

April 2003

U.S. Department of the Interior
Bureau of Land Management

Lakeview District Office
HC10 Box 337, 301 South G. Street
Lakeview, Oregon 97630

Draft-Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments *Summary*



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Lakeview District Office
HC10 Box 337, 301 South G. Street
Lakeview, Oregon 97630

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List of Abbreviations and Acronyms

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PL-02/038+1792

ACEC	- Area of Critical Environmental Concern	NOAA	- National Oceanic Atmospheric Administration
ACS	- Aquatic Conservation Strategy	NOI	- Notice of Intent
AUM	- Animal Unit Month	NPS	- National Park Service
BLM	- Bureau of Land Management	NRCS	- Natural Resources Conservation Service
BMP	- Best management practice	NRHP	- National Register of Historic Places
CA	- Conservation Agreement	NRI	- Natural Resources Inventory
CAA	- <i>Clean Air Act</i>	O&C	- <i>Oregon & California Lands Act</i>
CDFG	- California Department of Fish and Game	ODA	- Oregon Department of Agriculture
CEQ	- Council on Environmental Quality	ODEQ	- Oregon Department of Environmental Quality
CFR	- Code of Federal Regulations	ODF	- Oregon Department of Forestry
CFS	- Cubic Feet per Second	ODFW	- Oregon Department of Fish and Wildlife
COE	- Corps of Engineers (Corps)	ODOT	- Oregon Department of Transportation
CSWRCB	- California State Water Resources Control Board	ODSL	- Oregon Division of State Lands
CWA	- <i>Clean Water Act</i>	OHV	- Off-Highway Vehicle (also known as Off-Road Vehicle)
CWD	- Coarse Woody Debris	ONHP	- Oregon Natural Heritage Program
DEQ	- Department of Environmental Quality	OPRD	- Oregon Parks and Recreation Department
DSL	- Division of State Lands	ORV	- Outstandingly Remarkable Value
EA	- Environmental Assessment	OWRD	- Oregon Water Resources Department
EIS	- Environmental Impact Statement	PAC	- Provincial Advisory Council
EPA	- Environmental Protection Agency	PDF	- Project Design Feature
ESA	- <i>Endangered Species Act</i>	PFC	- Proper Functioning Condition
ESU	- Evolutionary Significant Unit	PFW	- Partners for Wildlife
FACA	- <i>Federal Advisory Committee Act</i>	PRIA	- <i>Public Rangelands Improvement Act</i>
FERC	- Federal Energy Regulatory Commission	RC&D	- Resource Conservation and Development
FLPMA	- <i>Federal Land Policy and Management Act</i>	RIEC	- Regional Interagency Executive Committee
FONSI	- Finding of No Significant Impact	REO	- Regional Ecosystem Office
FTZ	- Fuel Treatment Zones	RMP	- Resource Management Plan
GIS	- Geographic Information System	RM	- River Mile
HABS/HAER	- Historic American Buildings Survey/ Historic American Engineering Record	ROD	- Record of Decision
HCP	- Habitat Conservation Plan	ROS	- Recreation Opportunity Spectrum
IAC	- Intergovernmental Advisory Committee	RRMP	- Redding Resource Management Plan
IBLA	- Interior Board of Land Appeals	SONCC	- Southern Oregon/Northern California Coastal
ICBEMP	- Interior Columbia Basin Ecosystem Management Project	SHPO	- State Historic Preservation Office
JITW	- Jobs in the Woods	SMA	- Special Management Area
KFRA	- Klamath Falls Resource Area	SRMA	- Special Recreation Management Area
KFRMP	- Klamath Falls (Resource Area) Resource Management Plan	SWCD	- Soil and Water Conservation District
KPAC	- Klamath Provincial Advisory Committee	T&E	- Threatened and Endangered
LAC	- Limits of Acceptable Change	TES	- Threatened, Endangered, and Sensitive (Species)
LCDC	- Land Conservation and Development Commission	TMDL	- Total Maximum Daily Load
LSR	- Late-Successional Reserve	TNC	- The Nature Conservancy
LUP	- Land Use Plan	USBR	- U.S. Bureau of Reclamation
MOA	- Memorandum of Agreement	USDA	- United States Department of Agriculture
MOU	- Memorandum of Understanding	USDI	- United States Department of Interior
NCA	- National Conservation Area	USFS	- United States Forest Service
NEPA	- <i>National Environmental Protection Act</i>	USFWS	- United States Fish and Wildlife Service
NFMA	- <i>National Forest Management Act</i>	USGS	- United States Geological Survey
NFP	- Northwest Forest Plan	VRM	- Visual Resource Management
NHPA	- <i>National Historic Preservation Act</i>	WQS	- Water Quality Standards
NMFS	- National Marine Fisheries Service	WSR	- Wild and Scenic River
NOA	- Notice of Availability	WSRA	- <i>Wild and Scenic Rivers Act</i>
		WQRP	- Water Quality Restoration Plan



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Klamath Falls Resource Area

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E-Mail Address: Username@kfra.or.blm

Website: <http://www.or.blm.gov/Lakeview/kfra/index.htm>

IN REPLY REFER TO:

1610 (014)

February 26, 2003

Dear Interested Party:

Enclosed for your review and comment is the Draft Upper Klamath River Management Plan and Environmental Impact Statement (EIS) and Resource Management Plan Amendments. This document outlines management options and environmental consequences for managing lands administered by the Bureau of Land Management (BLM) in southern Oregon and northern California along the upper Klamath River system. This EIS will amend both the BLM Redding (California) and the Klamath Falls Resource Area (Oregon) Resource Management Plans. It also proposes classification and rules affecting all non-federal lands within the designated Oregon's State Scenic Waterway.

There are four resource management alternatives proposed in this DEIS. The alternatives were designed to provide different management actions that protect, maintain, restore and/or enhance river values, resources, and ecological processes while providing opportunities for the public to enjoy this unique area. In compliance with Code of Federal Regulations (CFR) § 1610.4-7, Alternative 3 was identified as the preferred alternative. Although a preferred alternative is identified, it is recognized that parts of the other alternatives would also meet management goals or possibly new information will be identified that could change the preferred alternative. As a result, dialogue and comments received on this draft plan will be heavily relied upon in the formulation of the Proposed Final Upper Klamath River Management Plan/Environmental Impact Statement.

Written comments should be sent to Larry Frazier, Project Team leader, Bureau of Land Management, 2795 Anderson Avenue, Building 25, Klamath Falls, Oregon, or via email (krmp@or.blm.gov). All written comments will be fully considered and evaluated in the preparation of the final Upper Klamath River Plan and EIS.

Your review and comments are requested at this time to ensure that your interests are adequately considered in the planning process. A 90-day public comment period is being provided for review of this document. Public meetings will be held in Klamath Falls, Oregon, and Yreka and Copco, California, during the comment period. Additional meetings may be held in other locations if there is sufficient interest. The comment period closing date and specific dates and locations of public meetings will be announced through the local news media, news letters, and the BLM website (www.or.blm.gov/Lakeview/kfra/index.htm).

Written comments on the State Scenic Waterway portion of the plan (Chapter 3) should be sent to Jan Houck, Program Coordinator, Oregon State Parks and Recreation Department, 20300 Empire Avenue, Suite B-1, Bend, Oregon, or via email (jan.houck@state.or.us).

Comment letters to the BLM, including names and street addresses of respondents, will be available for public review at the Klamath Falls Resource Area office during regular business hours 8:00 a.m. to 5:00 p.m., Monday through Friday, except holidays, and may be published as part of the Final EIS. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review, or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comments. Such requests will be honored to the extent allowed by law. Anonymous comments will be considered. All submissions from organizations and businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be available for public inspection in their entirety.

We appreciate your help in this planning effort and look forward to your continued interest and participation. For additional information or clarification regarding this document or the planning process, please contact Larry Frazier or Don Hoffheins at (541) 883-6916.

Sincerely,

A handwritten signature in black ink that reads "Teresa A. Raml". The signature is written in a cursive style with a large, prominent initial "T".

Teresa A. Raml, Manager
Klamath Falls Resource Area

DRAFT UPPER KLAMATH RIVER MANAGEMENT PLAN / ENVIRONMENTAL IMPACT STATEMENT and RESOURCE MANAGEMENT PLAN AMENDMENTS

Klamath Falls Resource Area Field Manager Recommendation

I recommend release of the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment. It has been prepared following direction in BLM Handbook H-1601-1 (Land Use Planning) and BLM Manual 8351 (Wild and Scenic Rivers). The Draft River Plan addresses issues raised by the public, and proposes land use allocations and management actions for Bureau administered lands and resources that would protect or enhance river values throughout the Upper Klamath River.



Teresa A. Raml, Field Manager

Redding Resource Area Field Manager Recommendation

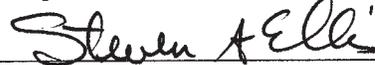
I recommend the release the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment.



Charles M. Schultz, Field Manager

Lakeview District Manager Concurrence

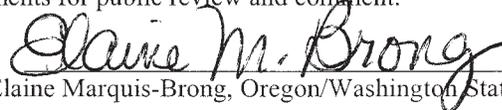
I concur with the recommendation to release the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment.



Steven A. Ellis, Lakeview District Manager

Oregon/Washington State Director Concurrence

I concur with the recommendation to release the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment.



Elaine Marquis-Brong, Oregon/Washington State Director

California State Director Concurrence

I concur with the recommendation to release the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment.



Mike Pool, California State Director

Oregon State Parks and Recreation Concurrence

I concur with the recommendation to release the Draft Upper Klamath River Management Plan Environmental Impact Statement and Resource Management Plan Amendments for public review and comment.



Michael Carrier, Oregon Parks and Recreation Director

Summary

Draft Upper Klamath River Management Plan

Environmental Impact Statement And Resource Management Plan Amendments



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Summary – Draft Upper Klamath River Management Plan/Environmental Impact Statement and Resource Management Plan Amendments

Chapter 1 - Introduction

Background

This Draft Environmental Impact Statement (EIS) refers specifically to a planning area on the upper Klamath River. The upper portion of the Klamath River is the stretch between Lake Ewauna, at Klamath Falls, Oregon, south to Irongate Dam in California. The lower Klamath River section is from Irongate Dam to the Pacific Ocean.

Management of this river corridor is quite complex, owing to its unique combination of private and public land ownership, and multiple land use management designations covering portions of two states.

Numerous factors affect management efforts for the area, the greatest of these being the presence of J.C. Boyle Powerhouse that uses river water diverted at J.C. Boyle Dam to generate electricity for a public utility. Other factors include public use for recreation, especially for a local whitewater rafting industry, the success of which is directly tied to water releases from the dam. Specific designations have been applied to parts of the upper Klamath River that by law require special management plans be developed.

The BLM's Klamath Falls Resource Area (Oregon) and the Redding Field Office (California) staff contributed to the creation of this plan, as well as the Oregon Parks and Recreation Department employees.

