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

U.S. Department of Agriculture
Forest Service
Ochoco National Forest

August 1992

North Fork Crooked River Environmental Assessment and Draft Management Plan

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.

NORTH FORK CROOKED RIVER ENVIRONMENTAL ASSESSMENT

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Prineville District Office
P.O. Box 550 (185 E. 4th Street)
Prineville, Oregon 97754

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
8350

DEAR RIVER ENTHUSIAST:

We are pleased to present the results of a cooperative effort between the Bureau of Land Management, Prineville District, and Ochoco National Forest to develop a management strategy for the North Fork Crooked River. The Environmental Assessment and Management Plan are enclosed for your review. This plan addresses citizen input and is consistent with the Wild and Scenic Rivers Act and Oregon Omnibus Wild and Scenic Rivers Act of 1988.

This plan has a public comment period of 30 days. Please write or call us to share your views on the river management plan before October 23, 1992. After the comment period, a decision notice and final management plan will be completed.

Thank you for your interest. Should you have questions about the management of the Wild and Scenic River, contact Jim Hancock, Bureau of Land Management (447-4115), or Tom Schmidt, Ochoco National Forest (447-9625).

Sincerely,

Donald L. Smith (Acting)
James L. Hancock
District Manager
Bureau of Land Management

Thomas A. Schmidt
Forest Supervisor
Ochoco National Forest

Enclosures
as stated above.

NORTH FORK CROOKED RIVER ENVIRONMENTAL ASSESSMENT

INTRODUCTION

Federal Designation

The purpose of this document is to provide future management direction so a management plan can be prepared that will protect and enhance the outstandingly remarkable and significant river values on the North Fork Crooked River, also referred to in this document as the North Fork. It also provides a basis for comparison of the alternative ways to accomplish objectives. This river was added to the National Wild and Scenic Rivers System in 1988. The Wild and Scenic Rivers Act was passed in 1968 to balance river development with river protection. To accomplish this goal, Congress created the National Wild and Scenic Rivers System:

> It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and...shall be protected for the benefit and enjoyment of present and future generations.

The Federal Omnibus Oregon Wild and Scenic Rivers Act of 1988 designated 40 river segments in Oregon, including portions of the North Fork, for inclusion in the Wild and Scenic Rivers system and directed the USDA Forest Service (Forest Service) and the Bureau of Land Management (BLM) to develop management plans for each designated river by October 1992.

This Environmental Assessment (EA) is a product of a comprehensive public involvement, state and federal agency, and local government effort facilitated through the interdisciplinary (ID) team process. The Forest Service and BLM worked together to produce an integrated EA for the North Fork Crooked River. A Memorandum of Understanding between the Forest Service and BLM gave the BLM lead planning responsibility. The ID team is composed of Forest Service and BLM professional staff members. Final approval is shared by the District Manager, Prineville District, BLM and the Forest Supervisor, Ochoco National Forest.

Designation as a Wild and Scenic River does not mean that the river corridor is managed like a National Park or Wilderness. The management goal is to maintain the character of the river in its current state and protect or enhance specific resource values.

River Description

The North Fork Crooked River is a mixture of land ownerships, including the BLM, Forest Service, and private. The river management plan is a multi-agency effort which includes interests by American Indians, private citizens, the Oregon State Division of Lands, Oregon State Department of Fish and Wildlife (ODFW), and others.

Under the Wild and Scenic Rivers Act, a river may be classified as wild, scenic, or recreational. This classification is based on the conditions of the river and adjacent lands, access to the river, and the degree of development within the river corridor. The North Fork includes all three classifications.

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 designated 32.3 miles of the North Fork from its source at Williams Prairie to one mile from its confluence with the Crooked River, and divided the river into six segments as follows:

Segment 1: 3-mile segment from its source at Williams Prairie to the upper end of Big Summit Prairie, to be administered by the Forest Service'

Segment 2: 3.7 mile segment from the lower end of Big Summit Prairie to the bridge across from the Deep Creek Campground, to be administered by the Forest Service;

Segment 3: 8-mile segment from the bridge across from the Deep Creek Campground to the Ochoco National Forest boundary, ½ mile from Lame Dog Creek, to be administered by the Forest Service;

Segment 4: 1.5-mile segment from the Ochoco National Forest boundary to Upper Falls, to be administered by the BLM;

Segment 5: 11.1-mile segment from Upper Falls to Committee Creek, to be administered by the BLM; and

Segment 6: 5-mile segment from Committee Creek to one mile from its confluence with the Crooked River, to be administered by the BLM.

More accurate mapping has shown the actual river miles in each segment to be as follows: Segment 1 - 4.6 miles, Segment 2 - 4.5 miles, Segment 3 - 6.3 miles, Segment 4 - 2.2 miles, Segment 5 - 11.9 miles, Segment 6 - 4.7 miles.

Segments 1, 2, and 6 were classified as recreational, Segments 3 and 4 were classified as scenic, and Segment 5 was classified as wild.

Segment 4, although administered by the BLM, contains some blocks of Forest Service managed land. These blocks will be managed by the standards and guidelines stated in the Ochoco National Forest, Land and Resource Management Plan for the management areas involved.

OVERVIEW OF RIVER VALUES

Resource Assessment

A Resource Assessment, which summarized the outstandingly remarkable and significant river values found along the North Fork, was completed in March 1992. The purpose of this resource assessment was to identify values not addressed in the legislation, determine the significance of values not determined to be outstandingly remarkable and to verify the Congressional Record. In many cases, the legislation did not specify where on the river the outstanding and significant values occurred. The resource assessment clarified the location, distribution, and condition of the river values. Additional information from specialists in many fields, and information from individuals and groups familiar with the river was used to write the resource assessment. The outstandingly remarkable and significant river values include scenery, recreation, fisheries, wildlife habitat (bald eagle winter roost site), and botanical (sensitive plants and some areas of pristine riparian vegetation).

Summary of Outstandingly Remarkable Values

Scenery is an outstandingly remarkable value on all river segments. Along the 34.2 miles of designated river, scenic values include meadows, rocky cliffs, and old growth ponderosa pine forest. From its source at Williams Prairie, the river flows freely through open wet meadows, surrounded by ponderosa pine forest. Beyond the river's confluence with Deep Creek the landscape elements include steep-sided volcanic canyons interspersed with old growth ponderosa pine forests and riparian meadows.

Recreation is an outstandingly remarkable value in Segments 4 and 5. The canyon sections of the river provide relatively pristine opportunities for fishing, hiking, hunting, and other semiprimitive experiences. The remoteness, solitude, natural beauty, and a wide variety of flora and fauna contribute to the recreation values in this area.

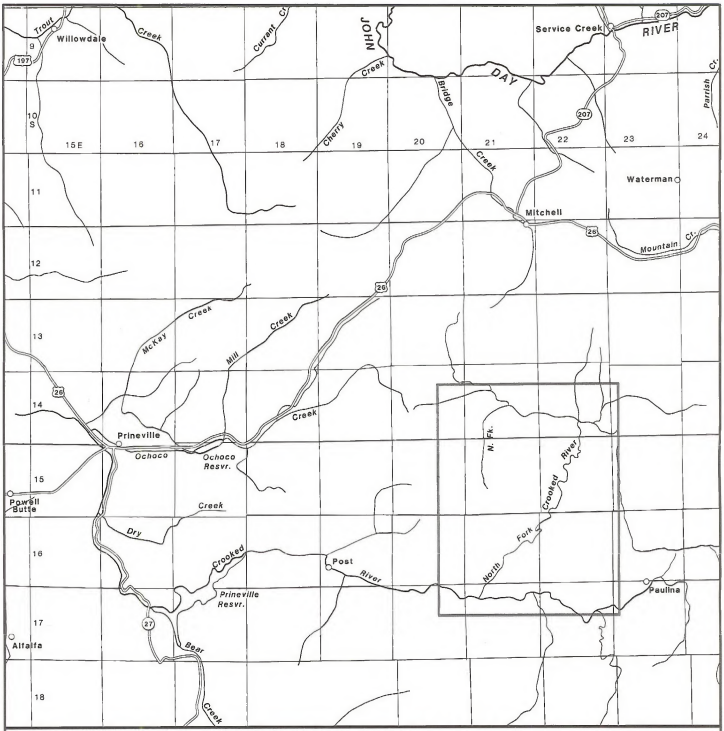
With enhancements fisheries values have the potential to be high, however the existing situation in much of the watershed and the resulting high stream temperatures affect the quality and quantity of the current fisheries. Redband/Inland Rainbow Trout, an Oregon State Sensitive, Class II species, occurs throughout the river. This species is also classified as a sensitive species by federal agencies. The opportunity to enhance this fish population through habitat improvement was identified in the resource assessment.

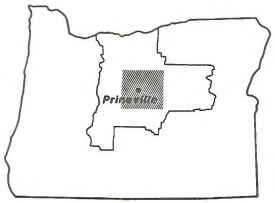
Many wildlife species including muledeer, elk, coyote, sandhill crane, and various birds of prey use the river corridor for feeding, nesting, shelter, or travel. Bald eagles, a federally listed endangered species, use the river corridor during the winter. **The presence of a bald eagle winter roost site is an outstandingly remarkable value in river Segments 5 and 6.**

There is a wide diversity of vegetation throughout the river corridor, including upland sagebrush/juniper/mountain mahogany associations and deciduous riparian habitat. **Botanical values, including the presence of sensitive plant species such as *Calachortus longebarbatus* var. *peckii*, old growth ponderosa pine forests, and some sections of native riparian conditions in the Wilderness Study Area are outstandingly remarkable values along the river.**

DOCUMENT ORGANIZATION

This document is organized into six chapters. First, Chapter I explains the purpose of this project and the issues to be addressed. Chapter II provides a summary of the resource assessment and describes the physical, social, biological, and economic resources of the river. Chapter III gives a detailed explanation of the alternatives considered to address issues and manage river values. Next, Chapter IV explains the physical, social, biological and economic effects of each alternative. Chapter V contains the draft River Management Plan which explains in detail how the preferred alternative would be implemented and monitored. Finally, Chapter VI contains the appendix and other information for readers who desire more detailed, analytical data.





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U.S. Forest Service

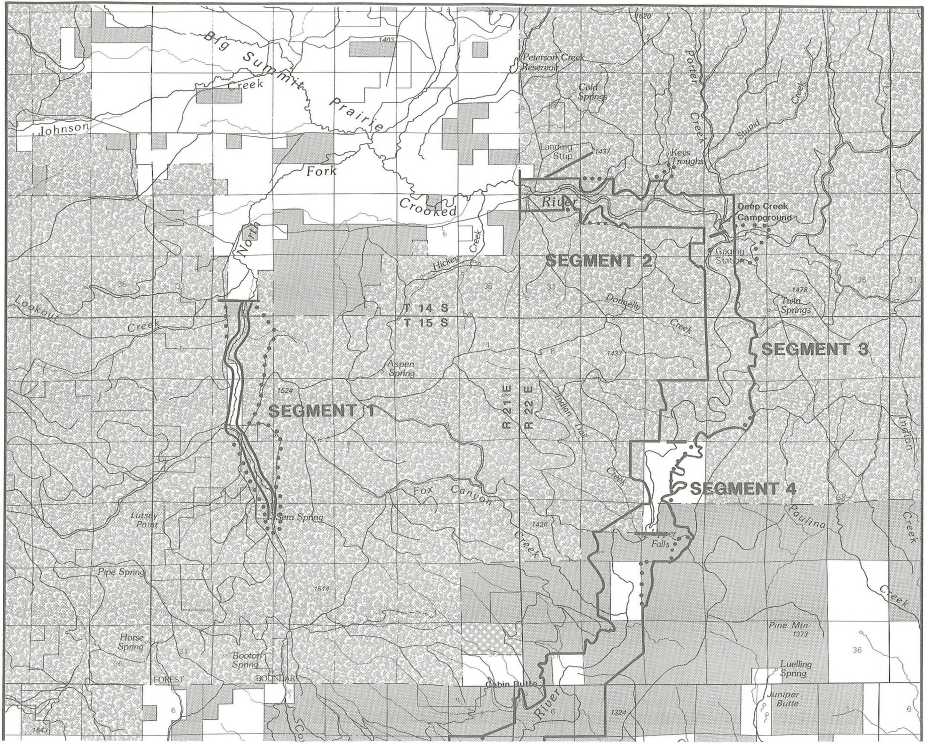
NORTH FORK CROOKED WILD AND SCENIC RIVER

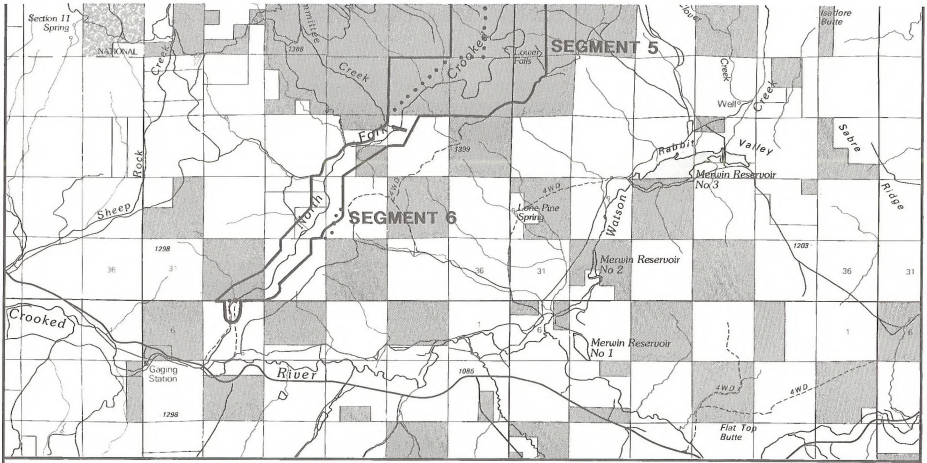
INDEX TO MAP SEGMENTS

Oregon
1992

5 0 5 10 15 Miles

Scale 1:500,000


Big Summit Prairie
Johnson Creek
North Fork Crooked River
Peterson Creek Reservoir
Cold Springs
Porter Creek
Stupid Creek
Landing Strip
Keys Troughs
Deep Creek Campground
Gaging Station
SEGMENT 2
Hickey Creek
Donnelly Creek
Twin Springs
T 14 S
T 15 S
Lookout Creek
SEGMENT 3
Aspen Spring
R 21 E
R 22 E
Indian Trail Creek
SEGMENT 1
SEGMENT 4
Fox Canyon Creek
Paulina Creek
Lutsey Point
Sera Spring
Falls
Pipe Spring
Pine Mtn
Horse Spring
Booton Spring
Luelling Spring
FOREST BOUNDARY
Cabin Butte
Juniper Butte
River



LEGEND

- Public Lands (Admin. by BLM)
- State Lands
- USFS Lands
- Private Lands
- Preliminary Wild and Scenic River Administrative Bounday
- Wild and Scenic River Boundary – Alternatives 2, 3 and 4

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NORTH FORK CROOKED WILD AND SCENIC RIVER

Oregon
1992

1 0 1 2 3 Miles
Scale 1:100,000

I

Purpose and Need for Action

"The rivers are our brothers -- they quench our thirst."
≈Chief Seattle≈

CHAPTER I
PURPOSE AND NEED FOR ACTION

The North Fork Crooked River (North Fork) was designated as a National Wild and Scenic River in 1988. The legislation required the USDA Forest Service and Bureau of Land Management to develop a management plan for the Wild and Scenic River within 3 years. This plan will guide management of the North Fork for the next 10 years or until the agencies revise the Forest Service and BLM Management Plans. The purpose of this document is to provide future management direction so a management plan can be prepared that will protect and enhance the outstandingly remarkable and significant river values of the North Fork.

This Environmental Assessment informs the public about the river planning process and describes the analysis done by the interagency river planning team. It describes alternative ways to meet the need for protection and enhancement of outstandingly remarkable and significant river values (ORV) while coordinating the interests of all the various publics and agencies involved. This document is intended to set land management standards for site specific project decisions to be made in the future.

PROPOSED ACTION

The proposed action provides the following future management direction within the boundaries established by Congress as shown on Map 2. Activities outside these boundaries may be affected by this direction if they impact the outstandingly remarkable or significant values that have been identified for the river. There will be no activities in the Wilderness Study Area (WSA), Research Natural Area (RNA), and Area of Critical Environmental Concern (ACEC). The ORVs of scenery in all river segments, recreation in Segments 4 and 5, bald eagle winter roost sites in Segments 5 and 6, and botanical/ecological values in all segments will be maintained or enhanced. Fisheries values will be enhanced in all segments. River Segments 1, 2, and 6 will be classified as recreational, Segments 3 and 4 as scenic, and Segment 5 as wild. Riparian vegetation and stream channel structure will be restored so that State Water Quality Standards can be met. There will be minimal recreation development. Livestock grazing will continue to occur in most areas, but reduced in riparian areas. Within foreground river views in Segments 1-3, only timber harvest needed to maintain or enhance scenery, recreation, or water quality objectives would be allowed.

The overall goal for the entire stretch of designated Wild and Scenic River is:

> The North Fork Crooked River will be protected as a free-flowing river with a diversity of river ecosystems, ranging from wet prairies to basalt canyons. All future river management or activities occurring within its boundaries will maintain and enhance the outstandingly remarkable river values for which the river was designated, including scenic, wildlife, botanical, and recreational values.

The decisions to be made in this document that will help provide direction for the river management plan will include:

1. What type of recreation opportunities will be emphasized in the river corridor?

2. What type, if any, of public access will be provided within the river corridor? Where would this access occur?

3. How will riparian habitat be managed within the river corridor?

4. How will water quality be improved to meet Oregon State Department of Environmental Quality standards?

5. Where and what type of upland vegetation management will be occur?

6. Where will the final Congressional river boundaries be located?

RELATIONSHIP TO OTHER DOCUMENTS

Since this document is an interagency effort, it is tiered to both Forest Service and Bureau of Land Management planning documents. Specifically, the management direction for Forest Service land in Segments 1 through 4 will become part of the Ochoco National Forest Land and Resource Management Plan, 1989 (Forest Plan). The management direction for BLM land in Segments 4 through 6 will augment the BLM Brothers/LaPine Resource Management Plan, 1989 (RMP).

This document may trigger an amendment to the Ochoco National Forest Plan. The Forest Plan provides direction for all resource management programs, practices, uses, and protection measures on the Forest. This plan is already in effect and will be amended to incorporate the River Management Plan standards and guidelines. This will be added to Part I, Chapter 4 of the Forest Plan which contains standards and guidelines for all management areas on National Forest land.

The RMP supports the development of the North Fork Crooked River Management Plan as directed by the National Wild and Scenic Rivers Act. The RMP provides a broad framework for multiple use management on public land within the Brothers/ LaPine planning area. It makes land use allocations, sets broad production goals, and protects important resource values. Management direction for the North Fork Area of Critical Concern (ACEC) and the Forest Creeks RNA is also addressed in the resource management plan. The North Fork WSA within the planning area is addressed in the BLM Final Oregon Statewide Environmental Impact Statement. The River Management Plan is in conformance with the WSA interim management and with the ACEC and RNA management direction.

Planning on National Forest and BLM land has two levels. The first level of planning is a programmatic level. It provides Forest- and Area-wide standards and guidelines. The River Management Plan is in this category. The second level of planning is site specific project planning. Individual projects such as specific trails, fish improvement projects, or roads fall into this category. These are tiered to the first planning level document and are designed to achieve the goals and objectives described in the Ochoco National Forest and BLM planning documents.

The River Management Plan provides goals, desired future condition, and standards and guidelines for the North Fork. Second level, site-specific National Environmental Policy Act (NEPA) analysis must be done for projects contained in the Plan. Management activities outside the boundaries must also protect values for which the river was designated.

PUBLIC INVOLVEMENT

A public involvement plan was formulated at the beginning of the river planning process in 1989 to assure that citizens had many opportunities to share their issues and concerns with the planning agencies.

The public was involved in identifying concerns to be addressed in this River Management Plan beginning in August 1991. At this time, a draft resource assessment was released to the public and comments were solicited concerning the identification of five outstandingly remarkable values (scenery, recreation, wildlife, botany, and riparian vegetation). The public agreed that these five values were indeed outstandingly remarkable.

A river newsletter, The High Desert River News, was mailed in August 1991 to over 1,000 people. This newsletter, along with a well circulated press release, announced the various ways in which the public could become involved with the planning process. A series of seven public meetings were held around the state (Prineville, Redmond, Crooked River Ranch, John Day, Eugene, Portland and Fossil). The purpose of these scoping efforts was to allow citizens the opportunity to express their issues and concerns about river management. Some people responded specifically to the North Fork at the public meetings, over the telephone, and through letters. Issue statements were developed that encompassed the full range of public perspectives.

Issues identified through this process are summarized under "Key Issues" in this Chapter.

After the ID team developed preliminary river management alternatives to address the issues and the National Wild and Scenic River Act, a second edition of the High Desert River News was mailed to the public in April 1992. It included a brief description of the alternatives and asked for further comment. Few people responded to these alternatives specifically.

Further public involvement included face-to-face meetings with private landowners along the river corridor, ODFW, the Confederated Tribes of the Warm Springs, and the Crook County Planning Department.

This Environmental Assessment and the draft River Management Plan will be released for a 30 day public review. After this time, the public comments and concerns will be analyzed and the Management Plan will be finalized. After the final River Management Plan is completed and the Decision Notice is issued, the public will have 30 days in which to appeal this Plan.

RELATIONSHIP TO PRIVATE LAND MANAGEMENT

Land uses and developments on private lands within the river area which were in existence when the river was designated may be permitted to continue. The Federal government has no authority to regulate or zone private lands although it may take steps to protect the river through easements purchased from landowners, land exchange or acquisition, or mitigation with willing landowners.

The Wild and Scenic Rivers Act specifically prohibits the use of condemnation in the fee title purchase of lands if 50 percent or more of the land within the boundary is already in public ownership (the North Fork falls into this category). If a land use or development clearly threatens the outstandingly remarkable values which resulted in the designation, efforts will be made to remove the threat through local zoning cooperation, land exchanges, purchases from willing sellers, and other actions short of condemnation. Scenic conservation or access easements through condemnation proceedings may be used but only as a last resort. Federal water projects, including dams, are specifically prohibited.

KEY ISSUES

The following issues were identified as Key Issues to be addressed in the draft River Management Plan. These were formulated through public scoping, ID team concerns, and the intent of the Wild and Scenic Rivers Act.

1. INSTREAM RESOURCES AND RIPARIAN HABITAT

Field inventories conducted during the resource assessment process revealed that vegetation along the river, especially from its source in Williams Prairie to the confluence with Deep Creek is lacking. Willows, grasses, sedges, conifers, and other riparian plants, provide less than 80% streamside shade and bank stability. This has resulted in deep channeling, poor fish habitat, and high water temperatures. Streamside shade, bank stability, water quality, and instream structural diversity are addressed as factors relating to the riparian condition. Riparian vegetation and water quality and quantity can contribute significantly to outstandingly remarkable scenic values. Many of the people who attended public meetings expressed concerns about the current condition of the riparian areas and stressed the need for improvement.

Monitoring of water quality has shown that the North Fork does not meet Oregon State Water Quality Standards. Both the Ochoco National Forest and Bureau of Land Management must comply with State requirements in accordance with the Clean Water Act. The North Fork is part of the Deschutes river basin, which is designated a cold water fishery with a target stream temperature of 58° F. ODFW, Trout Unlimited, Oregon Trout, and other publics have emphasized the need to improve water quality.

In order to improve water quality, the riparian vegetation must be improved. The riparian vegetation in most of Segment 5 of the river is an outstandingly remarkable value and exemplifies the desired streamside vegetation for the other river segments. The length of time it may take to achieve full riparian recovery and improve water quality, and the techniques used to accomplish this objective, may impact other resources.

Finally, water quantity is directly related to water quality, the amount of vegetation growing along the river, and fish habitat. It indirectly affects scenic, recreation, and wildlife values. No baseline data has been established to determine the minimum water level necessary to protect and enhance instream resources. An ongoing study is necessary to establish baseline data to determine future actions. The study itself will have no effect on other resources.

