates

The Forest Service is required by the National Forest Management Act to revise forest plans every 10 to 15 years. The BLM, although not mandated by law to follow a particular revision timetable, generally revises plans on a similar schedule. The current plans for both agencies and their dates of approval are shown below.

Forest Service

Region 1	**Approval Date**
Bitterroot Forest Plan	September 1987
Clearwater Forest Plan	September 1987
Deerlodge Forest Plan	September 1987
Flathead Forest Plan	January 1986
Helena Forest Plan	May 1986
Idaho Panhandle Forest Plan	September 1987
Kootenai Forest Plan	September 1987
Lolo Forest Plan	April 1986
Nez Perce Forest Plan	October 1987
Region 4	
Boise Forest Plan	April 1990
Caribou Forest Plan	September 1985
Challis Forest Plan	June 1987

Humboldt Forest Plan	August 1986
Payette Forest Plan	May 1988
Salmon Forest Plan	November 1988
Sawtooth Forest Plan	September 1987

Bureau of Land Management

Idaho

Bennett Hills Management Framework Plan	July 1976
Big Desert Management Framework Plan	October 1981
Big Lost Management Framework Plan	December 1983
Bruneau Management Framework Plan	June 1983
Cascade Resource Management Plan	July 1988
Cassia Resource Management Plan	January 1985
Challis Management Framework Plan	July 1979
Chief Joseph Management Framework Plan	November 1981
Ellis-Pahsimeroi Management Framework Plan	September 1982
Emerald Empire Management Framework Plan	November 1981
Jarbidge Resource Management Plan	March 1987
Kuna Management Framework Plan	June 1983
Lemhi Resource Management Plan	April 1987
Little Lost Birch Creek Management Framework Plan	June 1981
Mackay Management Framework Plan	January 1984
Magic Management Framework Plan	June 1975
Malad Management Framework Plan	February 1981
Medicine Lodge Resource Management Plan	November 1985
Monument Resource Management Plan	April 1985
Owyhee Management Framework Plan	May 1981
Pocatello Resource Management Plan	January 1988
Sun Valley Management Framework Plan	December 1981
Timmerman Management Framework Plan	July 1976
Twin Falls Management Framework Plan	September 1982

Montana

Garnet Resource Management Plan	April 1986

Wyoming

Kemmerer Resource Management Plan	April 1986
Pinedale Resource Management Plan	December 1988

Utah

Box Elder Resource Management Plan	April 1986

Nevada

Elko Resource Management Plan	March 1987
Paradise-Denio Resource Management Plan	July 1982
Wells Resource Management Plan	July 1985

GO TO INTRODUCTION

GO TO APPENDIX B