Purpose and Need, and Decisions to be Made

This planning effort is being undertaken because the current recreation plan, completed in 1983 by the BLM Medford District, is outdated. There are now overlapping jurisdictions and designations that did not exist 20 years ago. The *Wild and Scenic Rivers Act* and administrative guidance for implementing management of the Area of Critical Environmental Concern require preparation on management plans.

This DEIS is *not a decision document*. Its primary purpose is to disclose the environmental consequences that could occur through implementation of the alternatives being considered. However, decisions will be based on the analysis disclosed here.

A Record of Decision (ROD), or numerous RODs, will be signed by the state directors of Oregon/Washington and California State BLM offices. In addition, the Governor of Oregon will review the document and make a decision on adoption of administrative rules for the State Scenic Waterway.

There are two types of decisions that the BLM can make related to this plan – land use decisions and implementation level decisions. Land use decisions establish the type of appropriate management needed for the land. Implementation decisions prescribe specific actions that should be taken with respect to those lands.

When this planning effort is complete, there will be one Upper Klamath River Management Plan (henceforth called the River Plan) and Final Environmental Impact Statement that will guide and coordinate all federal and state land management activities along the river. This new River Plan would amend the current BLM resource management plans and will be completed in 2004.

For this DEIS, Alternative 3 has been identified as the “Preferred” Alternative. The analysis presented in this DEIS will be used by BLM State Directors for Oregon/Washington and California to decide on a final plan, which will be documented in one or more Records of Decision.

The River Plan also reviews classification and rules affecting all non-federal lands within the designated Oregon’s State Scenic Waterway. The classification and rules are in Chapter 3 of the DEIS.

The Planning Area

The area covered by the plan is within Klamath County, Oregon, and Siskiyou County, California, and is located about 25 miles southwest of Klamath Falls, Oregon.

The planning area for the River Plan extends about 20 miles from the J.C. Boyle Dam in Oregon (owned by PacifiCorp), southwest to the slackwater of Copco Reservoir in northern California (see Map 1).

The Oregon portion of the planning area is about 15 miles long and encompasses approximately 6,000 acres of public BLM-administered lands. The California portion is about five miles long and covers approximately 200 acres of public BLM-administered lands.

The river is divided into three sections within the planning area, Segments 1, 2, and 3, which extend north to south along the river corridor. Segments 1 and 2 are in Oregon, and Segment 3 is in California.

Existing Management Direction

The River Plan, while based on input from a variety of sources, both scientific and opinion-based, must also conform to existing laws and plans, on both the federal and state level.

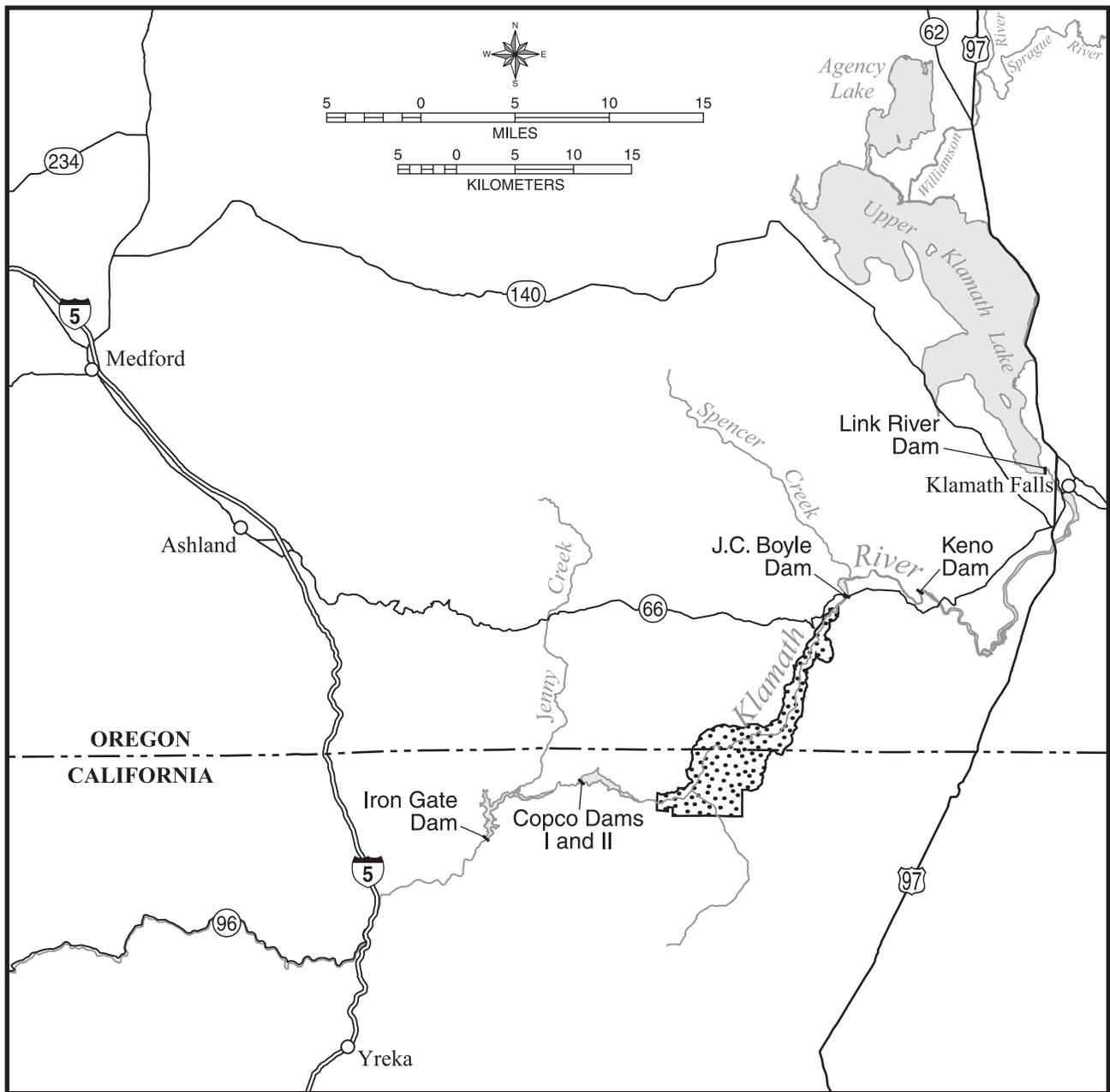
Federal and State Laws

The Klamath Falls Resource Area is responsible for determining if the River Plan conforms to applicable state and federal law, and will make this determination in a subsequent ROD.

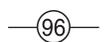
Designations within the Planning Area

Oregon Scenic Waterway

The Oregon Scenic Waterways System was created by ballot initiative in 1970. Scenic waterways are defined as including the designated river and related adjacent lands within 0.25 mile of the bank on either side of the river. In 1988 an 11-mile section (located in Segment 2) of the Klamath River in Oregon was designated a State Scenic Waterway.



Legend

-  Planning Area
-  Interstate
-  US Highway
-  State Highway



**U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management**

**OREGON
LAKEVIEW DISTRICT
Klamath Falls Resource Area
CALIFORNIA
REDDING FIELD OFFICE**

**Draft Upper Klamath River
Management Plan/EIS
and Resource Management
Plan Amendments**

2003



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D12-05-01: MW-061702
Oregon State Office

Map 1: Upper Klamath River, Regional Transportation, and Major Population Centers

National Wild and Scenic River Designation

In 1994, the Klamath River from J.C. Boyle Dam Powerhouse to the California/Oregon border (including a 0.25-mile corridor on either side) was designated a wild and scenic river under the *Wild and Scenic Rivers Act* (1968).

Upper Klamath River Area of Critical Environmental Concern

The BLM has designated an Area of Critical Environmental Concern (ACEC) in the Klamath River Canyon, from J.C. Boyle Powerhouse to the Oregon and California state line, extending from rim-to-rim.

Management Goals for the Plan

Overall management goals of the River Plan are:

- Maintain and restore river-related scenic and natural resources
- Provide diverse recreational experiences.
- Promote visitor understanding and enjoyment
- Protect and enhance cultural resources

Public Involvement and Scoping

Scoping is the process of determining the scope of the environmental analysis to be completed.

The scoping process for the River Plan was initiated in late 2000, and involved a variety of outreach methods; including meetings with relevant committees, organizations, government entities, and the public; consultations with the Tribes; news releases; and scoping documents mailed to people or businesses on a project mailing list.

Identification of Issues

By the end of the initial scoping period on January 31, 2001, the BLM had received 36 written responses. Comments from these letters have been consolidated into 57 different public issue statements, addressing 15 topics.

In addition, PacifiCorp sent a letter (dated May 2, 2001) requesting that about 6,000 acres of their private lands located within the planning area be considered in the River Plan for possible land tenure adjustments. PacifiCorp is considering several management options for these lands that are surplus to their needs for power production. PacifiCorp requested the BLM to consider their lands for exchange for other BLM lands, or purchase, or that BLM and PacifiCorp enter into a mutually beneficial land management arrangement of these lands. PacifiCorp and BLM natural resource specialists have cooperated to gather resource information on PacifiCorp lands for inclusion in the plan.

The analysis and potential projects developed as part of this planning effort may be used by PacifiCorp to help determine desired long-term management of the lands, and potentially identify offsite mitigation opportunities for the FERC relicensing process.

Wild and Scenic River and ACEC Values as They Apply to the Issues

The BLM has developed a set of criteria to determine outstandingly remarkable values during the eligibility process for inclusion into the national wild and scenic river system. Values identified in the “Final Eligibility and Suitability Report for the Klamath Wild and Scenic River Study” (1990) and in the National Park Service’s “Klamath Wild and Scenic River

Eligibility Report and Environmental Assessment” (August 1994) were used to support the designation of the river found in Segment 2 of the planning area. These values are: wildlife, fish, prehistoric, historic, scenic quality, and Native American traditional use. The BLM’s resource management planning process also stipulates identification of values that need to receive special management emphasis for designation of an ACEC.

Protection and enhancement of wild and scenic river and ACEC values within the planning area are the primary objectives of this plan. The wild and scenic river outstandingly remarkable values appear below with an asterisk (*).

Scenic Quality *

The river’s scenic quality is one of its outstandingly remarkable values. How to best maintain or enhance scenic qualities is a management concern, including consideration of new facilities, fuel treatments, prescribed fire, utility development, and roads.

Recreation Activities*

With respect to recreation on the river, two issues relating primarily to whitewater rafting are of great importance: recreational carrying capacity and river flows.

There is also concern about the management of other recreational uses within the river corridor, such as fishing, hiking, and off-highway vehicle (OHV) use.

Recreation Facilities

The improvement or construction of recreational facilities along the river is also an issue. Facilities may need to be removed or relocated to reduce impacts on other resources. Proposed trails, cultural resources, fish habitat, and vandalism are all pertinent issues.