2. RECREATION OPPORTUNITIES

The Semiprimitive Nonmotorized (SPNM) recreational opportunities within the river canyon in Segments 4 and 5 have been identified as outstandingly remarkable. This recreational opportunity is directly related to access and facility development in the river corridor. The SPNM recreational experience limits use to people with little or no mobility impairment who are willing to walk, ride horseback, or use nonmechanized equipment to travel into remote areas. The more accessible Segments 1, 2, and 6 may provide developed recreation experiences. Decisions about what recreational development (trails, campgrounds, scenic overlooks, etc.) is needed, where they should be located, and how they will be accessed must to be made. The amount and location of facility development may affect recreation and scenic values, riparian vegetation, and water quality.

Public access on private land in Segments 4, 5 and 6 is limited. A desire has been expressed for more public access, which may affect private landowner operations and may also increase the number of people entering the wild section of the river in Segment 5. The type and amount of public access will influence the protection and enhancement of other river values including scenery, recreation, and water quality.

3. UPLAND VEGETATION MANAGEMENT

Upland vegetation in this document is defined as all vegetation in the river corridor outside the riparian zone. This vegetation contributes significantly to scenic values, especially the old growth ponderosa pine. Scenery is an outstandingly remarkable value throughout the river corridor. Over time the upland vegetation has been changing from parklike stands of ponderosa pine to denser, mixed conifer forest. This is a result of past management practices such as fire suppression and timber harvest. The reintroduction of fire into the ecosystem, and the changes in timber harvest practices will have both short- and long-term effects on other resource values. Short-term scenic values may be affected by dead or blackened trees from fire and stumps from timber harvest. Short-term affects on water quality (increased sedimentation) may occur from timber harvest. A long-term affect of fire and timber management practices may be improved scenic quality.

4. RIVER BOUNDARY LOCATION

When the river was designated by Congress in 1988 the Bureau of Land Management submitted interim river management boundaries. During this river management planning process, the location of final river boundaries are to be determined. The interim boundary legal description is vague, especially in defining the beginning and end of river segments. There may have been some errors made in the description of river termini, lengths of river segments, and boundary widths. The boundary location should be that which incorporates the river's outstandingly remarkable and significant values and assists in implementation of the river management plan. Boundaries must not exceed an average of 320 acres per river mile and must meet boundary survey and location standards. Clearly delineated boundaries provide the basis to accomplish resource goals and objectives for the designated Wild and Scenic River.

5. COUNTY/STATE/FEDERAL/PRIVATE LANDOWNER COOPERATION

The designated portions of the river include 2,440 acres of private land. Private landowners are very concerned that the federal government may try to regulate use on private land. The federal government has no authority to regulate use on private land, however Congress has given river management responsibilities to the federal agencies. The effects of federal actions occurring on public land adjacent to private land and the effects of private land actions on adjacent public land is an emerging issue. In order to protect and enhance river values on private lands, the landowners, county, state and federal agencies must work together to accomplish defined goals.

The Crook County Planning Commission is revising the existing County Comprehensive Plan. Zoning ordinances developed by the county directly affect land use, thus affecting river values. During revisions of the comprehensive plan, the federal agencies will assist county planners by suggesting desired future conditions, goals, and identification of river values on adjoining public lands.

II

Affected Environment

There is an inward voice, that in the stream
Sends forth its spirit to the listening ear,
And in a calm content it floweth on.
≈ Thoreau ≈

CHAPTER II
AFFECTED ENVIRONMENT

This chapter describes the existing physical, biological, social, and economic environment that may be affected by management activities proposed in the Wild and Scenic River corridor. The outstandingly remarkable and significant river values for which the river was added to the National System are also described. This information forms the baseline for measuring changes and comparing alternatives. A more detailed narrative of all river values is contained in the *North Fork Crooked River Resource Assessment*. This document is available upon request at both the Ochoco National Forest and Bureau of Land Management Prineville Office.

RIVER DESCRIPTION

The North Fork Crooked River is located in central Oregon, approximately 40 miles east of Prineville. Over 34 miles of this river was designated as a National Wild and Scenic River. As it travels to the Crooked River, the North Fork displays a diversity of scenic, hydrologic, and geologic features. The river begins in Williams Prairie (at Sera Springs) as a very large wet meadow. The end of the first designated segment is at the lower end of Big Summit Prairie. The 8 mile segment of river flowing through Big Summit Prairie was excluded from the National Wild and Scenic River designation. This block of private land was historically a marsh and large wet meadow. Currently, it is utilized as a livestock pasture.

The designated portion of the river begins again on the east side of Big Summit Prairie at the Forest Service boundary. Here the boulder strewn river flows through a gentle canyon, with a paved Forest Service road following its north side. After Deep Creek enters the river, it meanders through 600 foot-tall canyons, often framed by old growth ponderosa pine and douglas fir. About 4 miles from its confluence with the main stem of the Crooked River the river again changes character, flowing through a more gentle canyon. Due to the diversity of land ownership and river character, the river is divided into six segments, described in Chapter 1.

LAND OWNERSHIP

Until final acceptance of this management plan, an interim boundary which averages 320 acres per river mile is used for administrative purposes. The Ochoco National Forest manages public lands in Segments 1 through 4 (4,798 acres), and the Bureau of Land Management, Central Oregon Resource Area, manages public lands in Segments 4 through 6 (3,699 acres). Within the designated river corridor, approximately 2,440 acres are privately owned.

NAVIGABILITY

State ownership to the beds of navigable waterbodies was granted to Oregon in 1859 as an incidence of statehood and is an inherent attribute of state sovereignty protected by the U.S. Constitution. Currently, both the State and Federal governments, and in some cases private property owners, claim ownership of the river's bed and bank. While the long-term resolution of this issue is not the subject of this river management plan, the future management implications are obvious. Therefore, while there may be disagreement on ownership, it is vitally important that there be agreement on the management philosophy for the North Fork Crooked River.

Under state law, the Division of State Lands (DSL) is responsible for the management of the beds and banks of navigable waterbodies (ORS 274.005-274.590). DSL is the administrative arm of the State Land Board (the Board), composed of the Governor, Secretary of State, and State Treasurer. Under constitutional and statutory guidelines, the Board is responsible for managing the assets of the Common School Fund. These assets include the beds and banks of Oregon's navigable waterways and are to be managed for the greatest benefit of the people of this state, consistent with the conservation of this resource under sound techniques of land management. Protection of public trust values of navigation, fisheries, and recreation are of paramount importance.

The original federal test for determining navigability was established in *The Daniel Ball* case over 100 years ago. This U.S. Supreme Court case clarified that rivers "are navigable in fact when they are used, or susceptible of being used, in their ordinary condition, as highways of commerce..." Interpreting this

requirement, subsequent court decisions have ruled that a waterbody is navigable if it is capable of use as a public highway for transporting goods or for travel. The Federal test for navigability and court determination has not been made for the North Fork Crooked River.

Within state owned waterways, any activities or land uses such as new utility or transportation corridors and boat ramps or similar facilities that impose into or cross a navigable waterway below ordinary high water will require an easement from the State Land Board. Existing facilities will require an easement at such time as they undergo major structural alteration, replacement, or relocation. In addition, removal of sand and gravel requires a royalty lease and any use that occupies any area of submerged or submersible land requires a waterway lease.

DSL has determined that there is sufficient evidence to support a claim of navigability and state ownership for the beds and banks of the North Fork Crooked River at least from the mouth of Deep Creek to the river's confluence with the Crooked River.

The position of the Bureau of Land Management and the Forest Service is that navigability is a judicial finding and must be made by a Federal court. Most Oregon rivers have not had their navigability determined. The Bureau of Land Management and the Forest Service consider rivers non-navigable until proven otherwise. However, a trial may not be required if the evidence is persuasive and all partners agree. Nonetheless, the final position of the Bureau of Land Management and the Forest Service must be based on consultation with appropriate legal counsel (Department of Justice) and the proper filing of a court stipulation. For those rivers found non-navigable, the Forest Service and BLM manage the bed and bank for the people of the United States.

The DSL also administers the State's Removal-Fill Law which protects Oregon's waterways from uncontrolled alteration. The law requires a permit for fill or removal of more than 50 cubic yards of material within State waterways. The permit review process involves coordination with the natural resource and land use agencies from local through federal levels.

As with any jointly managed resource, juristiction is not as important as care for the resource. The DSL, BLM, and Forest Service will continue to work together to assure that the public trust interest and the purpose of the Wild and Scenic Rivers Act are met.

VEGETATION

Vegetation in the river corridor is diverse due to variations in altitude, soils, and topography. Upland areas consist of scabland communities with bitterbrush, sagebrush, juniper and mountain mahogany. Some fingers of forested land are also present primarily in draws. Midslope and bottomland vegetation consists of two major forest types; ponderosa pine and mixed coniferous forest. The lands adjacent to the river consist of grass/shrub communities and riparian ecosystems. The approximate acreage of each major vegetative type, on Forest Service administered land, is summarized in Table 2-1.

Riparian areas

Riparian areas are located adjacent to water. Plants growing here depend on a perpetual source of water. Riparian vegetation in Segments 1 and 2 is very scarce at this time. Segment 2 averages only 14% of stream surface shaded (Grover, 1992). Also of concern in Segment 1 is the riparian ecosystem in Williams Prairie at the source of the North Fork. Historically this area was a large wet meadow with a narrow, meandering channel. Beaver exerted a major influence in maintaining the wet meadow ecosystem prior to arrival of early settlers. Without a healthy riparian condition to slow bank erosion and provide bank stability, the high flow events have created the extensive, deep downcutting and lowered water table that exists today.

The riparian ecosystem improves in Segments 3, 4 and 5. In most of Segment 5, the riparian vegetation is considered unique and outstandingly remarkable. In this area the riparian ecosystem is largely intact and generally unaltered by human influences. The outstandingly remarkable riparian habitat identified in the resource assessment is included in the Area of Critical Environmental Concern (ACEC) and within the Forest Creeks Research Natural Area. Riparian vegetation in the lower 2 miles of Segment 5 and in most of Segment 6 (except for in the ACEC) is in poor condition.

Uplands

Scablands are located on ridges and plateaus above the river. These communities are dominated by sagebrush and bunchgrass. This community

contains forbs, and a variety of perennial herbs on shallow, stony soil. Many of the plants in this community are edible and likely provided an important food source supply to American Indians.

Forests

Forested areas include pure stands of ponderosa pine and mixed conifer. A designated old growth block of ponderosa pine is located in Segments 2 and 3. Other trees such as Douglas fir and white fir are beginning to invade some stands of ponderosa pine. This is due to the lack of fire and other natural disturbance that would keep invading species in check.

Timber harvest is permitted in National Wild and Scenic Rivers boundaries classified as recreational or scenic. Only Segment 5, classified as wild precludes timber harvest through the National Designation. However, BLM land in Segments 4, 5 and 6 have been previously withdrawn from timber harvest. Estimated commercial timber volume located within Segments 1-3 includes: 4,577 MBF (thousand board feet) of ponderosa pine and 321 MBF of mixed conifer in Segments 1 and 2; and 1,328 MBF of ponderosa pine and 1,008 MBF of mixed conifer in Segment 3. Table 2-1 summarizes forest types by acreage for Forest Service managed Segments 1-3.

Table 2-1. Forest Types by Acreage for Segments 1, 2, and 3.

TYPE	SEGMENTS 1 & 2	SEGMENT 3
Old Growth	194	523
Meadows	500	3
Tree-Shrub	45	109
Non-Commercial	588	389
Ponderosa Pine 2-story	295	176
Ponderosa Pine Sawlog	265	146
Mixed Conifer 2-story	9	55
Mixed Conifer Sawlog	9	24
Restricted	318	158
Private	244	0
TOTALS	**2467**	**1583**

LIVESTOCK USE

Forest Service managed Segments 1-3 contain three grazing allotments, totaling about 1500 animal unit months (AUMs). The allotments where this use occurs are larger that the river boundaries. The amount of grazing that occurs in the riparian zone is unknown. Segment 1 has been grazed on a deferred rotation basis with 3 herds. Each of 7 pastures has been grazed early one year and late the following year. In 1990 and 1991 a high intensity, short duration system has been used. This involves grazing smaller units for 3-10 days, then moving the herd to the next unit. Each unit is grazed once more later in the year for 5-14 days. This approach has resulted in some growth of willows and a large quantity of grass left. This segment is rated on an upward trend.

The Grazing Practices in Segment 2 were revised in 1988, creating a riparian pasture. The pasture is grazed for 10 days once every three years (deferred rotation). The pastures in Segment 3 are also grazed on a deferred rotation basis. The Big Summit Allotment was revised in 1988 and the Roba Allotment is scheduled for revision in 1993. Fencing along the northwest side of the canyon rim has occurred in 1991-92.

BLM managed Segments 4-6 contain two grazing allotments. The Rabbit Valley Allotment has been managed to improve rangeland resource conditions and to improve or maintain ecological conditions. The North Fork Allotment has been managed to improve or maintain riparian habitat and stabilizing or improving watershed conditions. Spring/summer grazing consistent with BLM/permittee stocking rates and developed grazing prescriptions have been used to work toward these goals.

THREATENED, ENDANGERED AND SENSITIVE PLANTS

Four special status plants are suspected or known to occur within the river corridor. The Long-Bearded Mariposa Lily (*Calochortus longebarbatus* var. *peckii*) has been found in dry side-drainages in Segments 1 to 3. This plant is a Category 2 candidate for Federal listing as endangered or threatened, and is considered a sensitive plant. Other sensitive plants that are suspected to occur within this drainage include Henderson's ricegrass (*Orysopsis hendersonii*), umbellate spring beauty (*claytonia umbelleta*), rock onion (*Allium macrum*), bristle flower collomia (*Collomia macrocalyx*), Estes sage (*Artemisia ludoviciana* ssp. *estesii*) and Brandegee's onion (*Allium brandigei*).

Henderson's ricegrass is listed on the Oregon Natural Heritage Data Base (ONHDB) List 1 (endangered or threatened throughout its range) and also is a candidate for state listing as endangered or threatened. Umbellate spring beauty and rock onion are also on the ONHDB list 4 (watch).

WATER

Both water quality and water quantity affect the condition of river values. The quality of the fisheries, the scenic values, the amount and type of riparian vegetation, and wildlife are all dependent on water. The minimum instream flows needed to maintain these river values has not been determined.

Water Quality

The North Fork is part of the larger Deschutes River Basin. It is situated in the Crooked River subbasin and drains approximately 3,348 square miles. Variables affecting water quality include chemical composition, bank stability, clarity, and temperature. Oregon State Department of Environmental Quality standards require waters within the Deschutes River Basin to be 58° F or lower.

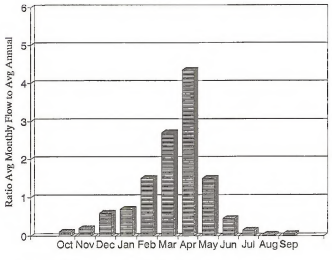
Land use practices within the North Fork watershed over the last 100 years have resulted in an overall decline in riparian condition and river channel morphology. As a result the river is characterized by low flows and high summer water temperatures. The river banks, especially in Segments 1 through 3 and 6, are unstable or actively eroding. There is a lack of riparian vegetation, cover, and large woody debris in the channel. Summer water temperatures in Segments 1 through 3 and Segment 6, regularly exceed 70° F. Turbidity is generally within state standards of ±10% during summer months.

Water quality starts to improve about 1 mile upstream of Upper Falls and continues to improve until it reaches Segment 6 (BLM "Macro-invertebrate Study, 1988-91"). This higher water quality in Segment 5 is attributed to a lack of management activities along this section of river. Management activities that may affect water quality are present in Segment 6. No data is currently available for water quality in Segment 6.

Water quantity and water rights

Water quantity varies greatly by season. Graph 2-1 displays the typical annual flow characteristics of the river. Peak flows usually occur in March or April, and lowest flows occur from July through November. Between Segments 1 and 3, streamflow reaches a maximum during April and tapers off rapidly to a negligible flow in July and August. Flows measured at a U.S. Geological Survey Station about ½ mile below the mouth of Deep Creek have varied from 500 cfs (cubic feet per second) to .5 cfs. The average flow near the mouth of Deep Creek is 123 cfs with significant monthly fluctuations. Hydroelectric potential is low.

Graph 2-1. Typical Annual Hydrograph - Flow Characteristics for the North Fork Crooked River.



Annual Average Flow = 167 cubic feet per second

In Segments 4 and 5, the average annual flow is 167 cfs and an average annual yield of 90,000 acre feet. These segments generally meet State Water Quality Standards for temperature and turbidity.

Existing water rights include 27 cfs withdrawn from the North Fork. A majority of these water rights are used for irrigation on Big Summit Prairie. Water rights granted on the designated portions of the river include 8.72 cfs (.60 acre feet) taken out below Big Summit Prairie in Segment 2 (Oregon Water Resources Department, Oct 1989). Some water rights are also granted on Gray Creek and near Teater's Ranch in Segment 6. In addition, the major streams feeding the North Fork, including the West Fork of Howard Creek, Indian Creek, Sump Creek, Elliot Creek, Johnson Creek, Committee Creek, and Allen Creek all have appropriated water rights, most dating prior to establishment of Ochoco National Forest. During drought years, there is no unappropriated water. Lack of sufficient waterflow, especially during summer months, may limit the amount and type of riparian vegetation along the river.

Oregon State Department of Fish and Wildlife filed for water rights on three areas of the river in 1991. The goal is to exercise these rights (if granted) for instream purposes. This may be done through leases, sales or gifts from landowners. The instream rights would augment flows during critical low summer flows, increasing the potential to improve conditions for trout populations.

RECREATION

Formal recreation use surveys have not been conducted along the river. Informal records show the highest use occurs during deer and elk hunting season. Heaviest spring fishing occurs from Upper Falls to the end of Segment 6. Visitors are primarily local Prineville residents. The second highest area of recreation use occurs at Deep Creek campground at the end of Segment 2. In general, recreation use is very light with few out-of-region visitors. Annual recreation use of the river corridor is less than 10,000 visits.

Existing Recreation Opportunity Spectrum (ROS) classifications in Segments 1-4, include 2,548 acres of Roaded Natural, 108 acres of Semiprimitive Motorized, and 2,491 acres of Semiprimitive Nonmotorized recreation.

Recreation uses in Segments 1 and 2 include dispersed camping, hunting, spring fishing, hiking, and developed camping. District recreation use records show that Deep Creek campground receives about 2,900 visits per year. About 2,000 people per year drive Forest Road 42 to sightsee, along Segment 2 which follows the river. In addition, about 200 people per year disperse camp, 240 fish, and 300 hunt big game. These two segments are managed as Roaded Natural.

In Segment 3, the canyon becomes dramatically scenic, with less motorized access and no developed facilities. District recreation use records show that about 250 people per year disperse camp, 240 fish, 300 hunt big game, and 100 hike. Some limited

swimming and early spring floating also occur. Floating occurs only if there is sufficient water from spring rains and snow melt, lasting about 2 week each year. This area is managed for Semiprimitive recreation experiences.

Segment 4 is primarily private land. This segment contains waterfalls and scenic canyon cliffs. When the landowner allows access, people use the area for dispersed camping, hiking, fishing, swimming, viewing scenery, and hunting. The landowner is concerned about public safety and personal liability when people use this area and denies access at times. The area would be suitable for Semiprimitive Motorized or Nonmotorized recreational opportunities.

The North Fork Wilderness Study Area (WSA) encompasses most of Segment 5. The WSA report identified excellent opportunities for solitude in the river canyon. There are no developed trails or facilities. Recreation opportunities available include photography, wildlife observation, hunting, horseback riding, hiking, camping, swimming, fishing, sightseeing and a limited season white-water float. The Semiprimitive Nonmotorized recreation opportunities in the WSA portion of the river are outstandingly remarkable.

Trails

There are no developed trails within the river corridor. There are many user developed trails in Segments 3, 4, and 5.

Developed Facilities

Deep Creek campground is the only developed facility in the entire river corridor. It is located at the downstream end of Segment 2.

Access

Forest Service roads 4215 and 4225 access Segment 1. Both lie within a ¼ mile of the river. A few short low standard roads access dispersed campsites in this area. In Segment 2, Forest Service Road 42, a paved double lane road, parallels the river for 4.5 miles. Forest Service collector roads also provide some access to within ¼ mile of Segments 2 and 3, including Forest Roads 4200-460, 4240, 4240-050, 4240-150, 4240-152, 4260, 4260-100, 4260-230, 4260-340, and 4260-300. Many of these collector and local roads access the canyon rim only. Three roads go directly to the river; Forest Roads 4260-230, 4200-460, and 4260-300.

In Segment 5, several four-wheel drive roads run to the rim but public motorized access into the canyon itself is extremely limited. Vehicle use is restricted to existing designated routes in Segments 4-6. Another factor limiting public access is the high percentage of private lands in Segments 4 and 6, although some primitive road access to the river exists.

SCENIC VALUES

Scenery is an outstandingly remarkable value in all segments. Landscapes within the river corridor range from open wet meadows to rolling sagebrush flats and steep-sided volcanic canyons. From its confluence with Deep Creek to Teater's Ranch the river canyon is often sheer 300-900 foot high walls of dark brown-rust textured basalt that forms a striking contrast between lush green riparian vegetation and the waters of the North Fork. Old growth ponderosa pine trees with deep reddish-brown, plated bark are abundant and create a beautiful riparian setting. The presence of Douglas fir and occasional aspen groves add diversity. There are two waterfalls along the scenic and wild stretches with vertical drops of 10-30 feet.

Currently, Segments 1 and 2 are managed for the Visual Quality Objective of Partial Retention. Segment 3 is managed for Retention. Although BLM does not use the same landscape classification system, the visual management allocations would translate to Preservation in Segment 5 and the upper one mile of Segment 6, and Retention in the rest of Segment 6. The landscapes on private lands have not been classified.

FISH

The North Fork is a part of the larger Deschutes River Basin. This area is an important producer of wild trout. Trout require cool water temperatures (58° F) and a variety of instream conditions. Instream habitat and river channel condition reflect both the riparian condition on-site and status of the upstream watershed. Past management on the upper segments has lead to a decline in stabilizing vegetation along the stream banks, the channel has been scoured during high flow events, and little large woody debris has been left in the channel. In Segments 1 through 3 only one piece of large woody debris per river mile was noted. This compares the about one piece per fifty feet found in stable forest streams.

Fisheries habitat in Segments 1,2,5 (the lower end) and 6 are well below potential due to poor stream and riparian conditions. High temperatures, wide/shallow channels, lack of pools, lack of cover, and erosive/unstable streambanks all contribute to poor fish habitat. Segments 1 and 2 average less than 14% shade, and in Segment 2 only two pieces of large woody debris were found on a 3 mile stretch. Very few pools are found in Segment 2 to provide deep, cool water for fish. However, the biological and physical elements are still in place for reaching fish production potential.

Fish species within the river include resident trout, speckled dace, brook trout, smallmouth bass, squawfish, chiselmouth chub and sculpin. Trout species include both stocked and resident populations. ODFW discontinued stocking this river and its tributaries in 1991. Redband/Inland rainbow trout occur in the river. This species is an Oregon State Sensitive, Class II species. Although this species has shown remarkable adaptation to adverse stream conditions, high temperatures have an adverse effect on growth, disease resistance, and reproductive success.

WILDLIFE

Several major wildlife habitat types occur within the river corridor. These include riparian, and coniferous forests as well as cliffs, caves and talus slopes. Each of these ecosystems is important to a diversity of wildlife species and also creates important edge habitat.

The riparian zone is a very important habitat for wildlife because it provides food, water and shelter consistently and in abundance. It is also the area of maximum conflict between multiple resource uses. The riparian zone often contains highly productive timber sites and abundant grasses for grazing livestock. Recreationists often concentrate near water and scenic values are very high.

Components of important wildlife habitat also include a high density of snags and dead, down woody material on the forest floor. Cavity nesters such as the pileated woodpecker, bats, and rodents need this habitat.

Cliffs, caves, and talus slopes provide important wildlife habitat. These special ecosystems are a haven for many raptors, bats, rodents, and cougar. These habitats cannot be reproduced by man, therefore their protection and proper management are extremely important. Segments 3 through 5 contain a high percentage of both cliffs and talus slope habitat. Some caves, although shallow are also present.

A few common wildlife species that live within the corridor include coyote, beaver, chukar, redtailed hawk, golden eagle, mule deer, elk and antelope. Critical winter range is provided for many species including big game and bald eagle. The corridor also serves as a migration and travel corridor.

Wildlife is an outstandingly remarkable value in Segments 5 and 6 due to the presence of two major northern bald eagle nocturnal roost sites. Bald eagle have also been seen in Segment 3. They do use the area in the summer, although no nesting has been documented. Winter counts of bald eagles have been down in the last few years. ODFW biologists feel this may be due to a decline in deer populations and/or the mild winter weather (Concannon, 1992).

Many species of sensitive wildlife may occur or have been seen in all segments. These species are listed in the *Rare, Threatened and Endangered Plants and Animals of Oregon* (Oregon Natural Heritage Program, 1991) and may include: spotted frog, northern goshawk, white-headed woodpecker, black-backed woodpecker, pygmy nuthatch, northern pygmy-owl, flammulated owl, western bluebird, Williamson's sapsucker, pileated woodpecker, sawwhet owl, mountain bluebird, Lewis' woodpecker, spotted bat, and Townsend's big-eared bat. Unverified sightings of the American peregrine falcon and marten, both federally and state listed endangered species have been reported. The wet meadows could also support long-billed curlew, upland sandpiper, and Sandhill Crane.

High quality wildlife habitat presently is created by some activities on private lands, such as irrigation and fertilization, but the majority of these benefits are directed towards mule deer and elk use. Due to a lack of economic incentives, habitat improvement for other species is primarily by chance and, in many cases, positive impacts are minimal.

Currently, county zoning regulations offer no guidelines requiring special management of wetland or riparian areas in the Crook County Comprehensive

plan. However, county zoning ordinances for Exclusive Farm Use do specifically allow creation, restoration, or enhancement of wetlands if a private landowner so desires.

CULTURAL/HISTORIC

The diversity of environmental settings between the Ochoco Mountains, Big Summit Prairie and the Crooked River valley played a major economic role in the lives of prehistoric people. Each environment offered diverse economic opportunities, however, the North Fork canyon itself suggests a marginal environment with restricted resources and limited habitation sites.

Few archaeological studies have been conducted in this area, therefore, archaeological evidence is limited. On the flanks of the Ochoco Mountains, there is evidence of temporary camps associated with hunting, root and bulb gathering, and the use of some rock materials to make tools. Numerous large sites, some with evidence of pithouses are found on Big Summit Prairie. Early surveyors note a major trail crossing the river near Upper Falls which has been interpreted as an "indian trail". This has not been verified.

Historic uses of the area include farming/ranching, timber, and transportation. There are two known historic sites on the river. One is an old logging mill located on private land about 1 mile upstream from Upper Falls. The other is an old, one room log cabin located in Segment 5. The cabin is in poor condition and hidden from view. Another feature is the Willamette Valley to Canyon City Military Road which crossed the canyon at what is now Teater's Ranch. Another old cabin in poor conditions exists on private land on Antler Prairie.

The Confederated Tribes of the Warm Springs retains reserved treaty rights to areas in the river corridor (Treaty of 1855). These rights include hunting, fishing, and gathering in usual and accustomed places and grazing livestock on unclaimed lands. Elders from the tribe have been known to gather roots close to the river corridor.

GEOLOGY

Segments 1 and 2 flow through the Picture Gorge Member of the Columbia River Basalt Group and the John Day Formation. Approximately 15-20 million years ago, this area may have been part of a clay hill centered at the present- day Big Summit Prairie. Segment 2 is strewn with boulders and contains low outcrops of platy-jointed basalt.

In Segments 3 through 5 the river is surrounded by steep cliffs which are part of the Columbia River Basalt Group. Columnar basalt features are common along the river.

The geologic features along the river are similar to those in John Day Fossil Beds National Monument, but no fossils have been found to date.

MINERALS AND ENERGY

There are no mining claims or mineral material sites within the river corridor. There is a moderate probability of finding bentonite and zeolites in some areas. Due to the isolation of the area, there is low probability of economic mineral development. However, potential for oil and gas is high.

SOILS

Williams Prairie, in Segment 1 is characterized by alluvial soils derived from mixed ash, basaltic alluvium, and tuffs. These soils are deep to very deep and typically have two feet of clay loam over clay. At four to six feet there are weathered tuffaceous deposits overlying basalt bedrock. The clayey tuff deposits are more resistant to erosion than the overlying mixed alluvium. This portion is a contributor of significant amounts of fine sediment to the North Fork in its current condition. Headcuts of varying severity exist throughout this segment.

Segment 2, is characterized by steep canyon sidewalls and narrow streamcourse. Soils of the sideslopes are derived from mixed colluvium with ash and loess deposits on the surface. Textures are stony or cobbly sandy loams and loams. Soils on the alluvial stream terraces adjacent to the river are a complex of sorted and unsorted stones, cobbles, gravels, sands, silts and clays. They are typically discontinuously stratified and truncated by the constant action of the streamcourse. The streambed is less erosive than in Segment 1.

In Segment 3, the river is characterized by increasingly higher and steeper sideslopes. Soils become shallower throughout this steep segment with more

rock outcrop and faster runoff. There is less ash and loess on these slopes than on Segment 2.

The alluvial stream terraces widen throughout this area. More fines (sand, silt and clay) are found throughout this area as the gradient lessens. Channel entrenchment is moderate, sinuosity is high and the gradient ranged from 1-3%. Valley form is a narrow, box like canyon with vertical cliffs. The valley floor is flat with a width ranging from 200-400 feet. There is considerable bank cutting with subsequent addition of fine sediment to the river.

Segment 4 is similar to Segment 3, however, the river canyon is deeper, well defined and contained within a basaltic canyon. The northerly aspects of the canyon sideslopes are comprised of soils that are 20 to 40 inches deep. These soils are supporting a ponderosa pine, mixed conifer canopy with a shrubby understory and a sedge/grass ground cover. This extensive vegetative cover and ash influenced surface soils allow for undisturbed areas to have little erosion or runoff problem.

The south slopes are shallow soils (10-20 inches) mainly Lorella, Madeline and rock outcrop. These soils support a juniper-blue bunchgrass (AGSP) vegetative cover and their cobbly surfaces and steep slopes have a moderately high erosion hazard and moderate runoff.

The rolling ridge tops are dominated by soils less than 10 inches thick. These support stiff sage, Sandberg bluegrass and bluebunch wheatgrass. The extreme rocky nature of these sites along with very shallow soil depths make these sites potentially high in erosion and very high in runoff.

Due to the large extent of rock outcrop, openness, and very shallow soil depths, the snow melt and runoff from these rolling tops and southerly steep sideslopes is rapid. The north slopes absorb (infiltration) most of this runoff through their deeper ashy soil surface textures and vegetated slopes better than the more open cobbly south slopes. The alluvial stratified bottom soils along the North Fork is a mixture of sorted and unsorted stones, cobbles, gravels, sands, silts, and clays with pools and riffles largely influenced by both basalt bedrock contact points and, to a lesser degree, large woody debris.

Segment 5 soils are very similar to Segment 4. The river canyon is at its most defined and deepest in this segment. The basaltic canyons and sideslopes are extensive and the basalt rock outcrops are also extensive. The drainage bottoms have extensive riparian vegetation that modifies the channel changes and supports the bank stability within the narrow canyon bottoms. The canyon stream bottom varies in width dependent upon the basalt rock outcrops/ contact, but averages 50-200 feet in width.

In Segment 6, the river is defined by becoming less canyon-like and the topography opens up to more rolling hills and wider river valley bottoms. The stratified alluvial soils along the river are dominated by deep soils and a wide, changing river channel not confined by basalt rock outcrop. The riparian vegetation has been altered by management practices resulting in instability and a wider, more fluctuating river channel. The adjacent upland soils are deeper, clayey and dominated by juniper which has been cleared and burned on most parts of the private lands. These soils are typical Simas, Madeline, Lorella type soils.

SOCIAL AND ECONOMIC

Private Lands

Private lands located along the river are regulated by the Crook County- Prineville Comprehensive Plan and State Forest Practices Rules. Private lands along the river are zoned either Forest (F-1) or Exclusive Farm Use (EFU-1). Both zoning regulations emphasize preservation of the rural land character and continuation of the economic benefits derived from ranching, farming, and logging. The County Comprehensive Plan also mentions the North Fork as a potential natural area, and the County's support for designation as a National Wild and Scenic River. When landowners propose to develop a piece of property, build a structure, road, gravel pit, or other ground disturbing activity, they must first have a site development plan approved by the Crook County Planning Director. The Director ensures that any proposed uses are in compliance with the comprehensive plan.

The State Forest Practices Act (as amended, 1991) also applies to private lands along the river. All logging must be approved by the State Forester prior to enactment. The State Forester helps the landowner comply with regulations regarding reforestation, protection of soil, water, threatened and endangered wildlife and plant species, riparian areas, Class I and II streams and wetlands.

Population and Community Characteristics

The river lies entirely within Crook County Oregon. County population is about 14,400 people (1990) with an estimated population in the year 2000 of 18,770. Prineville (population 5,740) is the only incorporated city in the county. Timber, light industry, agriculture, recreation, and government comprise the main economic enterprises in the county.

The Crooked River Valley contains the most productive agricultural lands in the county which, combined with a growing urban populace, poses serious urban-rural conflicts. About 75% of the county population lives within a four mile radius of Prineville. Other areas of concentrated population are the Prineville Reservoir, Paulina and Powell Butte areas.

Employment distribution in the county is as follows: manufacturing (largely lumber and wood products - 32%; wholesale/retail - 17%; professional - 17%; light industry - 11%; finance - 8%; construction- 6%; and other - 9%.

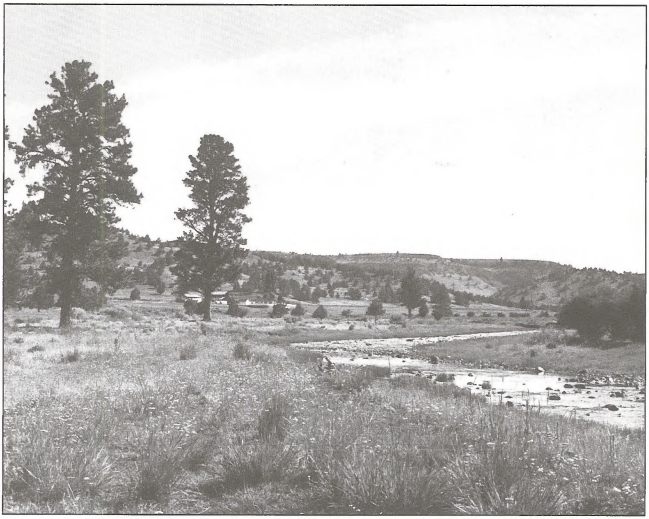
The Crook County Comprehensive Plan states "It is difficult to predict which or how many new industries will be attracted to the area to bolster the economy, but it is probable that economic development will occur in recreation and in support of a retirement community." (p.39)

The county has been experiencing a steady decline in the 0-14 year age bracket and a significant increase in those 65 years or older.

Predictions concerning community growth include the assumptions of: 1) employment growth in the lumber and wood products industries will be low, 2) new industries in the area will be of the type to utilze the existing pool of low skilled labor and will attract very little outside labor force, and 3) retirees will come primarily from the Willamette Valley and California and will settle in or very near the city limits of Prineville.

III

Alternatives



...in quarter-mile letters it had taken
centuries to form, water - my favorite element -
asked in the only language I could read, WHY.
≈David J. Duncan≈

CHAPTER III
ALTERNATIVES

This chapter explains the alternatives considered to meet the purpose and need while addressing issues and concerns of the public and of the federal agencies. Some alternatives were considered but not fully developed and, the rationale for this is explained. Next, management direction that applies to all alternatives is summarized. Then, three alternatives, including the No Action Alternative are detailed. The No Action Alternative explains current agency management guidelines and what would happen if the river continued to be managed as it has in the past. The other alternatives consider changes that either accelerate improvement of river values, or emphasize certain river values over others.

A. ALTERNATIVES CONSIDERED BUT NOT IN DETAIL

During the study process, several alternatives and management actions were considered but eliminated from detailed study. These alternatives failed to meet the purpose and need as described in Chapter I, or were not technically feasible, could not be implemented, were not legal, or did not appear to have much, if any, public support.

An alternative which proposed to increase the amount of grazing and recreation facilities in all segments was considered and dismissed. Since water quality is already below State standards and riparian habitat is poor, it was felt that this alternative was outside the reasonable range of management actions that would protect and enhance river values. Actions considered including adding gravel to the river bed in Segments 1-3, a trail from Donnelly Creek in Segment 2; paved, barrier-free trails in all segments; electric hookups at Deep Creek Campground; a developed campground in Segment 2 near Big Summit Prairie; foot bridges across the river; ski and snowmobile trails; a trail along the entire river corridor; and more boat launches. Most of these actions were not considered further because there is little demand for this amount of recreational development and they were outside the scope of this document. In addition, lack of consistent snow in the area makes winter recreation opportunities unreliable.

Another alternative proposed was to reduce human access to all segments and eliminate commodity uses such as grazing and timber harvest entirely. This alternative was not considered further because the Wild and Scenic Rivers Act specifically prohibits elimination existing rights and privileges.

B. MANAGEMENT DIRECTION COMMON TO ALL ALTERNATIVES

INSTREAM RESOURCES AND RIPARIAN HABITAT

1. Where feasible water sources will be developed outside the river corridor for livestock watering to reduce effects of grazing in riparian areas. Water rights will be filed according to State and Federal laws. (BLM and Forest Service administered land)

2. Manage towards a stream temperature of 58°F. (BLM and Forest Service administered land)

3. Inventory and classify baseline riparian vegetation and water quality data and monitor changes. Evaluate monitoring data on a regular basis. (BLM and Forest Service administered land)

4. Indigenous rainbow trout in the North Fork Crooked River will be managed for natural production consistent with the ODFW Management Plan for this river. Cooperate with ODFW to manage for wild trout populations. (BLM and Forest Service administered land)

RECREATION

5. All primitive recreational activities will be allowed on BLM segments. All ground disturbing activities that will visually impair the area will be prohibited within the Wild and Scenic Segments and subject to interim management guidelines for WSA and established management standards for the Area of Critical Environmental Concern (ACEC). (BLM administered land)

VEGETATION MANAGEMENT

Fire Management

6. Prescribed fire to protect and enhance outstandingly remarkable and significant values will be allowed in all segments, except within the RNA segments. Prescribed fire may be used to reduce fuel loads, manage habitat and forage, or control vegetation in weed infestation areas in Segments 4-6 except within the WSA segments. In the WSA segments, use of prescribed fire is restricted. (BLM and Forest Service administered land)

7. Suppress wildfires in all segments until a vegetative management plan is completed. (BLM and Forest Service administered land)

8. Fire suppression in the RNA segments (a small part of Segment 5) will be restricted and must be designed to maintain or enhance special values. Mineral soil exposure for fire breaks and application of retardants will be avoided. Wildfire suppression within the ACEC in Segments 5 and 6 will be accomplished using the minimum amount of equipment with the least amount of ground disturbance possible. (BLM administered land)

9. Fire suppression within the designated segments included in the WSA will be conducted primarily with aerial tactics. Firelines will be constructed by low impact hand lining using little or no mechanical equipment. Use of earth-moving equipment within the WSA of Segment 5 will be prohibited without prior District Manager approval. Fire rehabilitation seedings for any purpose other than soil protection will be prohibited within the WSA segments. Use of seed drills or non-native species within the WSA segments for the purposes of fire rehabilitation without State Director approval will also be prohibited. (BLM administered land)

Timber Management

10. If a stand replacement event occurs within Segment 5 or the designated old growth block, salvage harvest will be prohibited. (BLM and Forest Service administered land)

11. Timber harvest, woodcutting, and plant gathering within the RNA, ACEC, and WSA segments will not be allowed, except for the exercise of valid Tribal rights. (BLM administered land)

12. Commercial forestland within Segments 4, 5 and 6 on BLM lands have been previously withdrawn from the timber management base and no future harvest will be permitted. (BLM administered land)

13. If private lands in Segments 4 through 6 come into BLM ownership, the timber will be withdrawn from commercial timber harvest to protect river values. (BLM administered land)

Botany

14. Protect and enhance sensitive, threatened, endangered, or special status plant species. (BLM and Forest Service administered land)

Wildlife Habitat

15. Designated old growth in Segments 2 and 3 will be managed for old growth dependent and associated wildlife species. (Forest Service administered land)

16. The documented bald eagle roost sites will be protected in Segments 5 and 6. If the opportunity becomes available, acquisition of the west half of the SW quarter of Section 33, T. 16 S., R.21 E., W.M. in order to control management of the eagle roost sites in Segment 6 will be purchased. (BLM administered land)

17. Within the WSA segments, vegetative manipulation to maintain or increase wildlife forage will be prohibited, except to maintain plantings or seedings established before October 21, 1976. Use of non-native species or seed drills within the WSA segments will be prohibited without State Director approval. (BLM and Forest Service administered land)

18. Within the ACEC segments, wildlife enhancement projects will be allowed as long as the existing special values are maintained or enhanced. Extensive vegetation manipulation other than by prescribed fire will not be allowed. (BLM administered land)

PRIVATE LANDS

19. If the opportunity becomes available to acquire key private lands within the river corridor, it will be pursued. (BLM administered land)

20. Uses on private lands along the river corridor would be regulated by Crook County zoning ordinances and applicable State and Federal Laws. Although the Crook County-Prineville Comprehensive Plan (1978) recommended that the North Fork Crooked River be evaluated for feasability of natural and scenic designation, State Scenic Waterway regulations do not apply at this time.

CULTURAL RESOURCES

21. Traditional uses and access to ceded lands would be allowed. (BLM and Forest Service administered land)

C. MANAGEMENT ALTERNATIVES CONSIDERED IN DETAIL

ALTERNATIVE 1 - NO ACTION

This alternative would continue current management direction for federal lands. Future management direction would not be developed therefore a management plan would not be prepared to meet the requirements of the Oregon Omnibus Wild and Scenic Rivers Act of 1988. However, activities that would degrade outstandingly remarkable and significant river values would not be permitted. Management direction for resources not identified as KEY ISSUES can be found in the Ochoco National Forest Land and Resource Management Plan (Forest Plan) for Forest Service land, and in the Brothers/LaPine Resource Management Plan (RMP) for BLM managed public land. Direction that pertains directly to KEY ISSUES in this Environmental Assessment is summarized in this alternative to establish a point of comparison for other alternatives.

Direction pertaining to private lands is provided in the Crook County Comprehensive Plan and in State law.

DESIRED FUTURE CONDITION

The North Fork Crooked River, from its source to the end of Segment 6, near the confluence with the main stem of the Crooked River will be a free- flowing river. Shorelines may be accessible in places by road, except in Segment 5. The immediate river environment will appear natural, though there may be evidence of past or ongoing timber harvest, as well as grazing in Segments 1, 2, 3, 4 and 6. The WSA in Segment 5 will appear natural with little or no evidence of past or ongoing management activities. Developed and dispersed campsites and interpretive signing will be seen in recreational and scenic classified segments to enhance the public's use of the areas while protecting resources. In Segments 2 and 3, other management activities will be evident, including dispersed campsites, interpretive signing, and a low standard trail.

In Segments 1 through 3, the use of prescribed fire may be evident where used to enhance the retention of featured tree species in viewing areas, such as old growth ponderosa pine and western larch. In Segments 4 through 6, prescribed fire may be evident where used to enhance outstandingly remarkable river values.

INSTREAM RESOURCES AND RIPARIAN HABITAT

No overall water quality monitoring plan or instream flow studies would be conducted.

Segments 1-4 (Forest Service):

Within the limits of ecological potential, riparian areas would be managed for a shady, brushy condition with a canopy of alder, willow, aspen, or other deciduous vegetation. Streamside vegetation and habitat would be managed to maintain or improve water quality. Where coniferous trees are a natural component of the ecosystem, a variety of size classes would exist to perpetuate the supply of shade and woody debris over time. Sites unable to support a canopy of deciduous or evergreen species would be characterized by vigorous stands of forbs, grasses, and grass-like riparian species.

The requirements for shade along the river would target for more than 80 % of the surface shaded. Where this cannot be attained, 100% of shade potential would be the standard. Bank slopes would be managed for a high plant density, thick root masses, embedded angular boulders and logs to maintain stability. Requirements for large woody debris in the river would be 2 pieces (20 feet x 6 inch minimum diameter) per 100 feet. Stream channel cutbanks should not exceed an average of 20% of total for any stream drainage.

Existing uses, including livestock grazing, would continue. Forest Plan standards and guidelines for range utilization would be met on all livestock pastures within 2-3 years (as per Regional Forester memo of 12/5/91,

Appendix F). Forage utilization standards within 100 feet of the river would meet Riparian Utilization Standards (Table 3-1).

Roads that cross or parallel riparian areas would be closed if not planned for future use.

No more than a 10% cumulative increase in natural stream turbidity would be allowed.

TABLE 3-1. Forage Utilization/Riparian Communities - Allowable Use of Available Forage 1/

	Annual Utilization (%) By Existing Range Condition			
	Grassland Communities 2/		Shrubland Communities 3/	
Range Resource Management Level	Sat. *	Unsat. *	Sat.	Unsat.
B - Livestock use managed within current grazing capacity by riding, herding, salting, and cost-effective improvements used only to maintain stewardship of the range.	40	0-30	30	0-25
C - Livestock managed to achieve full utilization of allocated forage. Management systems designed to obtain distribution and maintain plant vigor include fencing and water development.	45	0-35	40	0-30
D - Livestock managed to optimize forage production and utilization. Cost-effective cultural practices improving forage supply, forage use and livestock distribution may be combined with fencing and water development to implement complex grazing systems.	50	0-40	50	0-35

1/ This will be incorporated in annual operating plans and Allotment Management Plans. Allotment Management Plans may include utilization standards which are either higher or lower when associated with intensive grazing systems and specific vegetation management objectives which will meet objectives for the riparian dependent resources. Includes cumulative annual use by big game and livestock.

2/ Utilization based on percent of total annual forage production removed by weight.

3/ Utilization based on percent of the current years growth removed. Example: measure length of current years growth of browsed and unbrowsed leaders. Find the average browsed and unbrowsed length. Divide the average browsed length by the average unbrowsed length. Subtract that number from 100 to get percent utilized.

* For satisfactory and unsatisfactory condition see Glossary in FEIS of the Ochoco National Forest Land and Resource Management Plan.

Segments 4-6 (BLM):

Management actions within riparian areas would include measures to protect or restore natural functions, as defined by Executive Order, the revised Oregon-Washington Riparian Enhancement Plan (1987), the BLM's Riparian Policy (1987), and Riparian Wetland Initiative for the 90s (1990). The overall goal of these plans is to restore and maintain riparian-wetland areas so that 75 percent or more are in proper functioning condition by 1997. The overall objective is to achieve an advanced ecological status, except where resource management objectives, including proper functioning condition, would require an earlier successional stage. Major strategies for achieving the above goals would include inventory and classification of baseline information, project monitoring, mitigation or avoidance of disturbances, land acquisition, and project development such as fences, water, planting, fire, and habitat improvement structures.

Spring/summer grazing is authorized on public land by the BLM consistent with BLM/permittee stocking rates and grazing prescriptions developed for the North Fork Crooked River area.

RECREATION - all Segments

Recreation Opportunity Spectrum (ROS)

Segments 1, 2 and 6 would be managed for Roaded Natural recreation opportunities. Segments 3, 4 and 5 would be managed for Semiprimitive Motorized and Nonmotorized recreation opportunities.

Trails

A low-standard trail that requires rock-to-rock river crossings could be developed from Deep Creek campground to the southern Forest Service boundary. No motorized uses would be allowed on trails, except on designated routes. All other trails would remain user developed. If these trails caused resource damage they would be rerouted, repaired, or closed.

Developed Facilities

Deep Creek campground would be reconstructed. Facilities would be made of native, rustic materials. Dispersed camping would be allowed throughout the area. Facilities needed to protect river values such as toilets, tables, and fire rings may be placed in heavily used dispersed campsites.

Access

Motorized access into the river corridor would be guided by current management direction. In Segment 1 the following Forest Roads would be closed until needed for future management activities: 4225-010, 4425-051, 4225-072, 4225-141. Forest Road 4240 joins with Forest Road 4260-300 near Upper Falls on private property. Access to the river is limited to private landowner discretion. Forest Road 4260-230 which provides access to the river in Segment 3 on the east side, down to a moderately used dispersed campsite would remain open to motorized vehicles. Other roads could be closed to meet ROS objectives.