Roads and Access

There are numerous roads on public land within the river canyon, and OHV use has resulted in increased erosion and sedimentation into the river, as well as damage to significant prehistoric and historic sites, and Native American traditional use areas. These concerns need to be balanced with public OHV use, the ultimate goal being to provide for this type of recreational use while protecting resources.

Cultural Resources/Prehistoric Sites

The river canyon contains many cultural sites, some of which receive intensive recreation use, and have endured resulting damage. This plan would aim to reduce vandalism and increase public awareness to prevent further damage to sensitive cultural areas.

Native American Traditional Uses*

Native Americans have used the river canyon for thousands of years, and the area has spiritual significance for tribal members. Current roads and access have led to OHV damage in Native American traditional use areas. This plan will address OHV issues, as well as forest health management and prescribed fire practices as a means of maintaining traditional food-gathering sites.

Historic Sites*

Historic sites are rapidly deteriorating and have been vandalized; this has raised concerns about how to protect and manage these structures.

Watershed Values

Different sections of the upper Klamath River have been listed as “water quality limited,” in accordance with Section 303(d) of the *Clean Water Act*. The listings are because of the impacts of nutrients, low dissolved oxygen and elevated stream temperatures on beneficial uses, such as fish habitat.

Water quality also affects other values, such as recreation, for which the river was designated a State of Oregon scenic waterway, and national wild and scenic river. This plan identifies possible ways of protecting and enhancing water quality within the planning corridor in support of other resource values.

Erosion caused by roads, water flows, lack of riparian vegetation, and impaired watershed processes has contributed to limited water quality.

Wildlife*

There are threatened and endangered species that use the river corridor. Habitat for these species would be evaluated to determine the types of management needed.

Fisheries*

Fisheries is one of the outstandingly remarkable values that earned the Klamath River its designation as a national wild and scenic river. In addition, the river has been classified by the states of Oregon and California as a wild trout fishery. The planning area is also within the historic range of the threatened and endangered coho salmon.

There are recreational trout fishing concerns surrounding the lack of large fish in the river. Daily fluctuating flows from the J.C. Boyle Powerhouse may be a factor.

Fire and Fuels

This plan addresses the need for effective fuel reduction treatments and the potential loss of scenic characteristics from wildfire.

Vegetation and Biological Diversity

This plan evaluates how vegetation (including wildlife and fish habitat, and Native American traditional use food-gathering areas) would be managed. This includes control or eradication of exotic or noxious species.

Air Quality

Prescribed fires could affect air quality within and outside of the planning area. A smoke management plan will be included in the final River Plan/EIS.

Socioeconomics

Potential management actions could affect the local economy, such as individuals, businesses, outfitters, minority and low-income populations, and tribes. These factors will be analyzed and considered in the plan.

PacifiCorp’s Power Generating Facilities

PacifiCorp operates a series of hydroelectric power generation facilities on the upper Klamath River. The River Plan identifies the effect these operations have on river resources and values.

Land Tenure

As the major private landowner in the planning area, PacifiCorp has requested that the BLM explore possible land tenure adjustments in the development of the River Plan. Adjustments could include land trade, acquisition, or mutually beneficial land management arrangements.

Private Land

The plan addresses the State of Oregon's Administrative Rules for private land in the Scenic Waterway portion (located in Segment 2) of the planning area (see Chapter 3). The effects on adjacent private land from BLM proposed actions are also addressed.

There are management concerns regarding how the federal government can ensure adequate recreational access to the river if it does not administer the land. Other potential impacts on private land adjacent to BLM administered land are also addressed.

Grazing

Livestock grazing effects on rangeland health, recreation, cultural, riparian, and wildlife habitat issues are analyzed.

Cumulative Impacts

The cumulative impacts of management actions proposed or recommended within the planning area, plus other actions on public and private land not a part of this plan, are also considered in this DEIS.

Chapter 2 – Affected Environment

General Setting and Access

The Klamath River lies within the High Cascades Physiographic Province and borders the Basin and Range Province on the west. Topography varies from flat to gently sloping along the river benches to some almost vertical canyon walls. The canyon rim rises 1,000 feet above the river. Precipitation is 15-20 inches, coming mostly in fall, winter, and spring. Temperatures range from low 20s in winter to high 80s-90s in summer. Canyon air quality is generally good, thanks to the planning area's location far from urban and industrialized areas.

Geological characteristics include volcanic flows, cinder cones, and fault patterns. Seismic activity is low in the planning area. No economically valuable mineral deposits are known to exist in the area.

The upper Klamath River is readily accessible from the four major population centers in southern Oregon and northern California. The main transportation route to the river is State Highway 66 (Green Springs Highway), which runs east/west between U.S. Highway 97 in the Klamath Basin, and Interstate 5, in the Rogue River Valley (see Map 1).

Scenic Resources

The visual quality of a landscape is based on landscape character. The stronger the influence of form, line, color, and texture, the more interesting the landscape; the more visual variety in a landscape, the more aesthetically pleasing it is. An assessment of landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications is used to classify the scenic quality of the area. During the rating process, each of these factors is ranked on a comparative basis with similar features within the planning area. A visual resource management (VRM) class rating is then made to manage the quality of the visual environment and to reduce the visual impact of development activities (BLM Handbook H-8410-1).

The upper Klamath River Canyon was evaluated by the BLM in 1977 and 1981 and received a "Scenic Quality Class A" evaluation – the highest scenic quality classification possible.

Recreation

The planning area is host to 10,000 visitors annually. Major recreational activities within the planning area include whitewater boating, fishing, hunting, and camping. Additional activities include sightseeing, hiking, photography, picnicking, wildlife observation, driving for pleasure (OHV use limited to designated roads and trails), trapping, and horseback riding.

Whitewater Boating

One of the unique features of the upper Klamath River is the extended season for whitewater boating opportunities provided as a result of year-round releases from the J.C. Boyle Dam/Powerhouse system. Most river systems in the Pacific Northwest are raftable only during high spring flows.

The primary rafting season on the upper Klamath River extends from Memorial Day through Labor Day, which makes it one of the few rivers in the northwest that can be floated throughout the summer.

Since the summer of 1998, PacifiCorp has varied the water release schedule to include more releases that start later in the day, starting the release as late as 2-4 p.m. This change in scheduling reflects changing market conditions for wholesale electric power, as well as anticipated regional electric power shortages during summer heat waves.

This shift in water release start times has impacted whitewater boating opportunities by either forcing boaters to launch their trips later in the day, or to cancel or postpone their trips due to the timing of the water release.

Recreation Sites and Facilities

Public recreation sites and facilities are located throughout the planning area. The remote river canyon offers campers a semi-primitive experience with several day use sites.

Camping facilities are provided at Topsy Recreation area, Klamath River Campground, and five additional fire-safe sites are available along the river's edge. There are several primitive campsites at Frain Ranch (PacifiCorp lands).

PacifiCorp offers fishing and day use access at six locations in the California section of the river and allows dispersed camping in the Frain Ranch Area.

Fishing

The upper Klamath River within the planning area is managed as a wild trout river in both Oregon and California. The river provides an excellent trout fishery and is among one of the better flyfishing rivers in Oregon.

Hunting

Hunting occurs primarily on open benches along the river and in draws along the canyon rim. Game includes black-tailed deer, silver-gray squirrels, mountain and valley quail, and turkey. Additional recreational hunting occurs in spring and early summer for ground squirrels and marmots.

Roads and Access

Public access to the planning area is currently on the Topsy and J.C. Boyle Powerhouse roads. These roads provide the majority of access in the planning area. There are some other roads that cross private land, where the discretion of the landowner determines access.

Cultural Resources/Traditional Use

Cultural resources within the planning area are divided into three categories (1) prehistoric, (2) historic, and (3) current Native American traditional use.

There are about 100 known prehistoric sites in the upper Klamath River canyon. There are fishing, gathering, and hunting camps, and pit house villages (pit houses are circular depressions reflecting a semi-subterranean prehistoric house structure).

The area was home to a variety of cultural groups at different times, including the Shasta Nation of northern California, the Modoc and Klamath Tribes of the Klamath Basin, the Takelma of the upper Rogue River, and possibly the Pit River Indians of northeastern California.

Europeans have used the upper Klamath River Canyon extensively since the 1850s, settling on terraces and flood plains along the river and several meadow areas. There are numerous

historic ranches that have structures still standing that were constructed between the late 1800's and early 1900's.

Today, members of the Klamath Tribe and the Shasta Nation continue to use the canyon for spiritual purposes, hunting, fishing, gathering, and other cultural activities. Many of the traditional use areas can be considered traditional cultural properties.

Vegetation and Soils

Special Status Plant Species

There are no documented sites of federally listed threatened or endangered plants in the planning area. Limited surveys have been conducted, but there have been no systematic surveys covering the entire planning area. Species of special concern that have been documented in the planning area include the mountain lady slipper orchid (*Cypripedium montanum*), Greene's mariposa lily (*Calochortus greenii*), Bolander's sunflower (*Helianthus bolanderi*), red-root yampah (*Perideridia erythrorhiza*), Howell's false-caraway (*Perideridia howellii*), and Lemmon's catchfly (*Silene lemmonii*).

Noxious Weeds

Noxious weeds are plant species designated under federal, state, or local laws and ordinances that cause economic loss and/or harm the environment.

Populations of Russian knapweed (*Acroptilon repens*), yellow starthistle (*Centuarea solstitialis*), poison hemlock (*Conium maculatum*), Scotch broom (*Cytisus scoparius*), St. John's wort (*Hypericum perforatum*), yellow toadflax (*Linaria vulgaris*), Himalayan blackberry (*Rubus discolor*), and puncture vine (*Tribulus terrestris*) have been documented and mapped within the planning area through incidental surveys by BLM staff and university researchers.

Plant Communities

The planning area contains a mixture of the following vegetation types. The following table (Table S-1) lists plant communities and the approximate percent coverage in the planning area.

Table S-1. Plant Communities of the Planning Area

Vegetation Community Type	Percent of Planning Area
Conifer forest and woodland	43
Oak woodlands	27
Juniper woodland	1
Mixed shrub	17
Rabbitbrush/Sagebrush	4
Dry meadow	4
Riparian communities	2
Irrigated meadow	2

Soils

The primary soil series in the Oregon portion of the planning area are the Bogus, Greystoke, McMullin, and Skookum series. Descriptions of the soils can be found in the “Soil Survey of Jackson County Area, Oregon” (USDA-SCS 1993).

Soils within the Oregon portion of the planning area generally have slow infiltration rates when wet. This is a consequence of moderately high proportions of clay, especially in subsurface horizons. Despite the potential for surface runoff, most soils in the planning area have a low susceptibility to sheet and rill erosion of surface horizons. This is due to the high proportion of coarse fragments on the soil surface.

The primary soil series in the California portion of the planning area are the Bogus, Jenny, Lassen-Kuck complex, Lithic Haploxerolls-Rock outcrop complex, and Medford. Descriptions can be found in the “Soil Survey of Central Siskiyou County California Central Part” (USDA-SCS 1983).

Soils within the California portion of the planning area generally have slow infiltration rates when wet (for the same reasons as the soils within the Oregon portion).

Terrestrial Species and Habitat Management

Birds

There are 197 species of birds within the planning area, some year-round residents, others seasonal or migratory.

Some important species include: bald eagle (Threatened), golden eagle, osprey, peregrine falcon (Oregon State Sensitive), prairie falcon, red-tailed hawk, American kestrel, sharp-shinned hawk, Coopers hawk, great horned owl, long-eared owl, western screech owl, northern goshawk (Oregon State Sensitive Species), northern pygmy owl (Oregon State Sensitive Species), northern spotted owl (endangered), wild turkey, redlegged partridge, warbling vireo, yellow warbler, lazuli bunting, lesser goldfinch, and Wilson’s warbler.

Mammals

The canyon provides habitat to support a great variety and abundance of mammals.

A partial listing of species is: silver-gray squirrel, beaver, muskrat, wild pigs, Townsend’s big-eared bat, Raccoon, river otter, mink, long- and short-tailed weasel, ringtail (Oregon State Sensitive Species), coyote, gray fox, bobcat, mountain lion, Roosevelt elk, black bear, cougar, blacktailed deer, and mule deer.

Herptiles

Eighteen species of reptiles and amphibians (collectively referred to as herptiles) have been identified in the planning area: western rattlesnake, common and western terrestrial garter snake, gopher snake, striped whipsnake, rubber boa, ringneck snake, yellow-bellied racer, western fence lizard, southern alligator lizard, sagebrush lizard, western skunk, western toad (Oregon State Sensitive Species), Pacific tree frog, California mountain king snake (Oregon State Sensitive Species), sharptail snake (Oregon State Sensitive Species), northern sagebrush lizard (Oregon State Sensitive Species), and western pond turtle (Oregon State Sensitive Species).

Watershed Values

Watershed values are a key component in shaping animal and plant communities in the planning area, and in providing recreational opportunities. The Klamath River fills many roles relating to human and wildlife needs.

Beneficial Uses

Among those roles are “beneficial uses,” as determined by Oregon Department of Environmental Quality. Established beneficial uses for the upper Klamath River in Oregon include public and private domestic water supply; industrial water supply; irrigation; livestock watering; salmonid rearing and spawning; resident fish and aquatic life; wildlife and hunting; fishing, boating, and water contact recreation; and aesthetic quality.

The North Coast Regional Water Quality Control Board has established beneficial uses for the California portion of the Klamath. Broad categories include water supply, recreation, fish and wildlife, power generation, and scientific study.

Energy Generation and Transmission

The planning area includes the portion of the Klamath River between two hydroelectric facilities: J.C. Boyle Dam in Oregon and Copco 1 Reservoir in California. The J.C. Boyle Dam 88-megawatt power generation plant is 4.3 river miles below the dam. This facility has turbine generators that supply power during high use (peak) periods.

Water Rights

Water use in the Klamath River Basin upstream from, and within, the planning area affects streamflows in the Klamath River. An adjudication process now being conducted by the Oregon Water Resources Department (OWRD) will determine surface water rights associated with the designated wild and scenic river. This process will establish water right claims submitted by BLM.

Klamath River Instream Flows

Within Segments 1 and 2, PacifiCorp is licensed to divert up to 2,500 cfs of Klamath River water to generate hydroelectric power. The utility also has two permits that allow a small diversion from the dam for irrigation, stock and domestic use.

The BLM has filed a claim for instream flows in Segment 2 of the planning area based on the *Wild and Scenic Rivers Act* of 1968. In the Act, Congress expressly reserved water for flow-dependent outstandingly remarkable values. Flows were claimed (Federal Reserve Claim 376, 1999) for three outstandingly remarkable values: fisheries (625 cfs from April 1 through June 15, and 525 cfs for the rest of the year) and recreation (whitewater rafting, 1,500 cfs between Memorial Day and September 30) (see Table 2-12). The BLM water right claim on the River is pending in the Klamath Basin Adjudication.

Other Water Rights

Other entities also have water claims and/or rights on the Klamath River, including the Oregon Department of Parks and Recreation, the Bureau of Indian Affairs (on behalf of the Klamath Tribes), the Oregon Department of Forestry, and private landowners. The Klamath River Basin Compact also provides guidance, along with other applicable laws, for water rights administration in the Klamath Basin (see River Plan for further details).

The Oregon Department of Forestry has a permit to use up to 10,000 gallons of water daily for dust abatement on an unnamed tributary in Segment 2.

Streamflows

The upstream end of the Klamath River drainage encompasses about 4,080 square miles of surrounding land. Snowmelt in this drainage area flows mostly to Upper Klamath Lake, which creates late winter and spring naturally occurring peak flows to the Klamath River.

Summer flows come from the Link River Dam (on Upper Klamath Lake), and groundwater discharges. Elevated flows in fall are caused by return flow from irrigated areas south and west of Klamath Falls.

The other primary cause of streamflow variance is the operation of the J.C. Boyle hydroelectric facilities. Flow varies according to water availability, instream flow requirements for salmon (listed under the Endangered Species Act) downstream from Iron Gate Dam, and PacifiCorp's FERC license.

Flows in Segment 1 are not subject to the daily fluctuations that occur in Segments 2 and 3 from powerhouse operations.

Energy demand (and subsequent hydroelectric plant use) can determine the amount of flow in the river. When daily average natural river flows are less than around 3,300 cfs, the facility can increase flows to produce power during peak energy demand periods which is called "peaking". On days when the J.C. Boyle complex is operated for peaking power, stage (change in river surface elevation) can be raised or lowered about 2.2 feet over a 6-hour period.

Water Quality

Water quality, which as previously mentioned, is designated "water quality limited" under terms of the *Clean Water Act*, is affected by upstream point and nonpoint pollutant sources in the area.

Some examples of characteristics that limit water quality in the planning area are high algal content, high pH, temperature, chlorophyll-a, and dissolved oxygen. These may detrimentally affect beneficial uses and outstandingly remarkable values (including fisheries, recreation, and wildlife).

Stream channel morphology

Stream channel morphology, that is, width, depth, substrate, and channel gradient, etc., is affected by natural flows and releases from J.C. Boyle facilities.

Increased discharge and/or decreased sediment (gravel) supply can cause channel widening, incision and bed armoring.

Aquatic Species/Habitat

The dams on the Klamath River have affected fish species distribution throughout the Klamath Basin. Historically, the Klamath River was a passageway for anadromous fish, salmon, steelhead, and Pacific lamprey as they migrated to various tributaries of the Klamath River and Upper Klamath Lake (ODFW 1997). These fish runs were halted in 1910 by the construction of Copco I Dam, completed in 1917, which permanently blocked fish passage (City of Klamath Falls 1986). Five more dams were built on the upper Klamath River; Copco II and Irongate are located in California, and Link River, Keno, and J.C. Boyle Dams are located in Oregon (PacifiCorp 2000). J.C. Boyle, Keno, and Link River Dams have fish ladders intended for trout migration, each varying in function. Only J.C. Boyle Dam has a screening facility to prevent entrainment of fish into the power diversion canal.

The hydroelectric project on the upper Klamath River will be assessed for reintroduction of anadromous species through the hydroelectric facilities as part of the Federal Energy Regulatory Commission relicensing process.

The upper Klamath River is inhabited by 10 known native fish species. Three species of note are: redband trout – the primary game fish in the Klamath River, Lost River sucker – (state and federally listed endangered species), and shortnose sucker – (state and federally listed endangered species).

Other native species are Klamath smallscale sucker, blue and tui chub, Klamath specked dace, sculpin species, and lamprey species.

At least fourteen exotic species occur in the river and reservoirs. Yellow perch, fathead minnows, Sacramento perch, and golden shiner typically favor slower water habitats including slackwater shoals close to Copco Reservoir, and generally are not found in swift flowing portions of the river (USDI-BLM 1990). Although not documented by fisheries specialists, there have been at least two reports of white sturgeon in the planning area. White sturgeon was planted in Upper Klamath Lake in 1956 (ODFW 1997). Brown trout, planted in Copco Reservoir, inhabit and migrate through the California reach to spawn in Shovel Creek (CDFG 2000). Steelhead, planted into Copco Reservoir 1971-1981 (excepting 1975, 1977, and 1978) has been reported from the California portion of the Klamath in the past.

Range Resources

Cattle, wildlife, and a small herd of wild horses currently compete for forage in the planning area. U.S. Timberlands, PacifiCorp, and BLM-administered lands are used for grazing in and around the planning area. Hay production is also common on privately-owned (PacifiCorp) meadows in the planning area in California.

Grazing has affected the natural vegetative composition throughout much of the planning area. Factors causing this change include early spring grazing, historical burning, natural erosion, trampling and soil compaction by livestock, and repeated livestock use. These conditions favor the weedy annual species that easily take over the native perennial plants and grasses (see the Noxious Weeds section for more information).

Two studies, one by the Medford District BLM in 1981 and the other for the proposed Salt Caves Hydroelectric Project by the City Of Klamath Falls in 1984 and 1986 determined the rangelands to be in poor condition. However, the “Edge Creek Rangeland Health Standards Assessment” concluded that current BLM management (grazing and nongrazing) practices were making significant progress toward meeting rangeland standards. Present day livestock use was not considered a factor in the suppressed conditions, nor was it found to be slowing down gradual improvements.

Two BLM grazing allotments exist within the planning area; Edge Creek Allotment (#0102) and Laubacher Lease Allotment (#0155), and grazing occurs on private lands.

Private Lands - Within the planning area, about 95 percent of grazing use takes place on privately owned land, primarily the property of PacifiCorp.

Wild Horses

A very small portion (<5 percent) of the Pokegama Wild Horse Herd Management Area is located within the planning area north of the Klamath River. The total herd management area is bounded by Copco Reservoir and the Klamath River on the south and east, Jenny Creek on the west, and State Highway 66 on the north. With the exception of State Highway 66, these natural boundaries appear to be physical barriers to movement of wild horses and, therefore,

to habitat expansion. There other wild horses that drift occasionally from the adjacent Gavin Peak Herd Management Area, which lies to the south and east of the planning area. There are currently estimated to be 35–45 horses residing in the herd management area. The Gavin Peak herd, administered by the USFS Gooseneck Ranger District, has minimal influence on the planning area.

Wildfire Management

Lightning occurrence in the Klamath River Canyon caused 20 lightning ignitions from 1990 to 1999. The fire return interval for the conifer forest/woodland type is every 10 to 20 years. The estimated fire return interval for oak woodlands in this type of canyon terrain is 5 to 15 years.

Exclusion of natural fire in the Klamath Canyon has resulted in high fuel loading and created conditions where the potential for wildfire occurrence is increased.

Air Quality

Air quality and visibility are important qualities with respect to the River Plan, because of the role they play in maintaining scenic values in the Klamath River Canyon. The Klamath River Basin enjoys relatively clean air.