On BLM lands, motorized travel would be restricted in Segments 4-6 to existing, designated roads. Trails leading into the canyon would be closed in Segment 5 to all vehicle use. If the opportunity became available to purchase public access on private lands in Segments 4, 5 and 6 it would be pursued. Public access to the isolated public parcel in Segment 6 within T. 16 S., R. 21 E.,W.M.,Section 22 would also be pursued if the opportunity became available.

VEGETATION MANAGEMENT

Scenic Values

Federal lands in Segments 1, 2 and 6 would meet the Visual Quality Objective (VQO) of Partial Retention in foreground views. Federal lands in Segments 3 and 4 would meet VQO of Retention in foreground views. Segment 5 would meet VQO of Retention guidelines in all viewsheds. Private lands have no visual quality objective since they are regulated by state and county ordinances.

Segments 1-4 (Forest Service):

From Sera Springs to Deep Creek campground (Segments 1 and 2), the landscape would be managed to appear natural in foreground views, although there may be evidence of past and ongoing timber harvest and grazing (Partial-Retention). From Deep Creek Campground to the southern Forest Service boundary (Segment 3 and part of Segment 4), the landscape would retain its natural character with little no evidence of man's activities including timber harvest or grazing (Retention).

Segments 4-6 (BLM):

Activities within areas of high scenic quality (measured by level of human modifications and level of scenic values such as waterfalls, water quality, or geologic features) or sensitive visual quality (measured by level of public concern, visitor use volume, and legislative land designations) may be permitted if they would not attract attention or leave long term adverse visual changes on the land. Segments 4, 5 and 6 are considered areas of high scenic and sensitive visual quality.

Fire Management

Appropriate fire suppression response to wild fires would occur in all segments. No overall fire management plan would be developed.

Segments 1-4 (Forest Service):

Prescribed fire would be used to enhance retention of feature trees such as ponderosa pine and western larch. Naturally caused fires (lightning) would be suppressed with emphasis on minimal physical disturbance. Natural fuels treatment would maintain vegetative types similar to natural ecological conditions. Fuel treatment would meet visual quality objectives and emphasis would be on nonmechanized treatments.

Segments 4-6 (BLM):

Depending on circumstances, lands in Segment 6 (except the ACEC) may receive full, aggressive suppression including use of aerial and mechanical suppression tactics.

Timber Management

Segments 1-4 (Forest Service):

In Segments 1 and 2, timber harvest would be allowed. Both uneven-aged and even-aged timber harvest would be used. Ponderosa pine stands would be managed for a combination of 1) multiple age class stands and 2) open, park-like stands. Mixed conifer stands would be managed for a mix of species with emphasis on maintaining western larch. Harvest techniques that help emphasize views of scenic features such as distant landscapes, aspen stands and rock outcrops would be used.

Uneven-aged management systems would follow Forest Plan standards and guidelines while protecting the scenic qualities of the area. From Deep Creek campground to the southern Forest Service boundary, timber harvest would meet Retention visual guidelines. Emphasis would be on uneven-aged harvest methods with even-aged techniques allowed on a limited basis when needed to meet area objectives. Ponderosa pine would be managed to encourage large trees and open, park-like stands, following Forest Plan standards and guidelines.

Segments 4-6 (BLM):

Commercial forestland within Segments 4, 5 and 6 on BLM lands have been previously withdrawn from the timber management base. The timberlands removed from the allowable cut base would still be subject to timber sales, based upon other resource objectives (such as wildlife habitat) and the need to maintain a healthy forest. Only salvageable, dying, and high risk trees along existing roads could be logged. Most of the roads into Segment 5 have been previously closed and thus access to harvest salvageable materials in this segment would be extremely limited.

Wildlife Habitat

Segments 1-4 (Forest Service):

Management would provide habitat for big game, primary cavity excavators, and the pileated woodpecker (a management indicator of old growth habitat), along with viable populations of all endemic species.

Within Segments 2 and 3, two special wildlife management allocations exist; an old growth area and Winter Range. Species such as big game would use the site for thermal and hiding cover. These sites would feature multi-layered forest canopies with shaded forest floors. Snag density would conform to Forest Plan standards and guides.

Within the Winter Range allocation, human presence would be restricted from December 1 - May 1. Increased hiding and thermal cover quality and quantity over time. Livestock use would be managed to provide for the winter needs of big game.

Segments 4-6 (BLM):

The most optimum diversity for wildlife species possible would be provided, given limits on types of projects authorized within the WSA and RNA segments. This means that vegetation types will be managed so that each of the seral stages are represented in an area. Techniques outside the WSA and RNA segments could include using selective logging, biological controls, chemicals, or prescribed and natural fires.

The structure of bald eagle roost sites would be maintained through planting of trees if regeneration is not taking place naturally.

Upland vegetative condition would be managed toward a goal of mid-seral (25-50 percent of vegetative potential) to late seral (50-75 percent of potential).

BOUNDARIES

The Wild and Scenic River boundaries would follow the interim boundary description sent to Congress in 1989 (see Map 2). This boundary is different than the one outlined in the Ochoco Forest Plan because an interim Congressional boundary was designated between the time the Forest Plan was published and the river was formally designated.

PRIVATE LANDS

No cooperative projects or private landowner incentives would be pursued by the BLM or Forest Service as a means to protect river values on private lands.

Crook County zoning ordinances and State Forest Practices rules as they apply to private land are explained in detail in Chapter II, Affected Environment.

ALTERNATIVE 2

This alternative emphasizes dispersed and developed recreation opportunities, motorized access, and interpretive services. Riparian areas, fisheries, and water quality would be improved while retaining commodity uses such as livestock grazing and timber harvest.

DESIRED FUTURE CONDITION

The North Fork Crooked River would be free-flowing from its source to the end of the National Wild and Scenic River designation. A wide variety of appropriate recreation opportunities would be available throughout the corridor. Segments 1, 2, and 6 would provide more developed recreation facilities such as viewpoints, trails, and campgrounds. Segments 3, 4 and 5 would provide semiprimitive recreation experiences with some low standard trails and dispersed, hike-in campsites.

The condition of riparian habitat along the river would improve at a moderate rate. This recovery would increase water quality, fish habitat, and wildlife habitat. Commodity uses such as grazing and timber harvest would be allowed in some areas, but managed in a way that emphasizes recovery of natural ecosystem processes.

INSTREAM RESOURCES AND RIPARIAN HABITAT

Within the limits of ecological potential, riparian areas would be managed for a shady, brushy condition with a canopy of alder, willow, aspen, or other deciduous vegetation. Streamside vegetation and habitat would be managed to maintain or improve water quality. Where coniferous trees are a natural component of the ecosystem, a variety of size classes would exist to perpetuate the supply of shade and woody debris over time. Sites unable to support a canopy of deciduous or evergreen species would be characterized by vigorous stands of forbs, grasses, and grass-like riparian species.

On Forest Service lands in Segments 1-4, existing uses, including livestock grazing, would continue. Forest Plan standards and guidelines for range utilization would be met on all livestock pastures within 2-3 years (as per Regional Forester memo of 12/5/91, Appendix F). Forage utilization standards within 100 feet of the river would meet riparian utilization standards (Table 3-1).

On BLM lands in Segments 4-6, the grazing use periods would be adjusted to minimize conflicts between livestock grazing and recreation use during high recreation use periods.

Management actions within riparian areas would include measures to protect or restore natural functions, as defined by Executive Order, the revised Oregon-Washington Riparian Enhancement Plan (1987), the BLM's Riparian Policy (1987), and Riparian Wetland Initiative for the 90s (1990). The overall goal of these plans is to restore and maintain riparian-wetland areas so that 75 percent or more are in proper functioning condition by 1997. The overall objective is to achieve an advanced ecological status, except where resource management objectives, including proper functioning condition, would require an earlier successional stage. Major strategies for achieving the above goals would include inventory and classification of baseline information, project monitoring, mitigation or avoidance of disturbances, land acquisition, and project development such as fences, water, planting, fire, and habitat improvement structures.

There would be cooperation with ODFW to improve resources that contribute to increased water quality and quantity.

RECREATION

Recreation Opportunity Spectrum (ROS)

Segments 1, 2 and 6 would be managed for Roaded Natural recreation opportunities. Segments 3, 4 and 5 would be managed for Semiprimitive Motorized and Nonmotorized recreation opportunities.

Trails

This alternative would develop several trails along the river corridor to increase recreation and wildlife viewing opportunities. These trails would include:

* A barrier-free, non-motorized interpretive trail in Segment 1.

* A nonmotorized interpretive trail at the end of Segment 2, from Deep Creek campground going upriver. Only a part of this trail would be barrier-free.

* Two walkways would be developed in Segment 2 that lead from viewpoints along Forest Road 42 to the river.

* A non-motorized trail from Upper Falls through Segment 5 if private land is acquired from a willing seller. This trail would meet wilderness trail standards. Within the WSA, the trail would be developed along the canyon rim, using existing trails and ungraded roads where possible.

* Nonmotorized side trails would be developed on existing, ungraded roads that access the river at Lower Falls, Cabin Butte, Fox Canyon, and Committee Creek.

Developed Facilities

Camping facilities would be increased in this alternative. Campgrounds could be developed in Segment 1 near Lookout Creek, and on federal land in Segment 4. These campgrounds could have developed facilities such as fire rings, tables, toilets, potable water and level camping spurs. Facilities would be barrier-free where feasible.

Deep Creek campground could be improved by leveling and regraveling the main campground road, leveling and clearly defining campsites and parking spurs, adding toilets, tables, fire rings, and water spigots. Facilities would be barrier-free.

Opportunities for boat launching could be developed, possibly at the mouth of Deep Creek and on public land in Segments 3 and 4.

Viewpoints along Segments 1 through 3 could be added. Possibilities include, two pullouts on Forest Road 4225 by Williams Prairie and two pullouts on paved Forest Road 42. Midway down segment 3, on Forest Roads 4260-100 and 4260-200 additional scenic viewpoints could be developed. These pullouts could include interpretive facilities.

Access

Motorized access into the river corridor would be guided by current management direction. In Segment 1 the following Forest Roads would be closed until needed for future management activities: 4225-010, 4425-051, 4225-072, 4225-141. Forest Road 4240 joins with Forest Road 4260-300 near Upper Falls on private property. Access to the river is limited to private landowner discretion. Forest Road 4260-230 which provides access to the river in Segment 3 on the east side, down to a moderately used dispersed campsite would remain open to motorized vehicles. Other roads could be closed to meet ROS objectives.

On BLM lands, motorized travel in Segments 4-6 would be restricted to existing designated roads with less than a 20% grade. Trails leading into the canyon in Segment 5 would be closed to all vehicle use. If the opportunity became available to purchase public access on private lands in Segments 4, 5 and 6 it would be pursued. Public access to the isolated public parcel in Segment 6 within T. 16 S., R. 21 E.,W.M.,Section 22 would also be pursued if the opportunity became available.

Forest Road 42-460, which accesses Deep Creek campground could be improved, as part of the proposed improvements to the campground.

Forest Road 42-461, which fords Deep Creek at the junction of Segments 2 and 3, could be improved up to the river. The boat launch parking area would be developed here. The rest of Forest Road 42-461 would be closed to motorized use.

Access easements from willing landowners would be needed on Forest Roads 4240 and 4260-300 to provide public access to any facilities developed at Upper Falls.

If the opportunity became available to purchase public access on private lands in Segments 4, 5, and 6 it would be pursued. Public access to the isolated public parcel in Segment 6 within T. 16 S., R. 21 E., W.M., Section 22 would also be pursued if the opportunity became available.

VEGETATION MANAGEMENT

Scenic Values

In order to maximize scenic values, Visual Quality Objectives for Segments 1 through 3 would be Retention in foreground views and Partial Retention in middle and background views. Public lands in Segment 4 would be managed for Retention in foreground views, Partial Retention in middle and background views. Segment 5 would be managed for Retention in all viewsheds, public land in Segment 6 would be managed for Partial Retention in all viewsheds.

Fire Management

A vegetative management plan that reintroduces prescribed natural fire into the ecosystem would be developed.

Timber Management

There would be no scheduled timber harvest on Forest Service land in Segments 1-4. Only timber harvest that is needed to maintain or enhance the visual quality of the area, or achieve recreation or wildlife objectives would be permitted. All harvest would meet Visual Quality Objectives.

Wildlife Habitat

Wildlife viewing opportunities in Williams Prairie would be emphasized by planting shrubs, trees, and grasses that attract various songbirds and mammals. Nestboxes and platforms would be built to encourage bird use of the area.

Manage vegetation for optimum diversity on BLM lands in Segments 4-6 as described in Alternative 1 except that chemical methods would not be used in any area.

The structure of bald eagle roost sites would be maintained through planting of trees if regeneration is not taking place naturally.

BOUNDARIES

River miles as described in the Congressional record were found to be inaccurate. Exact river miles are as follows: Segment 1 = 4.6 miles; Segment 2 = 4.5 miles; Segment 3 = 6.3 miles; Segment 4 = 2.2 miles; Segment 5 = 11.9 miles and Segment 6 = 4.7 miles. This changes the amount of acreage within the corridor that can be included within the river boundaries.

In Segment 1 the boundary would be defined by existing roads and topographic features and include river values. In addition, clarification of the exact beginning and ending of Segment 1 would be added. The beginning of Segment 1 would be changed to read "from its source at Sera Springs in Williams Prairie to the Forest Service land boundary in Lookout Pasture T. 14 S., R. 21 E., W.M., Section 32."

In Segments 2 through 6, the BLM interim boundaries would be used with some clarification of Congressional description added. Congress described the beginning of Segment 2 as "the upper end of Big Summit Prairie". This would be clarified by describing this point as the U.S. Forest Service property boundary on the west edge of T. 14 S., R. 22 E., W.M., Sections 19 and 30. Congress described the boundary between Segments 2 and 3 as "the bridge located across from Deep Creek campground". There is no bridge in this location, therefore it is recommended that the description be changed to read: "where the mouth of Deep Creek enters the North Fork Crooked River"

Additional changes in boundary width would be as illustrated in Map 2. The boundary would be changed to include scenic values following easily locatable and surveyable property lines at less cost and to average 320 acres or less per river mile. The length of Segment 6 would be shortened. The location of the lower boundary, identified in the Wild and Scenic Rivers Act as 1 mile from the confluence, was found to be in error. It was not the intention of the Wild and Scenic Rivers Act authors or Congress to include the .3 mile parcel of private land at the south end of Segment 6 within the designated boundary (see letter from Senator Mark Hatfield of 6/2/92, Appendix E). Therefore, the river corridor description would be changed in this alternative to begin at the public land boundary between T. 16 S. and T. 17 S., R. 21 E., W.M. between Sections 32 and 5. The legal administrative boundary terminus description would be changed by removing T. 17 S., R. 21 E., W.M., Section 5 and re-written to begin:

"Map No. 1 of 1

T. 16 S., R. 21 E., W.M.

Section 32:

From the Point of Beginning (defined as the centerline of the river on the section line common to Section 5, T. 17 S., R. 21 E., and Section 32, T. 16 S., R. 21 E., W.M.) thence easterly along said section line to the section corner common to sections 4, 5, 32 and 33,..."

and end:

"T. 16 S., R. 21 E., W.M.

Section 32:

Thence southwesterly to the center-south 1/16 corner, thence southwesterly to the west 1/16 corner common to sections 5 and 32, thence easterly along the section line common to sections 5 and 32 to the Point of Beginning."

PRIVATE LANDS

No cooperative projects or private landowner incentives would be pursued by the BLM or Forest Service as a means to protect river values on private lands.

Crook County zoning ordinances and State Forest Practices rules as they apply to private land are explained in detail in Chapter II, Affected Environment.

ALTERNATIVE 3

This alternative emphasizes accelerated improvement of water quality and riparian areas, using natural processes, while allowing undeveloped recreation opportunities. Commodity uses such as timber and grazing are allowed only if they assist in protection or enhancement of the outstandingly remarkable river values.

DESIRED FUTURE CONDITION

The North Fork Crooked River would be free-flowing from its source to approximately 1.3 miles from the confluence with the Crooked River. The immediate river environment would be characterized by lush, natural riparian vegetation and associated wildlife. The water quality would exceed state standards and wild trout populations would be abundant and healthy. The river channel would appear natural, with deep, narrow channels. The diversity of natural vegetation, varied geologic landforms, wildlife, clear running water and lack of developed facilities would all contribute to outstandingly natural scenic values.

INSTREAM RESOURCES AND RIPARIAN HABITAT

A water quality monitoring plan and instream flow study would be developed and implemented.

Continued implementation of Forest Plan range utilization standards would occur in Segments 1 through 3. In addition, an upward trend in riparian ecological condition with riparian utilization standards for shrubs to be 20% or less.

Restoration of the riparian areas, could be accomplished with a wide range of managment techniques including beaver management, intensive livestock management, and structures placed in the stream. Native species such as willow, that would support increasing beaver populations, would be planted in all suitable segments. The emphasis would be on obtaining 80% or more shade, as soon as possible, to reduce water temperatures and provide bank stability.

Management practices that accelerate riparian and water quality improvements on BLM land in Segments 4-6 would be identified and implemented.

The BLM and the Forest Service would cooperate with ODFW to improve resources that contribute to increased water quantity.

RECREATION

Recreation Opportunity Spectrum (ROS)

Segments 1,2, and 6 would be managed for Roaded Natural. Segments 3 would be managed for Semiprimitive Nonmotorized. Segment 4 would be managed primarily for Semiprimitive Nonmotorized with Semiprimitive Motorized access to Upper Falls to be maintained if the area is acquired from a willing seller. Segment 5 would be managed for Primitive recreational experiences.

Trails

No trails would be planned. Existing, user made trails would be rerouted, reconstructed, or closed if resource damage, such as excessive sedimentation occurred. No motorized trails would be planned.

Developed Facilities

Primitive camping would be encouraged along most of the river corridor. Existing dispersed camp areas would be managed to protect river values. This could include installing fire rings to lessen fire danger, revegetation of hardpacked soil areas, and installation of toilets if sanitation threatens water quality. Within the WSA, site restoration would include only natural methods appropriate for Wilderness.

If the private land around Upper Falls is acquired by BLM the dispersed camping areas would be managed to protect scenic and recreation values.

Deep Creek campground would be improved from its present condition if it was determined that resource damage was occurring.

One scenic viewpoint could be developed on Forest Road 42 in Segment 2 at an existing turnout. The site would be improved by providing a wider, flatter, turnout with interpretive signing.

Access

In Segment 1 the following Forest Roads would be closed until needed for future management activities: 4225-010, 4425-051, 4225-072, 4225-141. Forest Road 4240 joins with Forest Road 4260-300 near Upper Falls on private property. Access to the river is limited to private landowner discretion.

Other access would minimize the amount of motorized traffic in Segments 3 and 4, and emphasize nonmotorized travel. Segment 5 would be closed to motorized access. Forest Road 42-460, into Deep Creek campground would not be improved; in Segment 2, Forest Road 42-461 and Forest Road 4260-111 may be closed, and in Segment 3, Forest Roads 4260-230, 4260-341, 4260-342, 4240-157, 4240-159, and 4240-156 may provide motorized access to the rim only. In Segment 4, motorized use would be limited to Forest Road 4240 only. All other public roads would be closed to motorized use. If the private land around Upper Falls were acquired by BLM, Forest Road 4240 (also called 4260-300) would remain open to the west side of the river, but be closed on the east side. Entry on the east side would be by permit only, including administrative and permittee use.

VEGETATION MANAGEMENT

Scenic Values

Federal lands in Segments 1 through 4, and in Segment 6, would be managed to meet Retention visual guidelines in the foreground views and middleground views. Partial Retention would be achieved in background views. Federal lands in Segment 5 would be managed to meet Preservation visual guidelines in foreground and middleground views and Retention guidelines in background views.

Fire Management

A Vegetative Management Plan using fire as a tool would be developed with the goal of restoring a more natural fire regime and prescribed natural fire parameters for the river corridor. This plan would include the pre-treatment of fuels so that natural burning could take place and fire suppression would not be as necessary in the corridor.

Timber Management

There would be no scheduled timber harvest on Forest Service managed land in Segments 1-4. Harvest would be allowed only if used to protect and enhance riparian values and if it meets VQO of Retention.

If catastrophic events such as fire or insect outbreaks occur, no salvage would be permitted in Segments 3 and 5, the old growth block, or in the WSA, RNA, or ACEC. Salvage on other Forest Service segments may be allowed if it meets visual and recreational objectives.

Wildlife Habitat

Allow Williams Prairie to revert to a more natural meadow system, including re-introduction of fire into the ecosystem. The objective would be to improve habitat conditions for sensitive plant and animal species including the long-billed curlew, upland sandpiper, and sandhill crane.

Big game cover would be allowed to cycle through natural processes. Open road density would be minimized to protect natural values, including threatened and endangered species, sensitive species, and big game habitat.

Natural processes, such as development of different successional stages through the replication of natural fire regimes, would be encouraged. Artificial wildlife facilities such as nest boxes and nonnative plantings would be discouraged.

The bald eagle roost sites in Segment 6 would be left to regenerate naturally regardless of their condition.

BOUNDARIES

River miles as described in the Congressional record were found to be inaccurate. Exact river miles are as follows: Segment 1=4.6 miles; Segment 2= 4.5 miles; Segment 3= 6.3 miles; Segment 4=2.2 miles; Segment 5= 11.9 miles and Segment 6= 4.7 miles. This changes the amount of acreage within the corridor that can be included within the river boundaries.

In Segment 1 the boundary would be defined by existing roads and topographic features and include river values. In addition, clarification of the exact beginning and ending of Segment 1 would be added. The beginning of Segment 1 would be changed to read "from its source at Sera Springs in Williams Prairie to the Forest Service land boundary in Lookout Pasture T. 14 S., R. 21 E., W.M., Section 32."

In Segments 2 through 6, the BLM interim boundaries would be used with some clarification of Congressional description added. Congress described the beginning of Segment 2 as "the upper end of Big Summit Prairie". This would be clarified by describing this point as the U.S. Forest Service property boundary on the west edge of T. 14 S., R. 22 E., W.M., Sections 19 and 30. Congress described the boundary between Segments 2 and 3 as "the bridge located across from Deep Creek campground". There is no bridge in this location, therefore it is recommended that the description be changed to read: "where the mouth of Deep Creek enters the North Fork Crooked River"

Additional changes in boundary width would be as illustrated in Map 2. The boundary would be changed to include scenic values following easily locatable and surveyable property lines at less cost and to average 320 acres or less per river mile. The length of Segment 6 would be shortened. The location of the lower boundary, identified in the Wild and Scenic Rivers Act as 1 mile from the confluence, was found to be in error. It was not the intention of the Wild and Scenic Rivers Act authors or Congress to include the .3 mile parcel of private land at the south end of Segment 6 within the designated boundary (see letter from Senator Mark Hatfield of 6/2/92, Appendix E). Therefore, the river corridor description would be changed in this alternative to begin at the public land boundary between T. 16 S. and T. 17 S., R. 21 E., W.M. between Sections 32 and 5. The legal administrative boundary terminus description would be changed by removing T. 17 S., R. 21 E., W.M., Section 5 and re-written to begin:

"Map No. 1 of 1

T. 16 S., R. 21 E., W.M.

Section 32:

From the Point of Beginning (defined as the centerline of the river on the section line common to Section 5, T. 17 S., R. 21 E., and Section 32, T. 16 S., R. 21 E., W.M.) thence easterly along said section line to the section corner common to sections 4, 5, 32 and 33,..."

and end:

"T. 16 S., R. 21 E., W.M.

Section 32:

Thence southwesterly to the center-south 1/16 corner, thence southwesterly to the west 1/16 corner common to sections 5 and 32, thence easterly along the section line common to sections 5 and 32 to the Point of Beginning."

PRIVATE LANDS

Private lands in all Segments contain outstandingly remarkable scenic values. These lands also have an influence on water quality. Cooperative projects, scenic or conservation easements from willing landowners, and private land owner incentives would be used when needed to protect and enhance river values. During revisions of the Crook County Comprehensive Plan, federal agencies would assist county planners by suggesting desired future conditions, goals, and identification of river values on adjoining public lands.

ALTERNATIVE 4 - PREFERRED ALTERNATIVE

This alternative emphasizes protection and enhancement of scenic values through accelerated riparian improvement and upland vegetation management. Fisheries and water quality would be improved while slightly reducing or redistributing livestock grazing and timber harvest. A broad range of recreational settings from roaded natural to primitive are provided to meet projected demands.

DESIRED FUTURE CONDITION

The North Fork Crooked River will be free-flowing from its source to the end of the National Wild and Scenic River designation. The riparian vegetation will provide abundant shade and bank stability resulting in lower water temperatures and greater vegetative diversity. The river channel itself will return to more natural conditions, with narrow, deep channels. Commodity uses such as grazing and timber harvest will be in harmony with the river's outstandingly remarkable and significant river values.

A wide range of recreational opportunities will be available throughout the river corridor. Segments 1 and 2 will provide developed recreational facilities such as viewpoints and campgrounds. Segments 3 and 4 will provide Semiprimitive Motorized and Nonmotorized opportunities including low standard trails and dispersed campsites. Segment 5 will provide a Primitive recreation experience.

INSTREAM RESOURCES AND RIPARIAN HABITAT

Within the limits of ecological potential, riparian areas would be managed for a shady, brushy condition with a canopy of alder, willow, aspen, or other deciduous vegetation. Streamside vegetation and habitat would be managed to maintain and improve water quality. Where coniferous trees are a natural component of the ecosystem, a variety of size classes would exist to perpetuate the supply of shade and woody debris over time. Sites unable to support a canopy of deciduous or evergreen species would be characterized by vigorous stands of forbs, grasses, and grass-like riparian species.

Restoration of riparian areas in all river segments with unsatisfactory conditions would occur using appropriate techniques such as beaver reintroduction, intensive livestock management, placement of instream structures, planting of native species, fencing, or other techniques which meet objective and are in keeping with Wild and Scenic River guidelines.

All river segments would be managed for the amount of large woody debris appropriate for a natural river system, or where this cannot be determined, for 2 pieces per 100 feet of river.

The Forest Service and BLM would cooperate with ODFW, other agencies, and landowners to improve instream water quantity and quality.

The Forest Service and BLM would also cooperate with ODFW in the management of wild trout populations and protection of the Redband/Inland trout population.

The Forest Service and BLM would cooperatively develop a water quality monitoring plan and conduct an instream flow study to determine minimum flows necessary to maintain the river's outstandingly remarkable and significant river values. No increase in natural stream turbidity would be allowed, based on the results of monitoring studies.

On Forest Service managed lands in Segments 1-4, livestock grazing would continue. Forest Plan riparian range utilization standards should be met within one year on pastures in unsatisfactory condition. In addition, utilization of shrubs in riparian zones would be limited to 20% or less.

Forest Service lands in Segments 1-4 would be managed for 80% stream shade or 100% of potential. Stream channel cutbanks would not exceed the occurrence found in a natural stream condition, or where this cannot be determined, would not exceed 20% of total stream channel.

On BLM lands in Segments 4-6, management practices that accelerate riparian and water quality improvement would be identified and implemented. Spring/summer grazing would be authorized consistent with BLM/permittee stocking rates and grazing prescriptions developed for the North Fork Crooked River.

RECREATION

Recreation Opportunity Spectrum (ROS)

Segments 1,2, and 6 would be managed for Roaded Natural recreational opportunities. Segments 3 and 4 would be managed primarily for Semiprimitive Nonmotorized opportunities with some areas of Semiprimitive Motorized opportunities. Segment 5 would be managed for Primitive recreational opportunities. Permittee access would be allowed, including access to maintain and use irrigation diversions and ditches.

Trails

A low standard nonmotorized trail, similar to that proposed in Alternative 1 would be developed in Segment 3.

User developed trails will be closed, rerouted, or improved if resource damage occurs.

Developed Facilities

Deep Creek campground could be reconstructed from its present condition if it was determined that resource damage was occurring. Facilities would be in keeping with scenic values and may include toilets, tables, and fire rings. Barrier-free facilities would be provided.

At least one viewpoint could be developed on Forest Road 42 in Segment 2.

Primitive recreation developments would be allowed in all river segments. Dispersed campsites would be improved or closed if resource damage occurred.

If private lands in Segment 4 are acquired from a willing landowner, the BLM would develop a recreation management plan for the area.

Access

Motorized access would be in keeping with the ROS objectives of each river segment. In Segments 1 and 2, some roads may be closed on a temporary basis (until needed for future management activities), including Forest Roads 4225-010, 4225-051, 4225-072, and 4225-141. Some roads in Segment 3 may be closed on a permanent basis to implement the ROS objectives possibly including Forest Roads 4260-341, 4260-342, 4240-157, 4240-159, and 4240-156 where they go below the canyon rim. Forest Service Road 4260-230 in Segment 3, would remain open to the dispersed campsite on the river. In Segments 4 and 6, motorized access would be restricted to existing designated routes on grades of 20% or less. In Segment 5, all roads would be closed to motorized access to implement the primitive ROS objective. Permittee and administrative access would be permitted.

VEGETATION MANAGEMENT

Scenic Values

Visual Quality Objectives (VQOs) for public land in Segments 1, 2, 3, 4, and 6 would be Retention in foreground views, and Partial Retention middleground views. VQOs for Segment 5 would be Preservation in foreground and middleground views, and Retention in background views.

A Vegetative Management Plan would be developed by each agency for river segments under their management. Prescribed fire would be considered as one of the tools used to achieve the desired resource conditions.

Fire Management

Wildlifes would be suppressed in all segments until the vegetative management plan was completed.

Timber Management

Within the designated river corridor boundaries in Segments 1, 2, and 3 timber harvest within foreground views would not be programmed. Only timber harvest that is needed to maintain or enhance VQO, scenic or recreational values, or water quality objectives would be permitted. Areas outside the river management boundaries but visible from the river corridor would be managed for the prescribed VQO.

Salvage harvest would not normally be allowed in Segments 3 and 4 unless catastrophic events such as fire or insect outbreak occurred. Harvest would be managed to protect and enhance the river values.

There would be no commercial timber harvest on BLM lands in Segments 4 through 6.

WILDLIFE HABITAT

All existing and future bald eagle roost sites within the river corridor would be protected. The existing bald eagle roost site on BLM land in Segment 5 would be left to natural processes.

Segments 1-4 (Forest Service):

Management would provide habitat for big game, primary cavity excavators, and the pileated woodpecker (a management indicator of old growth habitat), along with viable populations of all endemic species.

Within Segments 2 and 3, two special wildlife management allocations exist; an old growth area and Winter Range. Species such as big game would use the site for thermal and hiding cover. These sites would feature multi-layered forest canopies with shaded forest floors. Snag density would conform to Forest Plan standards and guides.

Within the Winter Range allocation, human presence would be restricted from December 1 - May 1. Increased hiding and thermal cover quality and quantity over time. Livestock use would be managed to provide for the winter needs of big game.

Allow Williams Prairie to revert to a more natural meadow system, including re-introduction of fire into the ecosystem. The objective would be to improve habitat conditions for sensitive plant and animal species including the long-billed curlew, upland sandpiper, and sandhill crane.

Big game cover would be allowed to cycle through natural processes. Open road density would be minimized to protect natural values, including threatened and endangered species, sensitive species, and big game habitat.

Segments 4-6 (BLM):

The most optimum diversity for wildlife species possible would be provided, given limits on types of projects authorized within the WSA and RNA segments. This means that vegetation types will be managed so that each of the seral stages are represented in an area. Techniques outside the WSA and RNA segments could include using selective logging, biological controls, or prescribed and natural fires.

Upland vegetative condition would be managed toward a goal of mid-seral (25-50 percent of vegetative potential) to late seral (50-75 percent of potential).

Manage vegetation for optimum diversity on BLM lands in Segments 4-6 as described in Alternative 1 except that chemical methods would not be used in any area.

BOUNDARIES

River miles as described in the Congressional record were found to be inaccurate. Exact river miles are as follows: Segment 1 = 4.6 miles; Segment 2 = 4.5 miles; Segment 3 = 6.3 miles; Segment 4 = 2.2 miles; Segment 5 = 11.9 miles and Segment 6 = 4.7 miles. This changes the amount of acreage within the corridor that can be included within the river boundaries.

In Segment 1 the boundary would be defined by existing roads and topographic features and include river values. In addition, clarification of the exact beginning and ending of Segment 1 would be added. The beginning of Segment 1 would be changed to read "from its source at Sera Springs in Williams Prairie to the Forest Service land boundary in Lookout Pasture T. 14 S., R. 21 E., W.M., Section 32."

In Segments 2 through 6, the BLM interim boundaries would be used with some clarification of Congressional description added. Congress described the beginning of Segment 2 as "the upper end of Big Summit Prairie". This would be clarified by describing this point as the U.S. Forest Service property boundary on the west edge of T. 14 S., R. 22 E., W.M., Sections 19 and 30. Congress described the boundary between Segments 2 and 3 as "the bridge located across from Deep Creek campground". There is no bridge in this location, therefore it is recommended that the description be changed to read: "where the mouth of Deep Creek enters the North Fork Crooked River"

Additional changes in boundary width would be as illustrated in Map 2. The boundary would be changed to include scenic values following easily locatable and surveyable property lines at less cost and to average 320 acres or less per river mile. The length of Segment 6 would be shortened. The location of the lower boundary, identified in the Wild and Scenic Rivers Act as 1 mile from the confluence, was found to be in error. It was not the intention of the Wild and Scenic Rivers Act authors or Congress to include the .3 mile parcel of private land at the south end of Segment 6 within the designated boundary (see letter from Senator Mark Hatfield of 6/2/92, Appendix E). Therefore, the river corridor description would be changed in this alternative to begin at the public land boundary between T. 16 S. and T. 17 S., R. 21 E., W.M. between Sections 32 and 5. The legal administrative boundary terminus description would be changed by removing T. 17 S., R. 21 E., W.M., Section 5 and re-written to begin:

"Map No. 1 of 1

T. 16 S., R. 21 E., W.M.

Section 32:
From the Point of Beginning (defined as the centerline of the river on the section line common to Section 5, T. 17 S., R. 21 E., and Section 32, T. 16 S., R. 21 E., W.M.) thence easterly along said section line to the section corner common to sections 4, 5, 32 and 33,..."

and end:

"T. 16 S., R. 21 E., W.M.

Section 32:
Thence southwesterly to the center-south 1/16 corner, thence southwesterly to the west 1/16 corner common to sections 5 and 32, thence easterly along the section line common to sections 5 and 32 to the Point of Beginning."

PRIVATE LANDS

Cooperative landowner projects that protect or enhance river values, water quality, or water quantity would be encouraged.

MATRIX OF ALTERNATIVES

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Riparian & Water Quality	Segments 1-3	Same as Alternative 1 except:		
			Develop water quality monitoring plan and instream flow study	Develop water quality monitoring plan and instream flow study
	Achieve LRMP range utilization standards in 2-3 years	No increase in existing stream turbidity allowed	No increase in stream turbidity allowed	Restoration of riparian areas in unsatisfactory condition using variety of appropriate techniques
	Manage for 80% shade or 100% of potential	Cooperate with ODFW to improve instream water quantity	Cooperate with ODFW to improve instream water quantity	Cooperate with ODFW to improve instream water quantity
	Stream channel cutbanks not to exceed 20%			Manage for natural occurrence of large woody debris, turbidity, and bank stability
				Cooperative management of wild trout populations
	Manage for 2 pieces large woody debris per 100 feet of river		Segments 1-3	Segments 1-4 (Forest Service)
	Revise AMPs to emphasize riparian improvement		Continue implementation of Forest Plan riparian utilization standards; shrub utilization to be 20% or less	Meet Forest Plan riparian utilization standards in 1 year on pastures in unsatisfactory condition. Shrub utilization 20% or less
			Emphasis on obtaining 80% shade, reducing water temperature, and improving bank stability as soon as possible	80% shade or 100% potential
	No more than 10% increase in natural stream turbidity			Cutbanks not to exceed natural occurrence

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Riparian & Water Quality (continued)	Segments 4-6	Segments 4-6	Segments 4-6	Segments 4-6 (BLM)
	Inventory and classify baseline information, project monitoring, mitigation, and avoidance	Grazing use period adjusted to minimize grazing/recreation use conflicts	Management practices that accelerate riparian and water quality improvement identified and implemented.	Management practices that accelerate riparian and water quality identified and implemented.
	Spring/summer grazing is authorized on public land by the BLM consistent with the BLM/permittee stocking rates and grazing prescriptions		Achieve objectives through revision of AMPs	Spring/summer grazing is authorized on public land by the BLM consistent with the BLM/permittee stocking rates and grazing prescriptions
Recreation Access		Same as Alternative 1 plus:	Same as Alternative 1 plus:	Access will meet ROS objectives
	Close Forest Road 4225-141, 4225-010, 4225-051, 4225-072 until needed for future management	Permanent closure of Forest Roads 42-461	Close permanently Forest Roads 42-461, 4260-111, 4260-230, (4260-341, 4260-342, 4240-157, 4240-159, 4240-156 at rim)	Close Forest Road 4225-141, 4225-010, 4225-051, 4225-072 until needed for future management
	Segment 5 no motorized use beyond canyon rim	Improve Forest Road 42-460 to Deep Creek Campground, and 42-461 to boat launch		Close permanently Forest Roads 42-461, (4260-341, 4260-342, 4240-157, 4240-159, 4240-156 at rim)
	Segments 4 and 6 - motorized travel restricted to existing designated routes	Segments 4 and 6 same as Alternative 1 except motorized travel on less than 20% grade, only	Segments 4 and 5 - close all roads on public lands to motorized use	Segments 4 and 6 motorized access restricted to designated routes 20% grade or less
	In Segments 4-6 - pursue access to private inholdings and isolated tracks of public land if opportunity becomes available.	Access easements from private landowners needed	Other access limited to existing routes	Segment 5 all roads closed to motorized use

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
ROS	Segments 1, 2, & 6 are Roaded Natural Segments 3-5 are Semiprimitive Nonmotorized with some Semiprimitive Motorized access	Same as Alternative 1	Segment 5 is Primitive Segments 1, 2, and 6 are Roaded Natural Segment 3 is Semiprimitive Nonmotorized Segment 4 is Semiprimitive Nonmotorized with some Semiprimitive Motorized access	Segments 1, 2, and 6 are Roaded Natural Segments 3 and 4 are Semiprimitive Nonmotorized with some Semiprimitive Motorized access Segment 5 is Primitive
Trails	Low standard trail from Deep Creek Campground to Forest Service boundary above Upper Falls	Barrier free interpretive trail along eastside of Williams Prairie Interpretive trail from Deep Creek Campground upstream Trail from Upper Falls through WSA Side trails on existing roads at Lower Falls, Cabin Butte, Fox Canyon, & Committee Creek 2 walkways from viewpoints on Forest Road 42	No developed trails User developed trails closed, rerouted, or improved if resource damage occurs	Low standard trail in Segment 3 User developed trails closed, rerouted, or improved if resource damage occurs

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Developed Facilities	Improve Deep Creek Campground	Improve Deep Creek Campground	Utilize one existing turnout as viewpoint on Forest Road 42	Improve Deep Creek Campground when needed
		Develop campgrounds at Lookout Creek and Segment 4	Improve or close dispersed campsites if resource damage occurs	Improve or close dispersed campsites if resource damage occurs
		Primitive boat launch at Deep Creek amd Segment 4		Develop Recreation Management Plan for Segment 4 if land is acquired from willing seller
		6 viewpoints with interpretation		Viewpoint in Segment 2
Vegetation Management Scenic Values	Segments 1,2, & 6 Partial Retention in foreground	Segments 1-4 Retention foreground, Partial Retention in middle- and background	Segments 1-4, & 6 Retention fore- and middleground, Partial Retention background	Segments 1-4, & 6 Retention foreground, Partial Retention middleground
	Segments 3 & 4 on public land Retention foreground	Segment 5 Retention all viewsheds	Segment 5 Preservation fore- and middleground, Retention background	Segment 5 Preservation fore- and middleground, Retention background
	Segment 5 - Retention all viewsheds	Segment 6 Partial Retention all viewsheds		
	Private lands have no visual quality objectives			

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Vegetation Management (continued)				
Fire	Prescribed fire allowed to enhance feature trees	Vegetation Management Plan which uses prescribed and natural fire as a tool would be developed	Same as Alternative 2	Vegetation Management Plan which uses prescribed and natural fire as a tool would be developed
	Fuel treatments meet Visual Quality Objectives		Prescribed fire allowed only if meets management plan objectives	Suppress wildfires until Vegetation Management Plan is completed
Timber	Segments 1-3 timber harvest allowed	Only harvest that is needed to maintain or enhance VQO, scenic values, & recreation is permitted	Same as Alternative 2 except: only harvest needed to protect/enhance riparian values allowed	Salvage not normally allowed in Segments 3 and 4 unless catastrophic event
	Segments 1 & 2 commercial harvest, Segment 3 harvest only to enhance visuals			No commercial harvest on BLM land in Segments 4-6
	Salvage harvest allowed in all except WSA, RNA, ACEC	Salvage same as Alternative 1	No salvage harvest allowed in Segments 3 or 5, WSA, RNA, ACEC, or old growth except to protect water quality, quantity, riparian areas, and fisheries habitat	Segments 1-3, no programmed timber harvest in foreground
	Segments 4-6, BLM land withdrawn from harvest			Only harvest needed to maintain/enhance scenery, recreation, or water quality permitted
Botanical	Standard federal protection	Standard federal protection	Standard federal protection	Increased monitoring of sensitive plants

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Fish & Wildlife Habitat	Segments 4-6 manage for the optimum diversity of species using logging, biological controls, chemicals, natural and prescribed fires to create vegetative diversity	Segments 4-6 same as Alternative 1 except chemical controls not permitted	Big game cover left to natural processes. Open road density minimized	Segments 4-6 same as Alternative 1 except chemical controls not permitted Big game cover left to natural processes. Open road density minimized
	Protect bald eagle roost habitat through timber management if needed	Bald eagle roost habitat through timber management if needed	Bald eagle roost sites left to natural processes	Bald eagle roost sites left to natural processes
	Segments 1-4 (Forest Service) provide habitat for big game, primary excavators, and pileated woodpeckers.	Develop opportunities for watchable wildlife through native & non-native plantings, nest boxes	Revert meadows to natural ecosystems	Segments 1-4 (Forest Service) provide habitat for big game, primary excavators, and pileated woodpeckers
	Manage MA-F20 Winter Range allocation		Natural processes such as replication of fire regimes encouraged	Revert meadows to natural ecosystems
			Artificial wildlife structures discouraged	Manage MA-F20 Winter Range allocation
Boundaries	Congressional interim boundary See Map 2	See Map 2	See Map 2	See Map 2

MATRIX OF ALTERNATIVES (Continued)

Issues	Alternative 1 No Action	Alternative 2 Recreation Emphasis	Alternative 3 Riparian/Water Quality Emphasis	Alternative 4 Preferred
Private Land				
	County & State zoning applies Crook County zoning ordinances for F-1 (Forest) and EFU-1 (Exclusive Farm Use)	County & State zoning applies Crook County zoning ordinances for F-1 (Forest) and EFU-1 (Exclusive Farm Use)	County & State zoning applies Crook County zoning ordinances for F-1 (Forest) and EFU-1 (Exclusive Farm Use)	County & State zoning applies Crook County zoning ordinances for F-1 (Forest) and EFU-1 (Exclusive Farm Use)
	State Forest Practices Act	State Forest Practices Act	State Forest Practices Act	State Forest Practices Act
	DEQ	DEQ	DEQ	DEQ
			Cooperative landowner projects encouraged	Cooperative landowner projects encouraged

IV

Environmental Consequences

It was sculpting and painting and humming
seaward with all it touched and fed and
carried and concealed, singing,
"This - all of this - is why."
≈David J. Duncan≈

CHAPTER IV
ENVIRONMENTAL CONSEQUENCES

This chapter is the scientific and analytic basis for comparison of alternatives and the assessment of effects on the river's outstandingly remarkable and significant values, and issues identified through public scoping. The environmental and socio-economic effects that each alternative would have, if implemented, are analyzed. Short-term, long-term, direct, indirect and cumulative effects are analyzed. Other legally required disclosures are at the end of the chapter. Consequences and management direction refer only to public lands unless otherwise stated.

A. *INSTREAM RESOURCES AND RIPARIAN HABITAT*

Stream channel structure has been degraded in several segments, especially in the beginning of Segments 1, 3 and 6. Although many actions are proposed in all alternatives to begin healing of the stream channel structure, realistically it would take at least 20 years to see a significant structural change. However, stream enhancement projects that improve shade, trap sediment, and stabilize cutbanks would result in riparian vegetation recovery within 3-5 years.

State Water Quality Standards and riparian habitat objectives could be met under all alternatives, however some alternatives would take a much longer time to accomplish this objective. Alternative 1 would be the slowest to meet these objectives and Alternatives 3 and 4 would be the quickest.

1. *Effects of recreation management on riparian and water quality*

Alternatives 1, 3 and 4, propose few recreational developments, limiting effects on riparian vegetation and water quality. Short-term, minor effects to water quality may occur due to increased stream turbidity from runoff and sedimentation during campground reconstruction in Alternatives 1, 2, and 4.

Trails proposed for development in Alternatives 1, 2, and 4 would have minor, short-term effects on riparian vegetation and water quality during construction. This can be mitigated by limiting the construction period to the dry season and requiring erosion control measures such as hay bales. The trail proposed in Alternatives 1, 2 and 4 from Deep Creek to Upper Falls could follow the riparian zone in many areas, possibly causing increased trampling of vegetation. Trampling of vegetation may also occur in Alternatives 3 and 4 with user developed trails since visitors may find the riparian zone the easiest travel route through much of the river canyon. However, this problem could be mitigated by closing, rerouting, or improving problem trails.

The low standard roads that now exist in the watershed would continue to be minor a source of runoff and sediment in Alternatives 1 and 2. Road improvements in Alternative 2, such as paving, may improve water quality by reducing runoff and sedimentation. Short-term effects may include increased stream turbidity during construction. This may be mitigated by season of construction and use of erosion control equipment.

Since more roads would be closed and rehabilitated in Alternatives 3 and 4, these alternatives would promote the most rapid recovery from effects caused by roading. Closed roads in Alternatives 3 and 4 would revegetate and gradually become an part of the watershed, increasing the potential water storage and reducing runoff and sedimentation. Restricting motorized use in Segments 4 through 6, to roads with less than a 20% grade, in Alternatives 2 and 4 would reduce runoff and sedimentation by limiting soil disturbance to flat, stable slopes. Closing all roads in Segment 5 (Alternative 4) would reduce sedimentation.

Recreational developments in Alternatives 1, 2 and 4 may promote increased recreation use with minor increases in campground associated pollution and damage to vegetation by firewood collection and trampling.

2. *Effects of livestock on riparian and water quality*

Riparian vegetation is an outstandingly remarkable value in most of Segment 5 because it has not been altered by man or livestock. The riparian areas in other segments, especially 1, 2 and 6 are in poor condition due to past management activities. Alternatives 3 and 4 best protect the outstandingly remarkable riparian vegetation where it presently occurs, and extends the potential for this value throughout the river corridor by emphasizing and accelerating restoration using appropriate techniques.

In all alternatives, development of livestock water sources outside the river corridor will encourage better livestock distribution within allotment pastures. This will reduce trampling of vegetation in riparian areas, but may increase trampling of vegetation around the water trough.

In all alternatives, revised grazing practices resulting in achievement of 80% of the stream shaded or 100% of the potential shade in Segments 1-3 would have a positive effect on riparian and aquatic ecosystems. Water temperatures would be lowered and there would be more large diameter trees that could become woody debris, making the water more suitable for native trout.

The intensive livestock management actions in Alternatives 3 and 4 would create the fastest rate of recovery for all segments due to intensive riparian and stream rehabilitation projects. A short-term effect of implementing the Forest Plan standards and guidelines in all the alternatives would be a reduction in the amount of vegetation available for the next 3-5 years for livestock use until the riparian utilization standards were met. Alternatives 3 and 4 would provide 15-20% less forage. Livestock would be moved quickly through the pastures, using less of the available forage.