Area sources of air pollution are industrial plants, highways, urban areas, and smoke from wildfires or prescribed burns. The steep-sided topography of the river canyon can trap air until winds move it out. Smoke and dust generated outside the planning area can accumulate in the canyon, causing haze.

Land Tenure

PacifiCorp is the major private landowner in the planning area. PacifiCorp has requested, in writing, that BLM explore the possibility of land tenure adjustments during the development of the EIS.

PacifiCorp has submitted a map to the BLM that identifies parcels of their land in Oregon and California to be considered for possible land trade, acquisition, or a mutually beneficial land management arrangement.

Socioeconomics

Three counties, Jackson and Klamath Counties in Oregon, and Siskiyou County in California, are in the vicinity of the planning area. Total area population (2000 Census): 289,345, Jackson County: 181,269, Klamath County: 63,775, and Siskiyou County: 43,301.

Major population centers are Ashland (population 20,085), Klamath Falls (population 40,000 including surrounding county urban area), Medford (population 62,030), and Yreka (population 7,500).

The major sources of income are agriculture, government, and tourism. The Oregon Employment Department in its 1999 annual employment report, estimated civilian labor force in Jackson County to be 89,160 and 28,760 in Klamath County. The California Employment Development Department estimated civilian labor force in Siskiyou County to be 17,760, and trade (3,280). Unemployment rates in the individual counties were: Jackson, 6.6 percent; Klamath, 8.7 percent; and Siskiyou, 9.5 percent.

Description of Potential Area of Critical Environmental Concern

An ACEC designation highlights an area where BLM special management attention is needed to protect and prevent irreparable damage to important historic, cultural, and scenic values; fish or wildlife resources; or other natural systems or processes; or to protect human life and safety from natural hazards (BLM Regulations, 43 CFR 1610).

An ACEC has been designated in the Klamath River Canyon from rim to rim extending from J.C. Boyle Powerhouse to the Oregon/California state line (Segment 2). The values for which the ACEC was designated were for fish, wildlife, cultural, and scenic qualities.

This plan will also evaluate extending the existing ACEC to Segment 1 (below J.C. Boyle Dam to the powerhouse) of the planning area. To be considered as a potential ACEC, an analysis and evaluation report must consider the relevance and importance of resource values identified within the area which has been nominated as an ACEC. The report can be found in Appendix I of the River Plan.

Chapter 3 – Oregon Scenic Waterways Administrative Rules

The Oregon Scenic Waterways System was created by ballot initiative in 1970. Scenic waterways are defined as including the designated river and related adjacent lands within 0.25 mile of the bank on either side of the river.

The *Oregon Scenic Waterway Act* describes conditions under which activity can occur within the corridor of a state scenic waterway. The Act specifies the development of a management plan, in coordination with other state and local agencies.

The goal of the Scenic Waterway management planning process is to maintain the scenic “status quo” of a designated area without turning back the clock on existing land uses.

Scenic waterway management plans (administrative rules) are developed to protect or enhance the aesthetic and scenic values of scenic waterways, while allowing compatible agriculture, forestry and other land uses.

Existing Condition

The Klamath River from the J.C. Boyle Powerhouse to the Oregon-California state line was designated a scenic waterway in 1988. Ownership within this corridor is 75 percent BLM, 23 percent private, and 2 percent State of Oregon.

Klamath County has zoned the private lands within the scenic waterway corridor as “forestry.”

To date, uses in the canyon have been primarily recreation, range, and timber management.

Classification for the Klamath River Scenic Waterway

The Oregon Parks and Recreation Department established a classification of “Scenic” for the entire 11-mile segment of the Klamath River Scenic Waterway. The management goal of this classification is to allow existing uses while protecting the scenic character of the river.

Land Management Rules for the Klamath River Scenic Waterway

This Scenic River area shall be administered consistent with the standards set by Oregon Administrative Rules 736-040-0035 and Oregon Administrative Rules 736-040-0040(1)(b)(B). In addition to these standards, all new development in resource zones (i.e., forest-related dwellings) shall comply with Klamath County land use regulations.

The following land management rules are addressed in the River Plan DEIS:

- New structures and associated improvements shall be totally screened from view from the river by topography and/or vegetation.
- If inadequate topographic or vegetative screening exists on the site, the structure or improvement may be permitted if native vegetation can be established to provide total screening of the proposed structure or improvement within a reasonable time (4-5 years).

- Commercial public service facilities, including resorts, motels, lodges, and trailer parks that are visible from the river shall not be permitted.
- New mining operations, except recreational placer mining and recreational prospecting, as those terms are defined and used in Oregon Revised Statutes 390.835, and similar improvements, shall be permitted only when they are totally screened from view from the river by topography and/or vegetation.
- New roads may be permitted only when totally screened from view from the river by topography and/or vegetation. The condition of “total screening,” as used in this rule, shall consist of adequate topography and/or density and mixture of native evergreen and deciduous vegetation to totally (100 percent) obscure the new road.
- Where existing roads are visible from the river, major extensions, realignments, or upgrades to existing roads shall be totally screened from view from the river.
- Visible tree harvest or other vegetation management may be permitted provided that:
 - The operation complies with relevant *Forest Practices Act* rules
 - Harvest and management methods with low visual impact are used
 - Harvest or vegetation management is designed to enhance the scenic view within a reasonable time (5-10 years). Within this paragraph, “enhance” means to benefit forest ecosystem function and vegetative health by optimizing forest stand densities and vegetative composition, fostering forest landscape diversity and promoting sustainable forest values.
- Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape.
- Proposed utility facilities shall share existing utility corridors, minimize any ground and vegetation disturbance, and employ non-visible alternatives when reasonably possible.
- Whenever standards of Oregon Administrative Rules 736-040-0035 are more restrictive than Klamath County’s land use and development ordinances, scenic waterway regulations shall apply.

Chapter 4 – Resource Issues and Alternatives

This River Plan presents four alternatives for managing the canyon, based on data analysis and input from various sources, including residents, landowners, and the general public.

The first step in developing alternatives involved interdisciplinary team identification of desired future conditions (listed in the EIS as resource goals). The team then developed a set of management actions that are important in managing the type of resources in the Klamath River canyon. Four different themes were considered that would help to meet planning objectives and resolve conflicts that had been identified for the area.

Overview of Proposed Alternatives

Alternative 1 – Existing Management/“No Action”

This alternative is named “no action” although actions are proposed. Existing management policies would remain in place and implementation of actions would take place based on direction in the BLM Klamath Falls Resource Area and Redding Resource Management Plans. However, no action is proposed to modify any of the existing direction.

The goal of this alternative would be to maintain the existing wild and scenic river (scenic classification) outstandingly remarkable values and ACEC values.

Alternative 2 – Improvement of Resources and Opportunities

This alternative was developed in response to direction in the *Wild and Scenic Rivers Act*. This option advocates policies that would maintain and enhance the river’s “wild and scenic” status, and “the values which caused it to be included, without...limiting other uses that do not substantially interfere with public use and enjoyment of these values.”

The goal of this alternative would be not just to maintain, but to enhance where possible the area’s outstandingly remarkable values, while resolving resource management conflicts that might occur.

Alternative 3 (Preferred Alternative) – Natural Resource Enhancement/Restoration

This alternative proposes that the BLM manage the river canyon in a more natural condition.

The goal of this alternative is to maintain and enhance all outstandingly remarkable values, while placing emphasis on restoration and enhancement of natural resources.

Alternative 4 – Expand Human Use Opportunities

This alternative emphasizes recreation more heavily than the other three options.

The goal of this alternative is to maintain and enhance all outstandingly remarkable values, while placing emphasis on management that contributes to human use of the river corridor. This use should not conflict significantly with management of other values and resources.

Description of Alternatives by Resource Topic

Table S-2 provides an abbreviated summary of resource actions proposed for BLM lands with each alternative. Proposed actions are also listed for PacifiCorp land (at the request of PacifiCorp), but are only made as recommendations. Decisions on this plan will only be made for BLM-administered land. For a complete review of the specific actions by alternative refer to Appendix H in the draft River Plan.

Table S-2. Comparison of Management Actions by Alternatives

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Scenic Quality	<ul style="list-style-type: none"> • Management on a project-by-project basis; focus vegetation treatments around recreation sites to protect scenic values. Treatments done by prescribed fire, mechanical and hand. 	<ul style="list-style-type: none"> • Management to maintain or enhance visual/scenic resources and mitigate past damage; vegetation treatments to decrease wildfire potential. Treatments done by prescribed fire, mechanical or hand methods. 	<ul style="list-style-type: none"> • Management to restore/improve damage caused by human activity; aggressive vegetation treatments to reduce fuel loads by using prescribed fire, mechanical and hand treatments. 	<ul style="list-style-type: none"> • Management using landscaping and design to blend projects with existing visual resources; projects undertaken in areas of greatest human use; fuel treatments around facilities, trails, and roads using prescribed fire, mechanical and hand methods.
Recreation	<p>Setting is semi-primitive motorized; OHV use allowed on designated roads; law enforcement sporadic; minimal road maintenance; river flows not changed - but timing is questionable for whitewater rafting</p> <ul style="list-style-type: none"> • 1 developed campground – Topsy (BLM) (15 campsites) • 4 dispersed camps (11–14 sites) • 8 day use sites • 18 miles of non-motorized trails • 22 miles of designated OHV routes 	<p>Setting is semi-primitive motorized; OHV use on designated routes only; increase in developed recreation sites and trails; roads and trails maintained; law enforcement increased; recreation releases mimic conditions during wild and scenic designation to maintain whitewater rafting</p> <ul style="list-style-type: none"> • 2 campgrounds – Topsy (BLM), Shovel Creek (PacifiCorp) • 5 dispersed camps (15–20 sites) • 17 day use sites • 29 miles of non-motorized trails • 2 bridges (J.C. Boyle Dam and Klamath River Campground) • 50 miles of designated OHV routes 	<p>Setting is more “rustic” than Alternatives 2 and 4; recreation facilities could be closed or relocated; commercial rafting reduced; law enforcement would remain the same; river flows do not favor recreation (objective is improving fish habitat)</p> <ul style="list-style-type: none"> • 1 campground– Topsy (BLM) (15 campsites) • 5 dispersed camps (11–13 sites) • 6 day use sites • 16 miles of non-motorized trails • 22 miles of designated OHV routes 	<p>Setting is more developed than other alternatives to allow for significantly higher use levels; roads managed for easy access for all vehicle types; law enforcement increased; recreation releases to maximize whitewater rafting opportunities</p> <ul style="list-style-type: none"> • 5 campgrounds– Topsy (BLM), Turtle (BLM), Klamath River (BLM), Lower Frain (PacifiCorp), Shovel Creek (PacifiCorp) -- (41–52 campsites) • 8 dispersed camps (22–32 sites) • 18–21 day use sites • 31 miles of non-motorized trails • 2 bridges (J.C. Boyle Dam and Klamath River Campground) • 50 miles of designated OHV routes

Alternative 1

Alternative 2

Alternative 3

Alternative 4

Cultural Resources and Native American Traditional Use

- Cultural resources protected through documenting of historical sites; no historic structure restoration or public outreach would be pursued.
- Cultural resources protected through outreach, education, and partnerships with Tribes. Historic structures stabilized and rehabilitated; law enforcement would increase.
- Cultural resources protected from erosion, recreation, and project impacts; rehabilitate historic structures; enhance traditional use areas; discourage outreach and excavation as tools.
- Cultural resources protected through management of cultural sites; excavation used for mitigation and research; structures restored; outreach would promote education and discourage vandalism; law enforcement would increase.

<u>Prehistoric sites</u>	<u># Treated</u>						
Capped:	1	Capped:	1	Capped:	0	Capped:	2
Fenced:	0	Fenced:	2	Fenced:	0	Fenced:	0
Access controlled sites:	0	Access controlled sites:	1	Access controlled sites:	3	Access controlled sites:	3
Establish caretaker:	0						

<u>Historic sites</u>	<u>Historic sites</u>	<u>Historic sites</u>	<u>Historic sites</u>
Documented:	10	Documented:	10
Stabilized:	0	Stabilized:	2
Rehabilitated:	0	Rehabilitated:	4

- Class III Inventory on unsurveyed BLM lands only
- Class III Inventory same as Alternative 1, plus resurvey of BLM lands not meeting Class III standards
- Class III Inventory same as Alternative 2, plus survey unsurveyed high probability areas on PacifiCorp lands
- Class III Inventory same as Alternative 2

Vegetation

- Treatments include fuel reduction in conifer forest and oak woodlands; some riparian management; no changes in meadow treatments
- Treatments include conifer forests and oak woodlands actions to enhance ACEC values; shrubfields treated for big game forage; some meadow management; inventory of special status species; interpretive signs posted
- Treatments include conifer forests and oak woodlands actions to approach more historically natural condition; increased management of shrubfields and meadows; prescribed fire used as needed; inventory of special status species
- Treatments include conifer forests and oak woodlands actions to improve health and condition around high recreation use areas; interpretive signs and brochures placed in high use areas

Alternative 1

Alternative 2

Alternative 3

Alternative 4

Vegetation Treatments (acres/decade)

	<u>BLM</u>	<u>PC</u>	<u>BLM</u>	<u>PC</u>	<u>BLM</u>	<u>PC</u>	<u>BLM</u>	<u>PC</u>	<u>BLM</u>	<u>PC</u>
Plant Community	557	0	1,238	305	1,638	925	1,277	429	1,277	429
Conifer forests:	115	0	115	99	286	115	115	72	115	72
Dense Oak:	299	0	608	372	723	631	608	520	608	520
Open Oak:	0	0	0	0	0	0	0	5	0	5
Juniper:	130	0	538	367	700	644	538	537	538	537
Mixed shrub:	0	0	12	3	52	203	114	65	114	65
Rabbit/sagebrush:	63	0	215	46	215	103	215	46	215	46
Dry meadow:	7	0	52	166	62	245	9	22	9	22
Riparian:	0	0	0	374	0	374	0	0	0	0
Irrigated meadow:										
Total:	1,171	0	2,778	1,732	3,676	3,240	2,884	1,696	2,884	1,696
Total for Alternative	1,171		4,510		6,916		4,580		4,580	

(PC = Recommended for PacifiCorp Lands)

Terrestrial Species

- Emphasis on current wildlife management activities, including prescribed fire would continue; existing seasonal road closures would continue
- Emphasis on managing big-game and high-profile special status species; improve habitat for all vegetation; nesting structures installed; existing seasonal road closures would continue
- Emphasis on restoring habitat, inventory and monitoring of special status species maximized; human use de-emphasized; seasonal road closures would increase
- Emphasis on managing wildlife populations and habitats for visibility to public users; surveys and monitoring only as required; seasonal road closures slight increase

Watershed Values

Segment 1
 Give emphasis to securing in stream flows for favorable channel conditions and fish passage; no action on ramp rate or peak flows

Segment 1
 Increased baseflows; reduced ramp rate

Segment 1
 Increased baseflows with seasonal variation; reduced ramp rate during flood peaks; “geomorphic flows” or “pulse flows” would be released

Segment 1
 Increased baseflows; reduced ramp rate

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
	<p><i>Segments 2&3</i> Secure water rights;</p> <p>See Segment 1</p>	<p><i>Segments 2&3</i> Secure water rights, reduced ramp rate; modified run-of-the-river flow regime; powerhouse releases (in excess of the flow allowance) to resemble timing volume and duration that occurred at the time of Wild and Scenic designation</p> <p>Fisheries baseflows based on FERC releasing studies and other analysis</p>	<p><i>Segments 2&3</i> Secure water rights; reduced ramp rate; run-of-the-river flow regime</p> <p>Fisheries baseflows based on FERC releasing studies and other analysis</p>	<p><i>Segments 2&3</i> Secure water rights; reduced ramp rate; powerhouse releases to optimize whitewater opportunities</p> <p>Fisheries baseflows based on FERC releasing studies and other analysis</p>
Aquatic Species	<ul style="list-style-type: none"> Minimal management of aquatic resources; flows would remain under current regimes and controls; no long-term management to benefit fish habitat 	<ul style="list-style-type: none"> Emphasis on aquatic habitat improvement; existing river fishing access improved; flow regimes favorable to fish species pursued 	<ul style="list-style-type: none"> Emphasis on restoring fisheries production; trail construction and road access for recreationists de-emphasized; agreements would target protecting native wildlife species, including aquatic species; movement or modification of existing facilities including fish ladders and diversions, would be pursued to enhance habitat connectivity and condition 	<ul style="list-style-type: none"> Emphasis on increasing recreational fishing opportunities; additional river access points created for fishing opportunities
Livestock Grazing	<ul style="list-style-type: none"> Current grazing activities would continue Animal Unit Months (AUMs): 171 (BLM); 2,500-3,000 (PC*) *PC = Recommended for PacifiCorp 	<ul style="list-style-type: none"> Grazing could continue up to allowed maximums, range monitored to ensure appropriate use Animal Unit Months (AUMs): 125-171 (BLM); 0-2,000 (PC*) *PC = Recommended for PacifiCorp 	<ul style="list-style-type: none"> Grazing generally excluded from planning area Animal Unit Months (AUMs) - No grazing in this alternative *PC = Recommended for PacifiCorp 	<ul style="list-style-type: none"> Grazing allowed as long as it does not conflict with recreational uses Animal Unit Months (AUMs): 125-171 (BLM); 1,500-2,500 (PC*) *PC = Recommended for PacifiCorp
Wild Horses	<ul style="list-style-type: none"> Management basically the same under all alternatives: manage herd and habitat to stay within 30-50 head level Animal census; habitat monitoring; periodic horse captures; periodic evaluation of management level 			

Alternative 1

Alternative 2

Alternative 3

Alternative 4

Fire and Fuels

- Emphasis on minimal fuel treatment; random prescribed burn unit selections

- Emphasis on mechanical treatments; some random prescribed burn unit selections

- Emphasis on prescribed fire, however extensive mechanical and hand treatments needed during first decade

- Emphasis on hand and mechanical treatment near recreation sites and roads first

Land Tenure

- Retain and acquire land within Alternative 1 project planning boundary. Continue existing agreements with PacifiCorp and other private land owners
- Total acres potentially affected in this alternative = 11,880

- Retain and acquire land within Alternative 2 project planning boundary. Use land tenure adjustments or establish long-term cooperative management agreement with PacifiCorp to manage resources
- Total acres potentially affected in this alternative = 13,999 (additional acres mostly in California)

- Retain and acquire land within Alternative 3 project planning boundary. Use land tenure adjustments or establish long-term cooperative management agreement with PacifiCorp to manage resources
- Total acres potentially affected in this alternative = 20,482 (additional acres above Alternative 2 all in California)

- Retain and acquire land within Alternative 4 project planning boundary. Use land tenure adjustments or establish long-term cooperative management agreement with PacifiCorp to manage resources
- Total acres potentially affected in this alternative = 17,340 (additional acres above Alternative 2 all in California)

Private Land

- Oregon Parks and Recreation Department implements scenic classification and administrative rules for Scenic River Area for the entire 11-mile segment of the Klamath River Scenic Waterway

- Oregon Parks and Recreation Department implements scenic classification and administrative rules for an Scenic River Area for the entire 11-mile segment of the Klamath River Scenic Waterway

- Oregon Parks and Recreation Department implements scenic classification and administrative rules for an Scenic River Area for the entire 11-mile segment of the Klamath River Scenic Waterway

- Oregon Parks and Recreation Department implements scenic classification and administrative rules for an Scenic River Area for the entire 11-mile segment of the Klamath River Scenic Waterway

Special Areas

- None proposed

- Propose extending Area Critical Environmental Concern to river Segment 1

- Propose extending Area Critical Environmental Concern to river Segment 1

- Propose extending Area Critical Environmental Concern to river Segment 1

Socioeconomics

- No specific management actions are proposed for socioeconomics; however, other proposed management actions could have an effect on local and regional economy. The analysis considers impacts to individuals, businesses (including permitted outfitters), Tribes, minority populations, and low-income populations.

Chapter 5 – Environmental Consequences

The potential environmental consequences from implementation of the management alternatives proposed in the River Plan, are summarized in the following section (see Table S-3). The interdisciplinary team has made the assumption that actions that are only recommended for implementation on PacifiCorp land, would occur. This allowed a more complete assessment on impacts to natural and social resources, in general, but more importantly allowed them to consider the potential cumulative impacts of management in the Klamath River canyon.