Long-term effects would include increased vegetation and grasses in Segments 1-3. Riparian objectives would then be achieved through the revision of AMPs. The percentage of exposed cutbanks and channel incising would be reduced. The water table would begin to rise.

In all alternatives, rangeland resources and ecological condition would be improved on BLM segments. In Alternatives 3 and 4, riparian objectives would be met the fastest through a variety of accelerated restoration techniques. In Alternatives 1 and 4, spring/summer grazing consistent with stocking rates and grazing prescriptions would be beneficial to riparian and aquatic ecology. Livestock would use green forage available on the hillsides and would not concentrate in the riparian zone if grazing were limited to these months.

On private lands, grazing is expected to continue at the current level in all alternatives.

3. *Effects of timber harvest on riparian vegetation and water quality*

Timber harvest on private lands within and adjacent to the river corridor is possible under all alternatives. County and State zoning and laws would apply.

BLM lands in Segments 4-6 would not be harvested under any alternative due to a previous withdrawal and therefore no effects not previously analyzed would occur.

In Alternative 1, commercial harvest on Forest Service land in Segments 1 and 2 would be allowed, and harvest in Segment 3 would only be permitted to enhance riparian resources. Though no harvest would occur on the lower river, harvest on the upper stretches has the potential to impact riparian and aquatic ecology downstream.

Alternatives 2, 3 and 4 restrict harvest in foreground views in Segments 1-3 to that which maintains or enhances water quality, recreation, and scenic river values. Impacts on the riparian and aquatic ecology from reduced timber harvest may include decreased runoff, sedimentation, and turbidity improving water quality.

The potential for these positive effects is highest in Alternatives 3 and 4 and least in Alternative 1 where commercial harvest is allowed.

Visual Quality Objectives in Alternative 1 of Partial Retention in foreground of Segments 1 and 2 may allow more timber harvest with the potential for more runoff and sediment from logging activities. Visual Quality Objectives in Alternatives 2, 3, and 4 of Retention or Preservation in the foreground and Partial Retention or Retention in the middleground would result in reduced runoff and sedimentation.

4. *Effects of fire management on riparian and water quality*

Under current management direction, Alternative 1 the No Action alternative, no fire management plan would be developed. This would result in an ecosystem that was different then one dependent on fire. The potential for a large fire increases as more vegetation and dry fuels accumulate on the forest floor. A large fire would likely remove most existing riparian vegetation and reduce water quality due to sedimentation and lack of shade.

A vegetation management plan which uses fire as a management tool would be developed under Alternatives 2, 3, and 4. The long-term effect would be a return to natural fire cycles and associated ecological conditions. This would include emphasis on natural fire processes, prescribed burning, and conditional fire suppression. This would create a more natural setting for the riparian and aquatic communities and would lessen possible damage from fire suppression activities. In Alternative 3, there is a potential for damage to the watershed from the excessive erosion that would follow intense burns if natural fire processes were allowed without prior treatment of fuels. This could also affect fish and wildlife habitat. A low intensity fire would probably enhance the watershed by stimulating vegetation. There may be potential damage from suppression activities such as surface soil exposure but these impacts would be minimized by equipment use restrictions. Retardant, if utilized, could contaminate the water.

5. *Effects of stream improvement projects on riparian and water quality*

Under current management direction, Alternative 1, water quality monitoring would be without coordination or specific direction.

A water quality monitoring plan would be developed under Alternatives 2, 3, and 4. The long-term effect would be baseline data with which to scientifically measure changes in water quality and quantity, and the effects of actions within the watershed. Implementation of the monitoring plan would also help establish minimum water flows needed to protect and enhance the river's outstandingly remarkable values.

All alternatives would attempt to lower water temperature to 58° F, providing better Redband/Inland trout habitat. However, even if all proposed projects were implemented under any alternative, the water temperature and turbidity requirements may not be met. Big Summit Prairie, which is in private ownership, lies between Segments 1 and 2, and the contribution of water from the prairie has a significant effect on water quality downstream. Unless water temperatures and turbidity are reduced on the prairie, it will take many miles of rehabilitated habitat downstream to counteract this effect. In Alternative 3, where the riparian area would be improved the fastest, water temperature would be lowered accordingly.

All alternatives would be managed for large woody debris in the stream to enhance fish habitat, however, Alternatives 3 and 4 place more emphasis on this objective. This would improve fish and aquatic animal habitat, increase capture of stream sediments, decrease turbidity, and create bank stability. Given that there is no baseline data on naturally occurring woody debris, this action may not create a natural situation in all stream segments. Lack of recruitment trees along stream segments may mean woody debris must be imported. Additional instream structures in all segments would be used to more quickly restore the riparian and aquatic communities in Alternatives 3 and 4. All instream structures would meet the Wild and Scenic Rivers Act criteria for free-flowing rivers.

Alternative 4 would promote cooperation with ODFW, other agencies, and private landowners to improve water quality and quantity. Alternatives 1-3 do this to a lesser degree. Increased water in the stream would enhance riparian and aquatic ecosystems.

Beaver introduction as a possible tool in Alternatives 3 and 4 would have long term benefits to water quality, water quantity and biodiversity but recovery would be slower in areas where beaver habitat does not now exist. Beaver dams often create excellent fish pool habitat. Beavers could potentially eat the riparian vegetation becoming established and their dams could potentially prevent upstream movement of fish, back up water that could then wash out roads and culverts, and impede "free-flow".

Alternative 1 would allow a 10% or less increase in stream turbidity for Segments 1-3. There is no baseline data to determine the natural level of turbidity in the North Fork. Alternatives 2, 3 and 4 would allow no increases in natural stream turbidity which would be beneficial for aquatic invertebrate biomass, meet Wild and Scenic River objectives, and prevent further degradation of stream temperature and fish spawning habitat. This may preclude or limit the amount of trail, road, or facility development in the corridor. Mitigation measures for construction could include construction only during dry season or the use of hay or other erosional control measures during construction. Until baseline turbidity data is compiled, long-term effects of controlling stream turbidity are unknown. Alternatives 1 and 4 also emphasize keeping stream channel cutbanks to 20% or natural occurrence, further reducing sediment sources.

B. RECREATION

1. *RECREATION OPPORTUNITY SPECTRUM* (ROS)

The type of recreation opportunities offered in the river corridor vary by alternative and are summarized below by acreage.

Table 4-1. Acres of Recreation Opportunity Spectrum Classes by Alternative.

Alternative	Primitive	SPNM[1]	SPM[2]	Roaded Natural
1	0	5837	1111	3989
2	0	5837	1111	3989
3	4173	2667	108	3989
4	4173	2499	276	3989

[1] SPNM = Semiprimitive Nonmotorized
[2] SPM = Semiprimitive Motorized

The minimal recreation developments proposed in Alternatives 1, 3, and 4 for Segments 4 and 5 best protect the outstandingly remarkable recreation value of semiprimitive nonmotorized recreation in these segments.

Alternatives 1 and 2 provide more developed recreation in Segments 1-3, including opportunities for the handicapped and elderly. Since the area is lightly used, providing for more people in the area would not affect the ROS experience for at least the next ten years. Alternative 2 would adjust grazing use periods to minimize recreation/grazing conflicts in Segments 4-6.

2. *TRAILS*

Alternative 2 would provide the most developed nonmotorized trail (20 miles) while Alterative 3 would develop no trails. Alternatives 1 and 4 would develop several miles of low standard trail in Segment 3.

There is little demand for new trails in this area, only an occasional request for a trail from Deep Creek campground into Segment 3. Long-term effects of no developed trails may include an increase in user made trails.

In segments where trails are planned, a minor, short-term change to the natural environment could occur due to trail construction. More social interactions on developed trails may occur. People who like to hike in undeveloped areas may be displaced as more people are attracted to the developed trail system.

Alternatives 1, 3, and 4 would reroute or improve user developed trails if resource damage occurs. This may create short-term changes in the natural environment, but the long-term effects would be positive.

No motorized trails are proposed in any alternative. Motorized off-road travel would be restricted to designated routes which would include only roads open to other types of motorized travel. Minor off-road vehicle travel now occurs within the preliminary river boundaries and little or no displacement of existing uses would occur. Future demand for off-road vehicle travel routes may occur, and no alternative was developed which would meet this potential demand.

3. *DEVELOPED RECREATION OPPORTUNITIES*

All alternatives would allow interpretive signing to inform the public about the Wild and Scenic Rivers program and river values. An indirect effect would be increased public awareness of the river corridor. People may also visit more areas of the river and stay longer to enjoy and understand the river values. These effects would be greatest in Alternative 2, which provides the most signing, moderate in Alternatives 3 and 4, and least in Alternative 1.

In Alternatives 1, 2, and 4, Deep Creek campground in Segment 2 would be reconstructed. These alternatives would allow barrier-free access to camping facilities, improve sanitation and visitor safety. The campground is currently used to about 50% capacity (50 People-at-one-time (PAOT)). Alternative 3 would not alter this campground.

Alternative 2 would develop additional campgrounds in Segments 1 and 4. Developed campsite capacity would increase by approximately 75 PAOT. These additional campgrounds may be developed at existing dispersed campsites. Displacement of existing visitors may occur, since people who camp at dispersed sites do not usually want to camp at developed sites. Long term effects may include increased visitors in area, improved sanitation from installation of toilets and garbage cans, barrier-free access, and increased visitor safety due to higher maintenance, potable water, and law enforcement presence in the area.

It is not known if there is demand for more developed campgrounds in this area. A semi-developed campground near Segment 1, Biggs Campground is used to only 20% of its capacity, with most of the use occurring during hunting season.

In Alternative 4, developing a recreation management plan for Segment 4, (if the land is acquired from a willing seller) would help maximize protection of scenic and recreational river values through site specific analysis.

All proposed recreation developments would be in keeping with the river classification for each segment. No developed facilities are proposed in WSA, RNA, or ACEC, following existing management direction for each specially managed area.

a. *Dispersed Camping*

In all alternatives dispersed campsites with erosion, vegetation, or soil compaction problems may be improved to protect river values. Currently, only minor problems are occurring and no long term closures of existing sites are foreseen. In Alternative 3, access into the dispersed campsite on Forest Road 2630-230, in Segment 3 would be closed to meet semiprimitive nonmotorized recreation objectives.

Alternatives 1, 3, and 4 would close or rehabilitate dispersed campsites if resource damage occurs. These actions may displace some campers but would have positive effects on vegetation and water quality. Alternative 2 may eliminate approximately six dispersed campsites if the developed campgrounds were constructed at the dispersed sites. In the long term, Alternatives 3 and 4 provide the most dispersed camping opportunities, including Deep Creek campground and Alternative 2 provides the least.

b. *Scenic Turnouts*

Alternative 1 would manage the few turnouts in Segment 2 at their current condition. Indirect effects include safety hazards to both those using the turnout and other motorists due to these areas not being designed as scenic view areas.

Alternative 2 could develop scenic turnouts on Forest Roads 4200, 4225, 4260-100 and 4260-200. Indirect and long-term effects would be increased visitor safety, better river access, and increased visitor appreciation of river values. Increased visitor use in these areas may occur, however, present use is far below capacity. Increased use would not diminish the recreation experience.

Alternatives 3 and 4 would develop a turnout with interpretive signing on Forest Road 42. This would alleviate some safety and traffic hazards by providing at least one area where sightseers can view the river without interfering with destination traffic.

4. *ACCESS*

Alternatives 1 and 2 would provide motorized public access into all segments. Motorized travel in Segments 4-6 would be limited to existing designated routes. Alternative 3 would limit motorized access into Segments 3-5. Alternative 4 would restrict use on about 5 miles of road to administrative and permittee use in Segments 1 and 2 and permanently close about 9.5 miles of road in Segments 3-6 to implement recreation objectives.

In Alternatives 2 and 3, public access to private inholdings and isolated tracks of public land in Segments 4-6 would be pursued if the opportunity became available. Private inholdings in Segments 4 and 5 would require an easement or land exchange with a willing landowner in order to provide legal public access to those inholdings. Access to the isolated public tract in Segment 6 would require an easement from a willing landowner across private land or a land exchange of the private land between public land parcels.

In order to meet SPNM and primitive objectives in all alternatives some existing roads would be closed. Table 4-2 summarizes the potential amount of road that may be closed under each alternative.

Table 4-2. Miles of road closed by Alternative to meet ROS.

Alternative	Miles of Road	
	Temporary	Permanent
1	4.7	7.0
2		8.1
3		18.3
4	5	9.5

The limited motorized access proposed in Alternatives 3 and 4 would reduce the miles of river corridor available to people with mobility impairments and people who prefer motorized access over walking, riding horses, or biking. However, Segments 1 and 2 would be easily accessible under all alternatives.

C. *VEGETATION MANAGEMENT*

1. *SCENIC VALUES*

a. *Effects of livestock riparian management on scenic values*

Range utilization standards would be implemented immediately in Alternatives 3 and 4 and within 2-5 years in Alternatives 1 and 2, resulting in more tree and shrub vegetation in the riparian area. In Segments 1 and 2 this vegetation would be visible when looking across the prairie from Road 4225 as a definition of the meandering river's course through the open prairie landscape. Alternatives 3 and 4 may have a visible control device, such as a fence, to keep cattle grazing out of the riparian area and would have more visible instream structures, such as check dams, to control the channeling of the river. These visible structures may have an adverse affect on the outstandingly remarkable scenic values in all segments, however, the scenic benefits of increased vegetation may outweigh this adverse affect. Beaver activity is encouraged in Alternatives 3 and 4 and their work would be evident. Tree and shrub vegetation would be restored in all alternatives, however, Alternatives 3 and 4 would accelerate recovery through stream enhancement projects, plantings, and other appropriate techniques.

Adjusting grazing periods during high recreation use periods, in Alternative 2, would result in less livestock/ recreation conflicts.

b. *Effects of recreation management on scenic values*

The construction of trails, campgrounds, and overlooks in Alternative 2 would increase the visibility of people and recreation development. More signing, bulletin boards, hardened trails, barriers and parking areas would be evident but would be designed to blend in with the existing landscape character. People using these facilities would increase and meeting or seeing other recreationists would be more frequent. The long-term visual effects of recreation developments would be greatest in Alternative 2 and least in Alternative 3, although no alternative would build structures that were not in conformance with the protection or enhancement of outstandingly remarkable scenic resources along the river. Alternatives 1 and 4 would provide moderate facilities and be in conformance with landscape objectives, resulting in minor landscape modifications.

c. *Effects of vegetation management on scenic values*

In Alternative 1, Segments 1 and 2, timber management activities may be evident but would be subordinate to the characteristic landscape. These activities may be filtered openings in the middle and background canopy of the timbered stands. Timber management objectives in Alternatives 2, 3, and 4 would be to enhance the outstandingly remarkable scenic resource such as opening up distant views or highlighting unique rock features. Salvage harvest from a catastrophic event may occur in all alternatives except in Segments 3 and 5 of Alternative 3. Not allowing salvage in Segments 3 and 5 of Alternative 3 would leave fallen trees, blackened trees, and/or other fire scars visible. Any proposed salvage which followed a catastrophic event would require separate NEPA analysis.

d. *Effects of visual management on timber harvest*

Alternative 1 would manage foreground views in Segments 1 and 2 for Partial Retention and Segment 3 for Retention visual quality objectives (VQOs). The estimated allowable sale quantity (ASQ) for this alternative is 204 MBF (34 MCF).

Alternatives 2, 3, and 4 would manage foreground views for Retention VQOs. Timber harvest to meet recreational and scenic objectives would be allowed in Alternatives 2 and 3, and timber harvest would still be programmed. The estimated allowable sale quantity under Alternatives 2 and 3 is 192 MBF (32 MCF). Alternative 4 would remove timber within foreground views from the allowable sale quantity, although harvest would still be allowed to enhance or protect recreational, scenic, or water quality values. Timber volume that would be removed from the assigned sale quantity base would be 192 MBF (32 MCF).

Alternative 1 has no VQO for middle or background views. Alternatives 2 and 4 would manage middleground views (1/2 to 3 miles) in Segments 1-3 for Partial Retention. Ninety percent of this area is ponderosa pine which is managed under uneven-aged management systems. These harvest systems usually meet the VQO of Partial Retention. Therefore, no reduction in ASQ is expected in middle or background views. Alternative 3 would manage middleground views for Retention, possibly reducing ASQ by 84 MBF in middleground views.

Approximately 48% of Segments 1 and 2 are nonforested, and 54% of Segment 3 is nonforested. The reduction in ASQ proposed in Alternative 4 is less than .01% of the total forest ASQ for this decade.

e. *Effects of fire management on scenic values*

The prescribed burning allowed in all alternatives would have short-term visual impacts in the form of scorched ground and possibly, scorched trees. The long-term affect would be a more open, natural appearance. Wildfires would be suppressed in all alternatives however, a vegetative management plan in Alternatives 2, 3, and 4 would likely allow natural burns after proper fuel treatment. There may be resource disturbance from vehicles and other fire suppression equipment and techniques in suppressing wildfires. Fires may have a short-term adverse effect on the outstandingly remarkable scenic values but the long-term effects of fire would be to enhance the natural scenic resources.

f. *Effects of fish and wildlife projects on scenic values*

In Alternative 2, trees, shrubs, and grasses would be planted to encourage wildlife. Nestboxes and platforms may be visible in this alternative. Managing for optimum wildlife diversity in Alternatives 1 and 2 may enhance wildlife viewing opportunities, but the structures would also be visible. Alternatives 3 and 4 would also enhance wildlife viewing, but the structures would be natural appearing.

2. *OLD GROWTH*

No alternative changes the number of acres managed as old growth in the Ochoco National Forest Plan.

3. *FISH AND WILDLIFE*

a. *Effects of recreation development on fish and wildlife*

Restrictions on motorized travel could improve habitat diversity by reducing damage to vegetation and reducing disturbance to fish and wildlife. Alternatives 3 and 4 would have the lowest road density, thus providing the greatest benefit to wildlife. Alternatives 1 and 2 have approximately the same road density but Alternative 2 roads are maintained to a higher level. This would encourage more visitation and possibly more disturbance to wildlife and habitat.

Alternative 1 and 4 would have minimal negative impacts on wildlife habitat. Alternative 3 would have minimal negative impacts due to a lack of developments. Alternative 2 would result in the greatest negative impacts to wildlife due to an increase in the level of developments.

Campgrounds wold not be developed in the riparian zone under any alternative. Some trails, especially in Alternatives 2 and 4 may skirt the riparian zone and draw more people to areas of wildlife concentration.

b. *Effects of riparian management on fish and wildlife habitat*

Loss of riparian habitat results from removal of stream canopy cover which in turn allows an increase in water temperature. Higher water temperatures reduce productivity, survival and reproduction of fish communities. There is an increase in the incidence of fish disease and mortality. A loss of riparian habitat results in greater exposure of bare soils to the erosion process. In turn there is an acceleration in the rate of bank erosion. This causes an increase in the concentration of fine soil particles (sediment). An increase in fine sediments causes an increase in substrate embeddedness which then reduces food production, increases egg mortality, and reduces biological productivity.

Improvement of riparian vegetation and installation of instream structures in all alternatives would result in long-term enhancement of fish and wildlife habitat. Improved shade, bank stability, reduction of exposed cutbanks and elevation of the water table would result in lowered water temperatures year round, improving habitat for Redband/Inland trout. Wildlife dependent on riparian vegetation would also benefit. Alternatives 3 and 4 most aggressively installs instream structures therefore these affects would occur sooner. Habitat diversity would increase with the establishment of more shrubs and trees. This would provide greater vertical diversity which is attractive to insect-feeders and perching birds. More riparian mammals, including beaver and mink, would be present. Habitat conditions for the sensitive Preble's Shrew would be improved. Alternative 1 would take the longest time to achieve these effects and the amount of riparian vegetation achieved would be less. Alternatives 3 and 4 may achieve these effects faster than the other alternatives, however, it may take 20 or more years to achieve lowered water temperatures under any alternative.

Proposed livestock management within the riparian zone would allow wildlife habitat to proceed toward its potential under all alternatives. Fencing required to implement any changes in livestock use will have a negative impact on big game wildlife due to interference with movement, this can be mitigated by fence design.

Use of any available method to create habitat diversity, as proposed in Alternative 1, provides the most opportunity for improvement as it enables a wider range of treatments to be used. Alternative 2 has similar opportunities, except that the ability to use chemicals is not allowed. This may limit our ability to control the spread of some exotic plants. Alternatives 3 and 4 may limit the techniques allowed to create habitat diversity.

c. *Effects of timber harvest on wildlife habitat*

All alternatives would allow some type of timber harvest to increase wildlife habitat diversity. Lack of sufficient disturbance to favor ponderosa pine stands, other than by fire, would allow the current trend towards a dominant Douglas fir vegetation type to continue. All harvest on Forest Service land would meet Habitat Effectiveness Index (HEI) requirements. Alternative 1 allows the most flexibility in timber harvest and have the potential to result in the greatest diversity of vegetative cover. Alternative 3 would ensure the least short-term habitat loss by timber harvest. Alternatives 1 and 2 allow salvage harvest and this may reduce habitat for species requiring dead standing trees for any portion of their life cycle. Alternatives 3 and 4 allow some salvage harvest, but not in old growth or special management areas, providing for increased wildlife habitat diversity.

Alternatives 2 and 4 allow harvest in Segments 1-3 only to enhance recreational, scenic, and water quality values. This type of harvest may also create more wildlife habitat diversity.

d. *Effects of fire management on fish and wildlife habitat*

Fire could be used as a tool for wildlife habitat diversity, creating enough disturbance to reverse the trend toward Douglas Fir, however, careful planning is necessary to insure that fire be contained in the desired area. Some areas, particularly areas of substantial juniper canopy cover, do not have the fine fuels necessary to carry fire thus limiting the use of fire in habitat improvement projects prescribed by Alternatives 2 and 3. In areas where there has been previous fire control, a nonclimax upland vegetation condition has been maintained and habitat diversity lost. Fire management activities in Alternative 1 could reduce wildlife habitat diversity in both timber and shrub/grass vegetation types due to aggressive suppression of wildfires. Alternatives 2, 3 and 4 emphasize natural fire regimes and could improve habitat diversity in all vegetation types by using fire as a tool in vegetation management.

e. *Effects of upland vegetation management on fish and wildlife*

Alternatives 3 and 4 would indirectly emphasize grazing of upland vegetation by reducing utilization of riparian vegetation while retaining allotment AUMs (Animal Unit Month). This may cause more utilization of upland vegetation with the potential of leaving less upland vegetation for native wildlife.

All alternatives would continue management of the old growth ponderosa pine forests to provide habitat for the pileated woodpecker and associated old growth species such as the flying squirrel and white-headed woodpecker. Other nondependent species such as big game would use the area for thermal and hiding cover. These sites would feature multi-layered forest canopies with shaded forest floors. Large numbers of snags and logs would be evident. Within the Winter Range allocation (MA-F20), human presence would be restricted during the winter (December 1 to May 1). Hiding and thermal cover quality and quantity would increase over time.

4. *TIMBER MANAGEMENT*

a. *Effects of riparian and water quality projects on timber management*

Riparian and water quality improvement projects proposed under all alternatives would have some short-term effects on timber management. In order to achieve 80% of stream shaded or 100% potential stream shade in Alternatives 1, 2, and 4, trees providing this shade could not be cut until this objective were met. Harvest may also be limited in all alternatives so that recruitment trees for large woody debris could grow.

Alternatives 2, 3, and 4 would be more stringent than Alternative 1 since no increase in the existing turbidity would be allowed. This may require extensive presale analysis and may also limit the amount of harvest in the subwatershed.

b. *Effects of recreation management on timber management*

Increased visitor use often results in damage to trees within camping areas due to defacement by visitors. Increased soil compaction around trees in camping areas may also occur. These additional stresses cause the trees to be more susceptible to insect and disease attack. Any or all of these items may result in hazardous trees which must be removed from the camping area. Alternative 2 proposes the most developed campsites, so would have the highest potential for these types of problems, while Alternative 3 would have the least. Effects of visitor use on timber would be moderate in Alternative 4.

5. *FIRE MANAGEMENT*

a. *Effects of riparian and water quality projects on fire management*

Changes in utilization of grasses for livestock forage in all alternatives may result in taller, denser areas of grass that may provide dry fire material during the fall season, increasing potential fire danger. Increasing riparian vegetation and density of plants may also increase fire danger. This effect would be highest in Alternatives 3 and 4 and least in Alternatives 1 and 2.

In Alternatives 3 and 4 cooperation with ODFW, other agencies, and landowners in improving riparian conditions, which may result in increased water in the stream, may also provide more water for fire suppression. Alternatives 1 and 2 may have the same effect, however developing cooperative programs would be a low priority.

Fish habitat improvement projects would have little or no effect on fire danger, since these projects occur in or near water.

b. *Effects of recreation management on fire management*

Road closures proposed under all alternatives may affect access to fires. This may result in delays in reaching and suppressing fires. This effect would be lowest in Alternatives 1 and 2 which have the least amount of road closure and highest in Alternatives 3 and 4 which close the most roads. Alternative 2 would improve existing roads, allowing speedier access to fires in the same area.

The ROS of Semiprimitive Nonmotorized proposed for Segments 3, 4, and 5 in Alternatives 1, 2, and 4 and Primitive for Segment 5 in Alternatives 3 and 4 may limit the type of suppression activities that can occur in the river canyon. Without motorized access for fire equipment fires may burn a larger area before being contained and controlled than if motorized access were allowed. If a vegetative management plan was developed, in Alternatives 2, 3, and 4 this effect could be minimized by pre-treating fuels, reducing fire danger.

Recreation developments proposed in Alternatives 1, 2, and 4 may increase the number of people in the area. More campfires will be built thus increasing the potential for unattended campfires. This may be mitigated by increasing the number of fire rings and signing to encourage the use of fire only in specific areas and to increase visitor awareness of fire safety. Alternatives 3 and 4 emphasize dispersed camping and hiking which would result in less control of fire use and a higher fire danger than alternatives where designated fire rings are provided.

Using prescribed fire in all alternatives would be compatible with long-term visual objectives and enhancement of scenic views. Short-term effects such as blackened trees and red needles may not be compatible with the VQO in Alternatives 3 and 4. Fuel treatments would have to meet or exceed VQO, providing less flexibility in suppression efforts and being more costly. Suppressing wildfires in all segments under all alternatives would reduce the effects of natural fires, allowing an increase in fuel build-up.

In all alternatives fire could be used as a tool to enhance wildlife habitat diversity. The North Fork canyon is a limited area, however, and fire can not be easily confined to just the Wild and Scenic Rivers boundary.

c. *Effects of vegetation management on fire management*

The short- and long-term effects of vegetation management proposed under all alternatives are very interactive. Areas that would be managed for Retention or Preservation would likely result in increased fuels loading and higher fire danger. However, fire is also proposed as a management tool to meet these visual quality objectives. Alternatives 3 and 4 would provide the highest amount of coordination between managing the scenery through fire and also reducing unnatural fuels loading and Alternative 1, the least amount of coordination. Where areas are managed for Partial Retention, short-term fuels loading would increase in logged areas. Long-term, these fuel loads would be reduced through prescribed burning. The potential negative effects are greatest in Alternative 1 and least in Alternatives 3 and 4.

d. *Effects of Wild and Scenic Rivers boundary on fire management*

Boundary location would have little or no effect on fire danger since the surrounding public lands are under the same suppression guidelines.

e. *Effects of private land ownership on fire management*

Management of private lands should have little effect on fire. If vegetation is increased in these areas, the effects would be similar to those discussed under "a. Effects of riparian and water quality projects on fire management."

f. *Effects of development of a vegetative management plan*

The cumulative effects of immediate suppression of wildfire is already noticeable in some areas of the river corridor. The natural fire cycle is out of balance, and fuel loading is increasing. Alternative 1 deals with this on a case-by-case basis while Alternatives 2, 3, and 4 propose to develop a vegetative management strategy of which fire is a part.

Developing a vegetation/fire management plan, proposed in Alternatives 2, 3, and 4 to restore the river corridor to a natural ecological condition may not reach short-term objectives for Retention but would enhance long-term objectives by restoring a natural fire cycle, especially in meadow and ponderosa pine areas. The plan would include emphasis on natural fire processes, prescribed burning, and would conditionalize fire suppression activities. Canyon areas would need specific conditions in order to burn. Past harvest activities and fire exclusion have created a fuel situation that is not conducive to natural burning under extreme conditions. Natural burning without first doing prescribed burning could have devastating results. Fuels must be treated, either through prescribed burning or other means to make a natural fire feasible. Conditional suppression may be utilized based on an approved fire management plan being developed for the area with objectives for resource management a key element. There is a potential for increased soil erosion from an intense fire followed by heavy moisture, which may limit plant recovery. A low intensity fire would probably cause little damage to soil or vegetation and may enhance overall site diversity.

D. *THREATENED, ENDANGERED AND SENSITIVE SPECIES*

Present use by bald eagles is limited to winter, with the primary activity being the use of selected mature ponderosa pine stands as nocturnal roosts. Given the time of use and habitat selected, riparian and fire management are the only activities which may impact this outstandingly remarkable wildlife value. Proposed management in Alternatives 2, 3, and 4 could improve riparian and upland vegetation and fish habitat to a point where the bald eagles establish summer nest sites and use the corridor all year. Sensitive plants communities may also extend their range in the river corridor. If bald eagles, sensitive plants, or other

threatened, endangered or sensitive species extend their range in the corridor, analysis of impacts from any future proposed action would need to address that new use.

Sensitive species use of the corridor is presently stable due to overall habitat conditions. All alternatives propose managing for increased habitat diversity, which will benefit these species. Specific impacts are the same as those identified in the riparian, forest, and upland areas of the wildlife habitat discussion covered in this chapter.

Present bald eagle use is selective for mature ponderosa pine within Segments 5 and 6. Fire management in all alternatives would allow prescribed burning, if necessary, to maintain the health of those ponderosa pine stands. Specifically, this could be done to prevent the loss of the old growth nature of these stands. Developing a vegetative management plan, Alternatives 2, 3, and 4, would provide a more pro-active approach, enabling wildfire to be used to accomplish this objective.

Timber on BLM administered land in Segments 5 and 6, which includes the bald eagle winter/nocturnal roosts, is withdrawn from harvest. Alternatives 1 and 2 would allow timber management for purposes of maintenance of bald eagle roost sites. This allows greater flexibility in management of roost areas than Alternatives 3 and 4, which would leave these stands to natural processes. Given the present condition of these stands and the lack of any threat, no work on the stands would be necessary.

Physical resource development, including trails, instream structures, timber management, and similar surface disturbing activities would have no effect on special status plants and animals since clearance inventories are routinely done beforehand, and special status plant and animal habitat is generally avoided. Outstandingly remarkable, sensitive, threatened, endangered, or special status plants would be protected under all alternatives.

The use of prescribed fire to enhance vegetative river values in the long term would be assumed to enhance special status plants in all alternatives as it is generally accepted that these native species are part of the natural fire-dependent ecosystem. However, no information concerning the effects of fire on these species is currently available.

Management designed to improve/maintain riparian habitat would generally be beneficial to *Calochortus longebarbatus* var. *peckii* (Peck's mariposa lily), a sensitive plant, in all alternatives. Livestock grazing management, including the development of water away from riparian areas, reducing the amount of utilization allowed in riparian areas and changing the season of use. If early spring grazing (March) is completed prior to leaf emergence by the mariposa lily, there would be little impact on the plant. Spring grazing on wet soils may increase soil compaction, sedimentation, erosion, and foraging on sensitive spring plant species such as mariposa lily.

If current riparian management continues (Alternative 1) in Segments 1, 2 and 3, the population of the sensitive mariposa lily could continue to decline. Alternative 2 may increase trampling by encouraging more people to walk the corridor. Alternatives 3 and 4 may decrease the amount of trampling both by people and livestock. Streambank restoration would improve habitat conditions for this plant.

The potential use of beaver to restore riparian areas and raise the water table in Alternatives 3 and 4 could have an adverse effect on Peck's mariposa lily. A raised water table as a result of localized impoundment could alter the habitat presently supporting this species by conversion to an even wetter environment.

The development of water sources away from riparian areas could adversely effect the four other special status plants suspected of occurring in the river corridor: *Allium macrum* (rock onion), *Claytonia umbellata* (umbellate spring beauty), *Collomia macrocalyx* (bristle flowered collomia) and *Oryzopsis hendersonii* (Henderson's ricegrass). These species are all endemic to thin, rocky soils, including scabland, and therefore, except for Henderson's ricegrass, are not normally susceptible to livestock grazing. However, the intensity

of grazing associated with water developments could be detrimental should these plants be in the immediate vicinity. This could be mitigated through the use of clearance inventories to make sure water developments are not close to sensitive plant species.

Closure of roads under all alternatives would be beneficial to Peck's mariposa lily by making access to its habitat more difficult. Alternatives 3 and 4 provide the most extensive road closures providing the most protection for the lily. Alternative 2 closes more roads than Alternative 1 but also improves two roads. Road improvement could encourage more intense public visitation possibly leading to detrimental effects on the lily.

E. *CULTURAL RESOURCES*

Depending on how lands are acquired within the river corridor, and whether or not easements are existing or need to be developed, cultural resource inventories and evaluations may need to be performed in accordance with state and federal guidelines.

Any vegetative management plan with varied suppression actions would need to address cultural and historical resource concerns as appropriate. For example, protecting wooden historical structures would be a priority if a prescribed/natural fire policy were pursued.

Any additional development projects including water source developments, engineering passage and fish diversions, trail and campground construction, stream enhancement projects, and viewing platforms would require site specific cultural resource inventories and evaluations prior to any physical ground disturbance. As mentioned in Fire Management, care would need to be taken when considering the fire suppression methods being used.

In Alternatives 1, 3, and 4, very few ground disturbing activities would occur, thus limiting the potential impacts to cultural/historical resources.

In Alternative 2, development of recreation sites (trails, campgrounds and boat ramps) could adversely impact cultural/historical resources and would need to be inventoried and evaluated according to federal guidelines prior to construction.

In Alternatives 1, 3, and 4, limited development of trails and campgrounds, as well as timber harvest would follow standard operating procedures by conducting separate cultural resource inventories and evaluations on all proposed ground disturbing actions.

F. *BOUNDARIES*

The interim Congressional boundaries proposed in Alternative 1, are vague and difficult to locate on the ground. In fact, some features described in Alternative 1 do not exist in reality. If this boundary were used to implement the river management plan there would be continued confusion about where management activities were or were not allowed.

Alternatives 2, 3, and 4 would clarify the boundary description, include outstandingly remarkable river values, and keep designated acreage to an average of 320 acres or less per river mile.

Alternative 1, Boundaries describes the river's source as Williams Prairie. The boundary width is 200 feet on each side of the river. The end of Segment 1 is described as "the upper end of Big Summit Prairie". The end point includes uplands but not the river itself (see Map 2).

Alternatives 2, 3, and 4 describe the river's source as Sera Springs, create boundary widths which encompass foreground scenic values (an outstandingly remarkable value), and describe the end of Segment 1 as a point

where federally managed lands end along this segment of the river, on the southwest end of Big Summit Prairie.

The interim Congressional boundary in Alternative 1 describes the beginning of Segment 2 as "the Lower End of Big Summit Prairie". This area is difficult to locate on the ground and is in fact described incorrectly. The lower end would be the southern end of the prairie. Alternative 1 also describes the end of Segment 2 and the beginning of Segment 3 as "the bridge across from Deep Creek Campground". There is no bridge across from Deep Creek Campground.

Alternatives 2, 3, and 4 describe the beginning of Segment 2 as the western Forest Service boundary next to the eastern end of Big Summit Prairie. These alternatives also describe the end of Segment 2 and beginning of Segment 3 as "the mouth of Deep Creek", which is easily locatable on the ground.

Alternative 1 describes the termini of Segment 6 as "one mile from [the North Fork's] confluence with the Crooked River". It was not the intent of Congress to include .3 miles of private land at the end of this river segment (see Appendix E). Alternatives 2, 3, and 4 would describe the termini of Segment 6 as the end of BLM public land.

More accurate mapping of river lengths and measurement of acreage included within the river boundaries occurred during the planning process. Alternatives 2, 3, and 4 incorporate this updated information and make necessary adjustments in acreage to keep the overall acreage included in the river boundaries to 320 or less acres per river mile. Table 4-1 summarizes the changes in river length and boundary width between alternatives.

Table 4-3. River length and acreage included within North Fork Crooked River boundaries by alternative.

	Alternative 1	Alternatives 2,3,4	Net Change
River Miles	32.3	34.2	+ 1.9 miles
Acres	10,348	10,937	+ 589 acres

G. *PUBLIC/PRIVATE LANDOWNER COOPERATION*

Alternatives 1 and 2 would allow cooperative projects between interested landowners and federal and state agencies, but does not emphasize it. Alternatives 3 and 4 encourage cooperative projects.

Cooperation between the private landowners, the BLM, and the Forest Service is necessary due to the mixture of ownership within the river cooridor. Table 4-4 shows this mixture.

Table 4-4. North Fork Crooked River Land Ownership by Acres. (Alternatives 2, 3, and 4)

Segment Number	Miles	Forest Service Acres	BLM Acres	Private Acres	Total Acres
1	4.6	1170	40	244	1454
2	4.5	1399	--	--	1399
3	6.3	2029	--	--	2029
4	2.2	200	144	402	746

Table 4-4. North Fork Crooked River Land Ownership by Acres. (Alternatives 2, 3, and 4) **(continued)**

Segment Number	Miles	Forest Service Acres	BLM Acres	Private Acres	Total Acres
5	11.9	--	3460	713	4173
6	4.7	--	55	1081	1136
Totals	**34.2**	**4798**	**3699**	**2440**	**10937**

Trails proposed in Segments 4 and 5 in Alternative 2 are dependent on private landowners granting easements or land exchange to gain public access depending on the location of the trails.

Private inholdings in Segments 4 and 5 would require an easement or land exchange with a willing landowner in order to provide legal public access to those inholdings. Access to the isolated public tract in Segment 6 would require an easement from a willing landowner across private land or a land exchange of the private land between public land parcels.

H. *SOCIAL AND ECONOMIC*

1. *ECONOMIC*

Most of the activities that occur on the Ochoco National Forest have the potential to effect economic conditions within Crook County and the surrounding counties. On the Ochoco National Forest, timber harvesting is the activity with the most influence on employment, personal income, and 25% monies paid to counties.

The actual designation of the North Fork Crooked River as a Wild and Scenic River had more of an effect on the local economy than any of the river management alternatives would have.

Designation as a Wild and Scenic River has resulted in a minor decrease in the Forest's Allowable Sale Quantity (less than one-tenth of one percent), and no reduction on BLM administered lands. Also, river designation, Forest Plan standards, and BLM's riparian policy, initiative, and plan to improve fish habitat and riparian conditions will be responsible, more than any of the alternatives, for any increase in recreation use and any potential decreases in livestock use.

Alternatives 3 and 4 would allow for less timber availability than Alternatives 1 or 2 thus potentially having more effect on local economies.

Reduction in shrub utilization in Alternatives 3 and 4 would have more impact on affected permittees than Alternatives 1 and 2 but no effect on the local economies is expected. Long-term affects would be analyzed in the Allotment Management Plans before any final decisions are made.

2. *SOCIAL*

As with economic effects, almost all social effects have or will be caused by designation of the North Fork Crooked River as a Wild and Scenic River and not by any of the river management alternatives being considered in this analysis.

In terms of work lifestyles, none of the alternatives are expected to have a significant impact. Alternatives 2, 3, and 4 have a higher potential to adversely effect loggers and millworkers than the other alternatives

because of the restrictive timber harvest standards. Alternatives 3 and 4 have the potential to adversely effect ranchers, more so than the other alternatives. This effect would be on permittees and not the ranching community in general. In Alternative 2, a higher recreation emphasis over the other alternatives would bring more income to the local economy through the service sectors. However, the difference would be small and more than likely be offset by the lower harvest level.

Alternative 2, with its higher recreation emphasis, would provide the highest degree of recreational opportunities. The faster improvement of fisheries in Alternatives 3 and 4 would also provide additional recreational opportunities. None of the alternatives are expected to significantly influence recreational patterns in the river corridor or change the availability of recreational opportunities. As a result, there would be little or no impact on leisure lifestyles.

In terms of community cohesion (i.e. the degree of unity and cooperation within a community as it defines problems and attempts to solve them), Crook County is strongly resource based and uses the Forest mostly for consumptive purposes such as logging, grazing, hunting, fishing, etc. As a result, the alternative that most nearly meets the community's ideals of what should be done with the resources would create the least amount of cohesion. Again, river designation had the most impact as many local people felt that there was no good reason to put this river into the Wild and Scenic Rivers System. Alternative 2, with its higher level of development, would create less cohesion than Alternatives 3 and 4 because many in the local community would want to put the river to work and would accept this alternative. On the other hand, Alternatives 3 and 4, with less development and accelerated riparian and water quality improvements would create the most cohesion as people of similar values band together against "outsiders" who don't understand or care about their needs. Keeping the "status quo" as in Alternative 1 would likely create the least amount of cohesion since no changes are being proposed.

I. *WILDERNESS STUDY AREA*

All actions affected by this plan occurring within or potentially impacting the WSA would be reviewed and analyzed for compliance with the BLM's Interim Management Plan (IMP) and Forest Plan standards and guidelines prior to implementation. Failure to meet the IMP and/or standards and guidelines during review and analysis would result in relocation or denial of the action.

J. *AREA OF CRITICAL ENVIRONMENTAL CONCERN*

ACEC designation requires the BLM to provide protective management. Actions in all alternatives are consistent with ACEC management objectives.

K. *RESEARCH NATURAL AREA*

RNA designation requires the BLM to provide protective management. Actions in all alternatives are consistent with RNA management objectives.

L. *AIR QUALITY*

No actions proposed in this EA would have a significant adverse effect on air quality.

M. *PALEONTOLOGY*

No actions proposed in this EA would have a significant adverse effect on paleontological resources.

N. *FARMLAND*

Farmlands located within the Wild and Scenic River boundary are on private land. The integrity of the farmlands is protected by local and state zoning ordinances.

O. *FLOODPLAIN*

A large amount of floodplain is located within the Wild and Scenic River boundary. However, no proposed developments, except perhaps a foot trail would be developed within the floodplain. Alternatives 3 and 4 could eliminate several roads presently located within the floodplain.

Under all alternatives, all roads within the floodplain in Segment 5 would be closed.

P. *AMERICAN INDIAN USES*

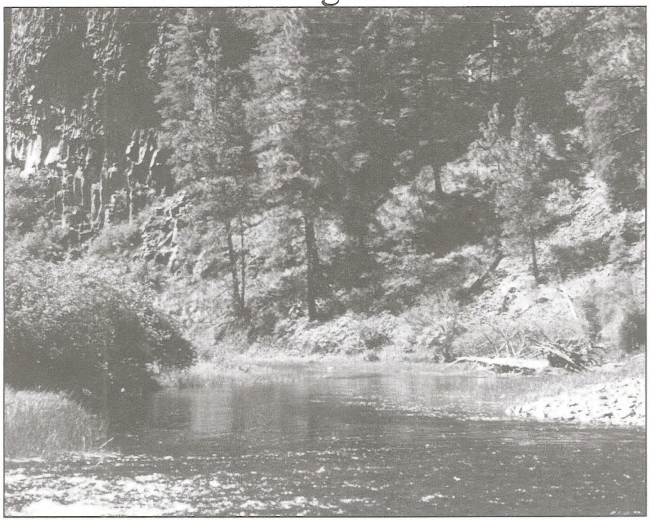
The scablands located on the uplands within the Wild and Scenic River boundary contain several plants used by American Indians. There are no proposed developments in these areas that would cause a decline in the plant populations. Access to these sites for traditional American Indians uses would not be limited under any alternative.

Q. *HAZARDOUS WASTE*

There are no proposed actions within the Wild and Scenic River boundary that would allow disposal of hazardous waste in the area.

V

DRAFT
North Fork Crooked River
River Management Plan



"When protected, rivers serve as visible symbols of the care we take as temporary inhabitants and fulltime stewards of a living, profoundly beautiful heritage of nature."

≈W. Kent Olson≈

CHAPTER V
NORTH FORK CROOKED RIVER MANAGEMENT PLAN

I. MANAGEMENT DIRECTION

A. MANAGEMENT GOALS AND DESIRED FUTURE CONDITION OF THE RIVER CORRIDOR

This section describes the overall management goals and desired future condition of the river corridor. The combination of goals and desired future condition lead to the formulation of specific management activities, standards and guidelines which help achieve resource objectives. Desired future condition statements are written as if the observer was standing along the river in ten or more years and describing the scene. These statements assume that management activities described in the preferred alternative have taken place. This vision can be achieved by close cooperation between the Bureau of Land Management, Ochoco National Forest, Oregon Department of Fish and Wildlife, Crook County Planning Commission, private landowners, and cooperative project management with public and private interest groups.

MANAGEMENT GOAL

The overall goal for the designated Wild and Scenic River corridor is:

> The North Fork Crooked River will be protected as a free-flowing river with a diversity of river ecosystems, ranging from wet prairies to basalt canyons. All future river management or activities occurring within its boundaries will maintain and enhance the outstandingly remarkable river values for which the river was designated, including scenic, wildlife, botanical, and recreation values.

DESIRED FUTURE CONDITION

Riparian: The riparian zone is in proper functioning ecological condition. It supports a diversity of native plants, provides all desired bank stability, provides 100% of the potential shade as required for aquatic species and supports a healthy native population of birds and animals.

Fisheries/Stream Ecology: The biological and physical resources of the river support healthy populations of Redband/Inland trout, other native fish species, and aquatic insects. The stream structure is in a natural, functioning ecological condition.

Water Quality Water temperatures are within 2° F of the State Standard of 58° F for cold water trout fisheries. The minimum flow of water necessary to support native fish, maintain water quality, and support recreational and scenic values is available. Turbidity does not exceed natural levels. Water chemistry is monitored and sources of pollutants are identified and corrected in a timely manner.

Recreation: A wide range of recreation activities, both motorized and nonmotorized occur. Motorized, barrier-free access to the river for dispersed camping, hiking, mountain biking, wildlife viewing, nature photography, fishing for native trout, hunting, and swimming occur from Williams Prairie to Deep Creek campground and from the lower end of Segment 5 through Segment 6. Semi-primitive and primitive experiences occur from Deep Creek campground through the Wilderness Study Area, and include hiking on primitive trails, hunting big game animals, fishing for native trout, backpacking, riding pack animals, swimming, photography, and nature study. User education and information is emphasized over regulatory processes. Interpretive signing is used to enhance the visitors' experience and to protect resource values.

Scenery: The outstandingly remarkable scenic values of the river are protected and enhanced. Foreground river views appear natural with few manmade intrusions. Management activities are not evident to the casual observer. Contrasts of form, line, color, texture, and sound are achieved throughout the river corridor. Large, platy-barked ponderosa pine, larch, aspen, and willow, a ribbon of riparian vegetation along the river, open grassy meadows filled with wildflowers, steep, rust-colored basalt canyon walls, the rippling river, and the sights and sounds of an abundance of wildlife all contribute significantly to scenic values.

Wildlife The river corridor supports a wide diversity of wildlife ranging from those dependent on wet meadow ecosystems, old growth, and riparian areas, to those dependent on upland scablands, rocky cliffs, and talus slopes. The river serves as a major travel corridor, safety area, and food source for many species. The winter bald eagle roost sites support large numbers of wintering birds. Wildlife viewing opportunities are abundant.

Vegetation All vegetation is managed to enhance or protect scenic qualities. The immediate river environment appears natural, though there is some evidence of past management activities in recreation classified segments. Fire, thinning, and timber harvest, as well as planting of native and nonnative plants occur to maintain natural ecological diversity. The outstandingly remarkable riparian habitat in Segment 5 is maintained, while riparian habitat in other segments is enhanced. Sensitive plant species such as Peck's mariposa lily are abundant and thriving.

Geology: Geologic formations that support scenic river values are protected. No mineral extraction occurs. At times trees are removed to give better views of rock outcrops from the river.

Cultural Resources Cultural, historic, and traditional use sites are identified and protected. The past history of the area is interpreted in several places for visitor enjoyment and education.

Public/Private Cooperation: The rights of private property owners are fully respected. As a result of land management actions on the public lands along the river, private landowners fully participate in managing the outstandingly remarkable and significant river values that occur on their private property. Partnerships with many clubs and citizen groups to protect and enhance the river values commonly occur.