Table S-3. Comparison of Resource Impacts

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Scenic Quality	<ul style="list-style-type: none"> • Minor scenic quality improvement (long-term) through some vegetation treatments 	<ul style="list-style-type: none"> • Moderate scenic quality improvements (long-term) through vegetation treatments 	<ul style="list-style-type: none"> • The greatest scenic quality improvements (long-term) occur through vegetation treatments 	<ul style="list-style-type: none"> • Moderate scenic quality improvements (long-term) through vegetation treatments
Recreation	<ul style="list-style-type: none"> • Recreation use would remain at present levels, and increase slightly over time • No new campgrounds or day use facilities would be constructed, existing facilities would be maintained or upgraded • OHV use limited to designated roads • River Segment 1 fishing access would remain primitive • Non-motorized recreation trails (18 miles) would be provided • Fishing opportunities should remain stable • Conflicts between recreation use and cultural sites impacts would continue 	<ul style="list-style-type: none"> • Recreation use would remain near present levels and increase slightly over time • Public access would be improved over Alternatives 1 and 3 • There would be more developed camping, day-use, interpretive facilities, non-motorized trails, and designated OHV routes than Alternative 1 and reduced conflicts with cultural sites when compared to Alternative 1 and 4 • Increased kayaking opportunities in river Segment 1 when compared to Alternatives 1 and 3. • Interpretive/environmental education efforts would increase when compared to Alternative 1 and 3 • Greater restrictions on OHV use would be implemented via designated routes and some road closures when compared to Alternatives 1 and 3 • Increased law enforcement and management presence when compared to Alternatives 1 and 3 	<ul style="list-style-type: none"> • Recreation use would remain near present levels • Developed camping and day use opportunities would be reduced from levels under Alternative 1 • OHV use would be the most restricted under this alternative, with the most extensive road closures • Fishing access would remain similar to Alternative 1 • Non-motorized trails would be provided, but at reduced levels from the other alternatives • Year-round kayaking opportunities would be improved compared to the other alternatives • Whitewater boating opportunities would be greatly reduced • Interpretive/environmental education efforts would be at a lower level than Alternatives 2 and 4, but higher than Alternative 1 • Law enforcement and management presence would be similar to Alternative 1 	<ul style="list-style-type: none"> • Recreation use would increase significantly • This alternative would manage recreation use for roaded natural recreation opportunity spectrum (ROS) experiences • This alternative provides the greatest amount of developed camping, day-use, interpretive facilities, and hiking trails of all the proposed alternatives • The greatest amount of OHV opportunities on improved roads would be available under this alternative • Motorized travel and OHV use would increase, potentially increasing long-term resource damage • Law enforcement and management presence would increase • Boating and kayaking opportunities would show the greatest improvement • Road conditions would improve the most, reducing opportunities for semi-primitive motorized

Alternative 1	Alternative 2	Alternative 3	Alternative 4
<ul style="list-style-type: none"> • This alternative would have more roads open for public use when compared to Alternatives 2 and 3 • Road improvements in this alternative focus only on significant problem areas 	<ul style="list-style-type: none"> • Increased developed recreational fishing opportunities when compared to Alternatives 1 and 3 • This alternative would have more roads open for public use when compared to Alternative 3 but less when compared to Alternatives 1 and 4 • Increased road maintenance over Alternative 1 levels could lead to increased use of recreation sites 	<ul style="list-style-type: none"> • This alternative would have the lowest number of roads open for public use when compared to the other alternatives • Road improvements in this alternative focus on preventing erosion and impacts to riparian areas 	<ul style="list-style-type: none"> • touring and solitude • This alternative provides the greatest level of interpretive/environmental education efforts • This alternative would provide the greatest enhancement of cultural resource displays, brochures, etc • This alternative would enhance wildlife viewing at recreational sites more than other alternatives • Recreational fishing access opportunities would increase the most
Roads/Access			
<ul style="list-style-type: none"> • Negative impacts to pre-historic and historic sites could occur under this alternative from recreational activities and location of recreation facilities • Increased vegetation and road treatments would have the least initial disturbance, followed by decreased human activity 	<ul style="list-style-type: none"> • The greatest positive benefits and protection of pre-historic and historic sites would occur under Alternatives 2 and 4 from recreational activities and location of recreation facilities • Increased vegetation and road treatments would moderate initial disturbance, followed by decreased 	<ul style="list-style-type: none"> • Moderate positive impacts would occur to pre-historic and historic sites under this alternative when compared to Alternative 1 • Increased vegetation and road treatments would have the greatest initial disturbance, followed by decreased human activity. • More cultural surveys would occur 	<ul style="list-style-type: none"> • The greatest positive benefits and protection of pre-historic and historic sites would occur under Alternatives 2 and 4 from recreational activities and location of recreation facilities • Increased vegetation and road treatments would moderate initial disturbance, followed by decreased
Cultural Resources and Native American Traditional Use			

Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>human activity</p> <ul style="list-style-type: none"> • More cultural surveys would occur with this Alternatives than Alternative 1, thereby increasing the knowledge of past Native American use • Increased law enforcement and patrols would decrease potential recreation activity impacts to pre-historic and historic sites when compared to Alternatives 1 and 3 <p>Vegetation</p> <ul style="list-style-type: none"> • The smallest amount of vegetative treatment of all the alternatives, therefore, the least positive impact on vegetation health and reduction of fuel loads and risk of wildfire • Potential for introduction of noxious weeds remains at current levels 	<p>human activity</p> <ul style="list-style-type: none"> • More cultural surveys would occur with this Alternatives than Alternative 1, thereby increasing the knowledge of past Native American use • Increased law enforcement and patrols would decrease potential recreation activity impacts to pre-historic and historic sites when compared to Alternatives 1 and 3 <ul style="list-style-type: none"> • Moderate level of vegetative treatment, than Alternative 1 • Reduction of fuel loads and wildfire risk is moderate • Noxious weed introduction could increase over Alternative 1 levels 	<p>with this alternatives than Alternatives 1 and 2, thereby increasing the knowledge of past Native American use</p> <ul style="list-style-type: none"> • Increased law enforcement and patrols would decrease potential recreation activity impacts to pre-historic and historic sites when compared to Alternatives 1 and 3. • The greatest amount of cultural surveys would occur with this alternative thereby increasing the knowledge of past Native American use <ul style="list-style-type: none"> • Vegetation treatments would be the highest in this alternative with the greatest positive impacts to vegetation health and diversity • Benefits are highest from reducing fuel loads and fire risk reduction compared to other alternatives • Short-term disturbances from vegetation treatments under this alternative would give noxious weed the most competitive advantage; however, long term management would produce more historically similar plant communities 	<p>human activity</p> <ul style="list-style-type: none"> • Increased law enforcement and patrols would decrease potential recreation activity impacts to pre-historic and historic sites when compared to Alternatives 1 and 3. • The greatest amount of cultural surveys would occur with this alternative thereby increasing the knowledge of past Native American use <ul style="list-style-type: none"> • Moderate level of vegetation treatments focused near recreation sites with greater positive impacts to vegetation health and diversity than Alternative 1 • Positive impacts to fuel reduction and risk reduction of wildfire are greater than Alternative 1 but less than Alternative 3 • Areas of vegetation treatment, which can temporarily increase risk of noxious weed invasion, would be larger than Alternative 1, smaller than Alternative 3, and similar to Alternative 2
<p>Soils</p> <ul style="list-style-type: none"> • Minimal short-term negative impacts to soil resources from vegetation treatments • Greatest potential long-term negative impacts from erosion due 	<ul style="list-style-type: none"> • Moderate short-term negative impacts to soil resources from vegetation treatments • Potential long-term negative impacts from erosion due to risk of 	<ul style="list-style-type: none"> • Moderate short-term negative impacts to soil resources from vegetation treatments • Potential long-term negative impacts from erosion due to risk of 	<ul style="list-style-type: none"> • Moderate short-term negative impacts to soil resources from vegetation treatments • Potential long-term negative impacts from erosion due to risk of

Alternative 1

- action, except as regarding minimum flows
- No Changes in recreation releases
- No flow changes anticipated unless as a result of the FERC relicensing process
- Adjudicated water rights secured for recreation and fisheries instream flows

Alternative 2

- Schedule powerhouse releases would resemble timing, volume and duration that occurred at the time of Wild and Scenic designation
- Instream flows revised as necessary, through the FERC relicensing process and other studies
- Adjudicated water rights secured for recreation and fisheries instream flows

Alternative 3

- Daily flow fluctuation: No releases would be made to support whitewater recreation
- Instream flows revised as necessary, through the FERC relicensing process and other studies
- Adjudicated water rights secured for recreation and fisheries instream flows

Alternative 4

- Daily flow fluctuation: No action, except as regarding minimum flows and ramp rates
- Scheduled powerhouse releases would enhance whitewater opportunities
- Instream flows revised as necessary, through the FERC relicensing process and other studies
- Adjudicated water rights secured for recreation and fisheries instream flows

Water Quality:

- Fluctuations in temperature downstream from powerhouse would be slightly reduced
- Sediment delivery to tributary streams would decrease, but not as much as in other alternatives
- Minor effects to stream shading along tributaries

- Some warming in downstream portion of Segment 1 due to releasing additional water from reservoir
- Temperature gradient at the powerhouse and daily temperature fluctuations would be greatly reduced
- Daily minimum water temperatures in Segments 2 and 3 would increase
- Reduction in warming rate downstream from powerhouse
- Water temperatures could increase slightly short-term, due to vegetative actions along mainstem river
- Water quality in fish-bearing and other streams would improve
- Sediment delivery to tributary streams would decrease
- In Shovel and Negro Creeks, summer water temperatures would decrease, and water chemistry could improve due to reduced

- Some warming in downstream portion of Segment 1 due to releasing additional water from reservoir
- Reductions in warming downstream from the powerhouse would be the greatest in this alternative
- Mainstem water chemistry could improve long-term
- Water quality in fish-bearing and other streams would improve
- Sediment delivery to streams would be reduced, more than compared to other alternatives
- Stream shading would be reduced in the short-term with minor increases in water temperature short-term, due to vegetative actions along mainstem river, more than Alternatives 1 and 4
- In Shovel and Negro Creeks, summer water temperatures would decrease and water chemistry could improve due to reduced

- Fluctuations in temperature downstream from powerhouse would be slightly reduced
- Warming rates would decrease, but not as much as in Alternatives 2 and 3
- Water quality in fish-bearing would be maintained or improve slightly
- Water quality in some small streams could be affected by road improvements and road use
- In Shovel and Negro Creeks, summer water temperatures could decrease and water chemistry could improve

Alternative 1	Alternative 2	Alternative 3	Alternative 4
<p>ACS Values - Riparian Reserves:</p> <ul style="list-style-type: none"> • This alternative is the least likely to maintain or restore riparian reserve functionality 	<p>irrigation withdrawals and instream restoration</p> <ul style="list-style-type: none"> • Actions proposed under this alternative would have a relatively high likelihood of maintaining or restoring riparian reserve functionality 	<p>irrigation withdrawals and instream restoration</p> <ul style="list-style-type: none"> • Actions proposed under this alternative have the highest likelihood of supporting the functionality of riparian reserves 	<ul style="list-style-type: none"> • Actions proposed under this alternative would have a moderate likelihood of maintaining or restoring riparian reserve functionality
<p>Aquatic Species</p> <ul style="list-style-type: none"> • This alternative provides the least enhancement and protection to aquatic resources • Fish stranding would continue due to flow fluctuations from the hydro-electric facilities • Increased risk of catastrophic fire in aquatic and riparian habitat areas 	<ul style="list-style-type: none"> • This alternative would have greater beneficial effects to aquatic species and habitats than Alternative 1 and 4, but not as great as Alternative 3 • Fish stranding would be expected to decrease due to changes in flow fluctuations and instream projects when compared to Alternatives 1 and 4 • Enhancement of mainstem channels would improve habitat for trout when compared to Alternative 1 • Proposed new and expanded recreational facilities would have greater negative impact on aquatic species than Alternatives 1 and 3 • Decreased risk of catastrophic fire in aquatic and riparian habitat areas when compared to Alternative 1 	<ul style="list-style-type: none"> • This alternative would provide greater beneficial effects to aquatic species and habitats than all other alternatives • Long-term beneficial effects would be expected from all proposed instream structures • The greatest reduction in fish stranding would occur in this alternative • Greatest reduction of risk for catastrophic fire in aquatic and riparian habitat areas in this alternative 	<ul style="list-style-type: none"> • This alternative would have greater beneficial effects to aquatic species and habitats than Alternative 1, but not as great as Alternative 3 • Enhancement of mainstem channels would improve habitat for trout when compared to Alternative 1 • Proposed new and expanded recreational facilities would have greater negative impact on aquatic species than Alternatives 1 and 3 • Decreased risk of catastrophic fire in aquatic and riparian habitat areas when compared to Alternative 1

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Livestock Grazing	<ul style="list-style-type: none"> • Grazing would continue at present levels • There would be a positive economic effect compared to other alternatives, as a result of continued grazing 	<ul style="list-style-type: none"> • This alternative would have few reductions in livestock grazing when compared to Alternative 1 • There would be minimal changes in economic effects from grazing reduction 	<ul style="list-style-type: none"> • This alternative would eliminate all grazing in the planning area except for adaptive management vegetation control • This alternative would have the greatest negative economic impact to grazing 	<ul style="list-style-type: none"> • This alternative would have moderate reductions in livestock grazing when compared to Alternative 1 • There would be moderate negative economic effects from grazing reduction
Wild Horses	<ul style="list-style-type: none"> • There are no impacts to wild horses from proposed actions 	<ul style="list-style-type: none"> • There are no impacts to wild horses from proposed actions 	<ul style="list-style-type: none"> • There are no impacts to wild horses from proposed actions 	<ul style="list-style-type: none"> • There are no impacts to wild horses from proposed actions
Land Tenure	<ul style="list-style-type: none"> • Potentially the least number of acres of private land acquired in this alternative • Oregon and California would lose tax revenue; amount paid under PILT program would not equal tax receipts 	<ul style="list-style-type: none"> • Potentially more acres of private land acquired than Alternative 1 • Oregon and California would lose tax revenue; amount paid under PILT program would not equal tax receipts • Acquisition of private lands would ensure that these natural resources would continue to be maintained or enhanced 	<ul style="list-style-type: none"> • Potentially the most acres of private land acquired in this Alternative • Oregon and California would lose tax revenue; amount paid under PILT program would not equal tax receipts • Acquisition of private lands would ensure that the greatest area of natural resources would continue to be maintained or enhanced 	<ul style="list-style-type: none"> • Potentially more acres of private land acquired than Alternatives 1 and 2 • Oregon and California would lose tax revenue; amount paid under PILT program would not equal tax receipts • Acquisition of private lands would ensure that a large area of natural resources would continue to be maintained or enhanced
Private Land	<ul style="list-style-type: none"> • Minimal if any impacts to private land 	<ul style="list-style-type: none"> • Minimal if any impacts to private land within the Scenic Waterway from either State Administrative Rule implementation (mostly PacifiCorp “industrial” use) 	<ul style="list-style-type: none"> • Minimal if any impacts to private land within the Scenic Waterway from either State Administrative Rule implementation (mostly PacifiCorp “industrial” use) 	<ul style="list-style-type: none"> • Minimal if any impacts to private land within the Scenic Waterway from either State Administrative Rule implementation (mostly PacifiCorp “industrial” use)

	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Special Areas				
• No change		<ul style="list-style-type: none"> • If recommendations are adopted, PacifiCorp affected mostly by recreation site development, road improvements and vegetation treatments 	<ul style="list-style-type: none"> • If recommendations are adopted, PacifiCorp affected mostly by eliminated grazing, irrigation changes, meadow management, road improvements and road closures, and vegetation treatments 	<ul style="list-style-type: none"> • If recommendations are adopted, PacifiCorp affected mostly by recreation site development, reduced grazing, road improvements and road closures, and vegetation treatments
		<ul style="list-style-type: none"> • Extend existing ACEC to Segment 1 	<ul style="list-style-type: none"> • Extend existing ACEC to Segment 1 	<ul style="list-style-type: none"> • Extend existing ACEC to Segment 1

Chapter 6 – Coordination and Consultation

The Draft Upper Klamath River Management Plan/EIS (henceforth called the River Plan) was prepared by an interdisciplinary team of resource specialists from the BLM, Lakeview District, Klamath Falls Resource Area Office with cooperation from the BLM, Redding Field Office and the Oregon Parks and Recreation Department. The official start of the preparation of the River Plan was initiated with the publishing of a “Notice of Intent” to prepare a Draft Environmental Impact Statement in the *Federal Register* on November 27, 2000. This notice also included an invitation to the public to suggest issues to be addressed in the River Plan and to provide comments concerning the management of the public lands. The planning process began in earnest in early 2001 with scoping meetings with the public, local governments, and organizations.

The River Plan is quite complex and requires extra coordination due to the fact that the planning area covers portions of two states. Multiple federal, state, and local government agencies were coordinated with to ensure that regulations would be adhered to during the preparation of this plan. In addition, PacifiCorp coordinated with the BLM in sharing natural resource information on their lands that are considered in the River Plan.

Coordination

The BLM is coordinated with the following federal, state, and county agencies or committees: U.S. Fish and Wildlife Service, U.S. Forest Service, Environmental Protection Agency, Bureau of Reclamation, and National Resource Conservation Service, the Regional Interagency Executive Committee, Klamath Provincial Advisory Committee, Klamath Basin Ecosystem Restoration Office, Oregon Department of Forestry, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, Oregon Water Resources Department, Oregon Division of State Lands, Oregon State Marine Board, Oregon Parks and Recreation Department, State Historic Preservation Office (California and Oregon), Oregon Department of Environmental Quality, California Department of Fish and Game, California Department of Environmental Quality, California Departments of Forestry, California Water Resources Control Board, and the Klamath and Siskiyou Counties.

For more detailed information regarding the agencies BLM has coordinated with, see Chapter 6 in the DEIS.

Consultation

US Fish and Wildlife Service – The 1973 Endangered Species Act identified on a National List, any plant, animal or fish that is in danger of extinction throughout all or a significant portion of its range. Species that are threatened, proposed and candidate status have a consultation process for projects with the USFWS, which administers the National List. A Biological Opinion (BO) will be prepared on the final preferred alternative that will make a determination on endangered fish or wildlife species and habitat. This opinion evaluates the potential impacts to species from a specific project and provides recommendations for protection of the viability of the species. To date, consultation with the USFWS has been informal through discussions with BLM staff.

Tribes - The Lakeview District is in the process of developing a Memorandum of Understanding (MOU) between the BLM and the Klamath Tribes. It is anticipated the MOU will be finalized in FY 2003. The KFRA has consulted with the Klamath Tribes on the Klamath River Management Plan/EIS. Government-to-government meetings have been held that have included presentations to the Tribal Council. Regular updates have been given to the Tribes Cultural and Heritage Resource specialists during bi-monthly meetings.

Government-to-government consultation meetings were also held with various Tribes in California. The KFRA has consulted with the Shasta Nation (both Oregon and California groups), Hupa, Karuk, and Yurok Tribes regarding the proposed River Plan.

Chapter 7 – Implementation and Monitoring

Implementation

A detailed implementation time schedule will be developed in the FEIS. For the River Plan/DEIS, it was assumed that actions identified in Appendix H would be implemented in ten years with annual maintenance needed there after. The life span of this plan is estimated to be twenty years.

The total cost estimates for implementing the specific actions for each alternative are displayed in Table S-4. BLM has prepared cost estimates for the recommended actions that occur on PacifiCorp lands. This was done to abide by PacifiCorp's written request to consider their lands in this River Plan/DEIS.

There were common assumptions made when developing the cost estimates for implementing each alternative.

Cost estimates were based on contracting all work to complete the specific actions.

No cost estimates were made for land tenure acquisitions.

Maintenance costs were determined to be critical after the ten-year implementation period. Maintenance costs were determined by estimating 10% of the total cost per alternative per year. Maintenance costs are for recreation facilities, roads, and vegetation treatments.

Monitoring

BLM is required to monitor land use plan decisions (43 CFR 1610.4-9) and to adopt a monitoring program for any mitigation incorporated into decisions based on environmental impact statements (40 CFR 1505.2[c]). In addition, protection and enhancement of outstandingly remarkable river values is a mandate of the Wild and Scenic Rivers Act. In order to verify the trend of river resource conditions and to guide future management decisions, it is desirable to systematically sample public land, file the data in an organized fashion, and provide for periodic evaluation of the information obtained.

The monitoring plan identifies three levels of monitoring that could be conducted. These monitoring levels are described for each monitoring action and alternative (see Appendix M). The following reviews the three levels of monitoring that could be completed after projects implementation.

Implementation Monitoring — When determining whether a course of action is having the desired effects, the first step to take is implementation monitoring. This type of monitoring answers the question: "Were the actions detailed in the Record of Decision accomplished as designed?" Implementation monitoring will be conducted on each mitigation measure incorporated into the Klamath River Management Plan, and disclosure of accomplished actions will be documented in achievement reports. For many mitigation measures, such as standard Best Management Practices, the only monitoring necessary would be implementation monitoring.

Effectiveness Monitoring — If more monitoring information is desired, the second phase of monitoring is to determine whether the actions documented in the implementation phase of monitoring are having any effect. This phase answers the question: “Did the actions accomplished meet the objectives in the Record of Decision?” Thus, effectiveness monitoring includes obtaining field observations that meet approved protocol, and evaluating the data gathered to determine whether conditions remain within the bounds and intent of Plan direction.

Validation Monitoring — The validation phase of monitoring seeks to resolve whether the course of action is having the desired effects. Validation answers the question: “Were the initial assumptions used to develop the Klamath River Management Plan correct?” The validation phase also forms the background for adaptive management, and would become the initial data set for the next round of decision making.

Table S-4. Summary of Implementation, Monitoring, and Annual Maintenance Costs

Management Actions	Alternative 1		Alternative 2		Alternative 3		Alternative 4	
	BLM	PC*	BLM	PC*	BLM	PC*	BLM	PC*
Implementation Cost/Decade**	\$ 1,106	\$ 267	\$2,978	\$4,531	\$4,062	\$11,030	\$4,326	\$4,072
Monitoring Activities Cost/Decade***	384	N/A	857	N/A	765	N/A	796	N/A
Total Cost/Decade	\$1,490	\$ 267	\$3,835	\$4,531	\$4,827	\$11,030	\$5,122	\$4,072
Annual Maintenance after first decade (the implementation period)	105	27	298	453	400	400****	433	407

* PC = PacifiCorp (Costs are estimated using the same method as for BLM land. Private landowners may be able to accomplish work at a different rate.)
 ** All cost totals are in \$1,000 and displayed for a ten year time period
 ** Monitoring costs calculated only for BLM lands for a ten year time period
 *** Annual maintenance costs based on less than 10% factor