B. MANAGEMENT AREA PRESCRIPTIONS

The following standards and guidelines (S&Gs) explain the bounds or constraints within which all management practices will be carried out to achieve the planned goals, objectives, and desired future condition of the North Fork Crooked River on land managed by the Ochoco National Forest and Bureau of Land Management. These standards and guidelines supplement policy direction found in BLM and Forest Service Manuals and Handbooks and the Regional Guide for the Pacific Northwest. They also comply with applicable State and Federal laws and regulations. In addition the S&Gs complement and in some cases supercede the standards and guidelines written for each management area in the Ochoco National Forest Land and Resource Management Plan (Forest Plan), 1989 and the Brothers/LaPine Resource Management Plan (RMP), 1989.

Management areas to which Forest Plan standards and guidelines apply are referred to as North Fork Crooked River Recreation Corridor (MA-F23) and North Fork Crooked River Scenic Corridor (MA-F24). MA-F23 corresponds to designated Segments 1 and 2, from the river's source at Sera Springs to the mouth of Deep Creek, not including the private lands on Big Summit Prairie. These areas were classified as "recreational river". MA-F24 corresponds to Segment 3, from the mouth of Deep Creek to the southern Forest Service land boundary above Upper Falls. The Forest Plan will also be amended to include the Forest Service managed lands on the west side of the river in Segment 4. These river segments are classified as "scenic river". Standards and guidelines will also apply to BLM managed land in Segments 4, 5 and 6. Segment 4

is classified as "scenic river", Segment 5 is classified as "wild river", and Segment 6 is classified as "recreational river".

Specific terminology used in the S&Gs identifies the type of direction and degree of compliance required. Correct interpretation of these terms is critical to understanding the intent of the direction.

The first intent is conveyed by the **"shall"** or **"will"**. With this degree of compliance the action is mandatory in all cases. The second intent is conveyed by the word **"should"**. With this degree of compliance, action is required unless reason exists for not taking action. This direction is intended to require a practice unless it entails unacceptable hardship or expense. Exceptions to "should" restrictions are expected to occur infrequently.

Standards are performance criteria indicating acceptable norms or specifications that actions must meet. Guidelines are an indication or outline of policy or conduct that is not a mandatory requirement (as opposed to a standard, which is mandatory).

Note: * In this draft denotes new direction that is different from the existing Ochoco Forest Plan or BLM management plans.

INSTREAM RESOURCES AND RIPARIAN HABITAT

Standard and Guideline
The requirements for shade along streams will generally correspond to provisions for more than 80% of the surface shaded. Where this cannot be attained, 100% of the potential shade is the standard.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

Standard and Guideline
Provide suitable amounts of large woody material in the stream based on specific characteristics of riparian areas. Where this cannot be determined two pieces of large woody debris per 100 feet of river would be standard.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
No increase in natural stream turbidity would be allowed, based on the results of monitoring studies.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Stream channel cutbanks should not exceed the occurrence found in a natural stream, or where this cannot be determined, stream channel cutbacks should not exceed an average of 20% of total streambank for any given stream drainage.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

*** Standard and Guideline**
Encourage developments to disperse livestock away from riparian areas. Where feasible, water sources should be developed outside the river corridor for livestock.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Water quality monitoring shall be conducted annually. A water quality monitoring plan which measures flow, macroinvertebrates, turbidity, temperature, and other parameters will be developed and implemented.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Existing water temperatures at or above 58° F will not be increased. Temperatures at or below 56° F may be raised a maximum of 2° F. Where stream temperatures exceed 58° F, management activities will include objectives for reducing temperatures to levels that will improve fish habitat capability.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Riparian range utilization standards will be met within one year. Shrub utilization should be 20% or less.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

RECREATION

Standard and Guideline
Manage for the Recreation Opportunity Class of Roaded Natural.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
BLM Segment 6

*** Standard and Guideline**
Manage for the Recreation Opportunity Class of Semiprimitive Nonmotorized except for specific, identified areas of Semiprimitive Motorized access.

Applicable Management Area
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segment 4

*** Standard and Guideline**
Manage for the Recreation Opportunity Class of Primitive.

Applicable Management Area
BLM Segment 5

*** Standard and Guideline**
Roads will be managed to meet ROS objectives for each river segment and classification.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Except for constant service through routes and short, existing, local access, use will be restricted to approved projects designed to meet management area objectives. These routes will be closed to motorized use at the end of the project.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

Standard and Guideline
Motorized use restricted to designated routes.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

*** Standard and Guideline**
Motorized use restricted to designated routes with a grade of 20% or less.

Applicable Management Area
BLM Segment 4,6

*** Standard and Guideline**
No motorized access permitted except for permittee and administrative use.

Applicable Management Area
BLM Segment 5

*** Standard and Guideline**
User developed trails will be closed, rerouted, or improved if resource damage occurs.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor

MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5, 6

Standard and Guideline
Recreational improvements should be provided where needed to protect resources or sites. Sites receiving recurring use should be checked periodically for safety considerations (water sources, hazard trees). If it is not possible to mitigate dispersed site resource impacts, close and rehabilitate the site.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Develop facilities to complement recreational opportunities and protect resource values, in a manner consistent with management area emphasis and desired future condition. Reconstruct Deep Creek campground to provide potable water and barrier-free access as a minimum.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor

*** Standard and Guideline**
Provide viewing and interpretive opportunities where feasible.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor

Standard and Guideline
Coordinate trail and trailhead planning to disperse users and offer a range of challenges. Design trails to blend with landscape, and construct with native materials.

Applicable Management Area
MA-F24 North Fork Crooked River Scenic Corridor

SCENIC RESOURCES

*** Standard and Guideline**
Manage for the Visual Quality Objective (VQO) of Retention in foreground views, and Partial Retention in middleground views.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,6

*** Standard and Guidelines**
Manage for the VQO of Preservation in foreground and middleground views, and Retention in background views.

Applicable Management Area
BLM Segment 5

FIRE

*** Standard and Guideline**
Develop a Vegetative Management Plan that includes fire as a tool to restore areas to desired ecological condition.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

TIMBER

*** Standard and Guideline**
No scheduled timber harvest, in foreground views from the river, shall be allowed. Timber harvest as necessary to maintain or enhance scenic, recreational, or water quality objectives may be permitted. Salvage harvest may be allowed only under catastrophic conditions.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

*** Standard and Guideline**
No scheduled timber harvest.

Applicable Management Area
BLM Segments 4,5,6

Standard and Guideline
No salvage allowed.

Applicable Management Area
BLM Segment 5
MA-F6 Old Growth

*** Standard and Guideline**
Salvage harvest should not normally be allowed unless catastrophic events such as fire or insect outbreak occur. Harvest shall protect and enhance the river values.

Applicable Management Area
BLM Segment 4

BOTANY

*** Standard and Guideline**
The outstandingly remarkable botanical values within the river corridor shall be protected and monitored. This includes the riparian vegetation in Segment 5, and populations of threatened, endangered, and sensitive plants including *Calochortus longebarbatus* var. *peckii* (Peck's mariposa lily) found throughout the river corridor.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

FISH AND WILDLIFE HABITAT

Standard and Guideline
Protect the integrity of actual and potential bald eagle winter roost sites.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

Standard and Guideline
Activites that have the potential to alter or disturb cliffs, talus, or cave habitat shall be carefully evaluated.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Williams Prairie shall be allowed to revert to a natural meadow ecosystem, including the reintroduction of fire. The objective is to improve habitat conditions for sensitive plant and animal species.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor

*** Standard and Guideline**
Indigenous Redband/Inland trout shall be managed for natural production consistent with the Oregon Department of Fish and Wildlife Management Plan for the river.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Big game cover should be allowed to cycle through natural processes. Open road density would be minimized to protect natural values, including threatened, endangered, and sensitive species, and big game habitat.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

Standard and Guideline
Project activities for habitat management are restricted to open roads and adjacent areas from December 1 to May 1. Livestock use should be managed to provide for winter needs of big game.

Applicable Management Area
MA-F20 Winter Range

Standard and Guideline
Management should provide habitat for big game, primary cavity excavators, and the pileated woodpecker, along with viable populations of all endemic species.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor

CULTURAL RESOURCES

*** Standard and Guideline**
Traditional Native American uses and access to ceded lands shall be allowed.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

BOUNDARIES

*** Standard and Guideline**
Existing BLM and Forest Service management plans shall be changed to include the preferred boundary (Map 2) as described in the legal boundary description on file at both the Ochoco National Forest Supervisor's Office and Bureau of Land Management Area Office, located in Prineville, Oregon.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

PRIVATE LANDS

*** Standard and Guideline**
Private landowner rights shall be fully respected.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
County zoning, the State Forest Practices Act, and other applicable state and federal laws should be the primary means of protecting river values on private land.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

*** Standard and Guideline**
Cooperative projects between private landowners, private organizations, federal and state agencies should be pursued where needed to protect and enhance river values and water quality and quantity.

Applicable Management Area
MA-F23 North Fork Crooked River Recreation Corridor
MA-F24 North Fork Crooked River Scenic Corridor
BLM Segments 4,5,6

II. IMPLEMENTATION

The projects contained in this plan will be translated into multi-year program budget proposals that identify needed expenditures. The budget proposals are submitted through normal Forest Service and BLM budget processes. A final budget for any Fiscal year (Oct 1 - Sept 30) is the result of negotiation between the Congress of the United State and the Administration as well as an allocation process among all the Forest Service and BLM units by their higher offices. The actual amount of work accomplished depends on the final budget, which may vary greatly from the requested budget. It is not possible to guarantee when proposed projects, or the management direction stated in this plan will be fully implemented.

The managers of the agencies, Forest, or administrative unit may change proposed implementation schedules through allocation of the Forest or Regional budget. These changes will not require an amendment to this plan. Priorities for completion are expressed by the year projected for completion. When a project consists of various items, all steps of that project are included in the estimated costs.

Management of the Wild and Scenic River is an integrated program. All work activity that will take place is included here. These funds will not be limited to recreation monies but include benefitting resource areas. Cost for implementatin of this plan have been combined into four categories. These include: annual program management, operation and maintenance, facilities and projects, and monitoring. Much of the cost expressed here is a continuation of programs that existed before river designation. Costs are based on 1992 dollar values and cover those items anticipated for completion in the next ten years. By limiting discussion to the next ten years, some planned items of work will not be included.

All projects listed below must undergo site specific environmental analysis prior to project implementation. This will include the appropriate environmental analysis documentation required by the National Environmental Policy Act of 1976 (NEPA), biological evaluation, cultural resource inventory, and any other site specific analysis necessary.

IMPLEMENTATION SCHEDULE

Annual Program Management
Funding for program management includes development of education and information programs, development of maps and brochures, vehicle costs, equipment charges, and overhead charges.

Administrative Overhead (10 years)	$ 30,000	FS
	40,000	BLM

Operation and Maintenance

The river corridor includes one developed campground, many dispersed campsites and user made trails. In addition, as facilities are added or upgraded, including Deep Creek campground, scenic overlooks, and trails, operation and maintenance costs will increase.

Operation and maintenance costs (10 years)	$ 75,000	FS
	20,000	BLM

Facilities and Projects

INSTREAM RESOURCES AND RIPARIAN MANAGEMENT

1. Revise Allotment Management Plans within corridor	$ 6,000	FS
2. Implement accelerated riparian improvements	20,000	BLM
3. Conduct study to determine minimum instream flows needed to protect resource values (aesthetics, fish, recreation)	50,000	FS, BLM
4. Develop and implement a Water Quality Monitoring Program	50,000	FS, BLM
5. Plant riparian vegetation where needed, all segments	25,000	FS, BLM
6. Placement of instream structures Segments 1-3	90,000	FS
7. Construction of fish screens	10,000	BLM
8. Construction of upland water sources	60,000	FS, BLM

VEGETATION MANAGEMENT

1. Develop a Vegetation Management Plan for river corridor	27,000	FS, BLM
2. Prescribed burns to maintain/enhance scenic/botonical values	10,000	FS, BLM
3. Map and inventory VQO	2,000	FS
4. Conduct threatened, endangered and sensitive plant surveys	11,000	FS, BLM

CULTURAL RESOURCES

1. Conduct cultural resource surveys	10,000	FS, BLM

RECREATION

1. Placement of Wild & Scenic River signs	5,000	FS, BLM
2. Reconstruct Deep Creek campground	200,000	FS
3. Construct scenic overlooks on Forest Service Road 42	50,000	FS
4. Develop low standard trail in Segment 3	60,000	FS
5. Close and rehabilitate roads not in keeping with ROS	40,000	FS, BLM
6. Develop recreation management plan for Segment 4 (if acquired from willing seller)	12,000	BLM
7. Close, reroute, or rehabilitate trails as needed	10,000	BLM
8. Improve or close dispersed sites as needed	20,000	FS, BLM

LAND ACQUISITION

1. Acquire private lands from willing sellers	75,000	BLM

BOUNDARIES

1. Post boundaries in areas needed to avoid conflict/confusion with other management activities and private lands	10,000	FS, BLM

PRIVATE LAND

1. Develop cooperative projects with private landowners and other interested publics	2,000	FS, BLM

III. MONITORING

The objective of this monitoring plan is to determine if programs and projects are maintaining and enhancing the outstandingly remarkable and significant river values for which the river was designated. Monitoring is the repeated gathering and recording of pertinent information for comparison with, and evaluation of, goals, objectives, standards and guidelines. This data is then analyzed to determine trends and affects on the resources. Through the monitoring and evaluation process managers can determine how well the federal agencies are implementing the intent of the Wild & Scenic Rivers Act and determine the need for amendments or revisions to management direction.

Table 5-1. Monitoring Plan outlines the items to be monitored within the river corridor.

Table 5-1. Monitoring Plan for the North Fork Crooked River

Items to be Monitored	Unit of Measure	Method	Frequency	Threshold	Annual Cost	Responsible Agency
Water Quality •Temperature	Degrees	Thermographs	Annual	Over 58° F	$400, $1000 one time equipment purchase	Forest Service
Water Quality •Turbidity, flow, chemicals	Parts per million	ISCO sampler	Annual	DEQ standards	$1,000, $6,000 one time equipment purchase $27,000 (10 years)	Forest Service BLM
Water Quality •Bacteria, dissolved oxygen	Amount	Grab samples	Annual	DEQ standards	$3,000	Forest Service
Riparian Condition	% Shade	Bottom Line Survey (BLS)	3 years	80% or less than 100% of potential	$500, $100 one time equipment purchase	Forest Service
Riparian Vegetation	% and type	Greenline system, Photo points	3 years, Annual	None at this time	$3,300, $600 one time equipment purchase $15,000 (10 year)	Forest Service BLM
Vegetative Condition	Condition evaluation on allotment	Range condition & trend transects, photo transects	3 years	If range in downward trend	$500	Forest Service
Forage Utilization AUMs	% utilization		Sample key areas	20% of allotments annually 10% over recommended use	$1,500	Forest Service
Stream Structure	% cutbanks	BLS	3 years	20% or more of river drainage	$500	Forest Service
Stream Structure	Large woody debris	BLS	3 years	Less than natural occurrence	$300	Forest Service
Stream Structure	Embeddedness	Buckets/steel chain	3 years	None at this time	$1500+, $100 one time equipment purchase	Forest Service

Table 5-1. Monitoring Plan for the North Fork Crooked River(Continued)

Items to be Monitored	Unit of Measure	Method	Frequency	Threshold	Annual Cost	Responsible Agency
Stream Channel	Channel morphology	Cross section	3 years	None at this time	$1500	Forest Service
Wildlife/Stream Structure	# beaver	Direct counts	3 years	None at this time	$300	Forest Service
Stream Health	Macro-invertebrates	2 sites, Biotic Condition Index (BCI)	3 years	None at this time	$1250, $500 one time equipment purchase	Forest Service
Fish Habitat	Fish habitat	Hankin/Reeves survey	3 years	None at this time	$9000, $500 one time equipment purchase	Forest Service
Species Composition	Fish numbers	Electroshocking	3 years	None at this time	$1000, $500 one time equipment purchase	Forest Service
Wildlife Habitat	Acres cover	HEI, snag counts, vegetation types	3 years	None at this time	$7000	Forest Service, BLM
Threatened, Endangered, & Sensitive Animals	Bald eagle roost sites	Acres of suitable habitat	5 years	No loss of habitat	$3000	BLM
Threatened, Endangered, & Sensitive Plants *Calochortus longebarbatus* var. *peckii*	# of flowering stems	Field survey & plots	2 years	Detect no more than 30% decrease in population numbers w/90% confidence	$500	Forest Service
Scenic Quality	Acres in each Visual Quality class	Monitor Timber Sales, photo inventory	5 years	If 10% of area not meeting VQO	$1000	Forest Service
Cultural Resources	# of sites	Field survey	As needed for projects	No tolerance for disturbance w/o mitigation	$1000	Forest Service, BLM

Table 5-1. Monitoring Plan for the North Fork Crooked River(Continued)

Items to be Monitored	Unit of Measure	Method	Frequency	Threshold	Annual Cost	Responsible Agency
Recreation - Trails	Percentage of eroded trail to total	Field survey	5 years	20% or more erosion		$2000 Forest Service, BLM
Recreation - Dispersed Sites	Percentage unvegetated area to number of sites	Field survey	5 years	20% or more of sites with no vegetation	$2000	Forest Service, BLM
Access Management	Compliance with travel restrictions	Area patrols	5 times/year	5% noncompliance	$4,000	Forest Service, BLM

A

Glossary

ABBREVIATIONS AND ACRONYMS

Acronym	Definition
ACEC	Area of Critical Environmental Concern
AMP	Allotment Management Plan
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
DEIS	Draft Environmental Impact Statement
DEQ	Oregon Department of Environmental Quality
EA	Environmental Assessment
EIS	Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FONSI	Finding of No Significant Impact
FS	Forest Service
FY	Fiscal Year
HE	Habitat Effectiveness
HEI	Habitat Effectiveness Index
ID	Interdisciplinary
IDT	Interdisciplinary Team (ID Team)
LMP	Land Management Planning
LRMP	Land and Resource Management Plan
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFCR	North Fork Crooked River
ODFW	Oregon Department of Fish and Wildlife
OHV	Off-Highway Vehicle
ONF	Ochoco National Forest
ORV	Outstandingly Remarkable Value
PAOT	Persons at One Time
PL	Public Law (also P.L.)
R	Rural (ROS Classification)
RMP	Resource Management Plan
RN	Roaded Natural (ROS Classification)
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
RVD	Recreation Visitor Days
SCORP	State-wide Comprehensive Outdoor Recreation Plan
SHPO	State Historic Preservation Officer (or Office)
SPM	Semiprimitive motorized (ROS Classification)
SPNM	Semiprimitive Nonmotorized (ROS Classification)
S&G	Standards and Guidelines
T&E	Threatened and Endangered Species
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United States Forest Service
VQO	Visual Quality Objective
WSA	Wilderness Study Area
WSR	Wild and Scenic River
W&SR	Wild and Scenic River

GLOSSARY

These definitions apply to Forest Service and Bureau of Land Management (BLM) land management and planning. Meanings may differ when used in another context. Some definitions were shortened, paraphrased or adapted to fit local conditions. Definitions of other terms used in resource management but not included in this glossary may be found in the following publications:

* American Geological Institute; *Dictionary of Geological Terms*. Doubleday & Company Inc., New York; 1962.

* Kothman M.M.; *A Glossary of Terms Used in Range Management*. Society for Range Management; 1974.

* Mifflin, Ronald W. and Hiton H. Lysons. *Glossary of Forest Engineering Terms*. USDA Forest Service, Pacific Northwest Forest and Range Experiment Station; 1979.

* Schwarz, Charles F.; Thor, Edward C.; Elsner, Gary H. *Wildland Planning Glossary*. USDA Forest Service, Pacific Southwest Forest and Range Experiment Station, General Technical Report PSW-13; 1976.

A

ACCEPTABLE RIPARIAN CONDITION - A shady, brushy riparian condition with frequent amounts of tall overstory conifer trees and shorter hardwoods of alder, willow and aspen; the site has the potential to produce conifers and/or hardwood species. Moderately gentle bank slopes containing moderate to high plant densities, thick root masses, embedded angular boulders and old logs characterize these areas. Frequent channel scouring and deposition will largely be replaced by mossy aquatic growth on assorted sizes of tightly packed rocks.

ALLOTMENT MANAGEMENT PLANS (AMP) - A written program of livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment.

ALL-TERRAIN VEHICLE (ATV) - Any motorized, off-highway vehicle 50 inches or less in width, having a dry weight of 600 pounds or less that travels on three or more low pressure tires with a seat designed to be straddled by the operator. Low-pressure tires are 6 inches or more in width and designed for use on wheel rim diameters of 12 inches or less, utilizing an operating pressure of 10 pounds per square inch (psi) or less as recommended by the vehicle manufacturer.

ALTERNATIVE - One of several policies, plans, or projects proposed for decision making.

ANADROMOUS FISH - Those species of fish that mature in the sea and migrate into streams to spawn. Salmon, steelhead, and searun cutthroat trout are examples.

ANIMAL UNIT (AU) - An animal unit is a 1,000 pound mature cow, or its equivalent based on an average daily forage consumption of 26 pounds dry matter per day.

ANIMAL UNIT MONTH (AUM) - The amount of forage required by an animal unit for one month.

AQUATIC - Living or growing in or on the water.

ARCHAEOLOGY - The scientific study of the physical characteristics of cultural resources in order to describe and explain former ways of life.

B

BACKGROUND - The visible terrain beyond the foreground and middleground where individual trees are not visible, but are blended into the total fabric of the stand. (See "Foreground" and "Middleground.")

BASALT - A dark gray to black, fine-grained igneous rock.

BEST MANAGEMENT PRACTICES (BMP) - A specific activity, measure, course of action, or treatment.

BIG GAME (BG) - Those species of large mammals normally managed for sport hunting, generally elk, deer, and antelope.

BIOLOGICAL DIVERSITY - The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

BIOLOGICAL EVALUATION (BE) - A specific process, required by the Forest Service as part of an environmental assessment, that evaluates the potential effects of a proposed project on proposed endangered, threatened, and sensitive species and their habitats; done for both plants and animals.

BIOLOGICAL POTENTIAL - The maximum possible output of a given resource limited only by its inherent physical and biological characteristics.

C

CAPABILITY - The potential of an area of land to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils, and geology, as well as on the application of management practices, such as silviculture or protection from fire, insects, and disease.

CHANNEL - An open conduit either naturally or artificially created which periodically or continuously contains moving water or forms a connecting link between two bodies of water.

CHANNEL STABILITY - A relative term describing erosion or movement of the channel walls or bottom due to waterflow.

CLEARCUTTING - The harvesting in one cut of all trees on an area for the purpose of creating a new, even-aged stand. The area harvested may be a patch, strip, or stand large enough to be mapped or recorded as a separate class in planning for sustained yield.

CLIMAX - The culminating stage in plant succession for a given site where vegetation has reached a highly stable condition.

COLLECTOR ROAD - Roads that serve smaller land areas than a Forest arterial road, and usually connected to a Forest arterial or public highway. Collect traffic from Forest local roads and/or terminal facilities. The location and standard are influenced by both long-term multiresource service needs, as well as travel efficiency. May be operated for either constant or intermittent service, depending on land use and resource management objectives for the area served by the facility.

COMMODITY - A transportable resource product with commercial value; all resource products that are articles of commerce.

COMMUNITY COHESION - The degree of unity and cooperation evident in a community as it defines problems and attempts to resolve them.

COMMUNITY STABILITY - A community's capacity to handle change without major hardships or disruptions to component groups or institutions. Measurement of community stability requires identification of the type and rate of proposed change and an assessment of the community's capacity to accommodate that level of change.

COMPACTION, SOIL - The packing together of soil particles by forces exerted at the soil surface, resulting in increased soil density.

CONCERN - A point, matter, or question raised by management that must be addressed in the planning process.

CONFINE - To limit fire spread within a predetermined area principally by use of natural or preconstructed barriers or environmental conditions. Suppression action may be minimal and limited to surveillance under appropriate conditions.

CONTROL - To complete the control line around a fire, any spot fires therfrom, and any interior islands to be saved; burn out any unburned area adjacent to the fire side of the control line; and cool down all hot spots that are immediate threats to the contol line, until the line can reasonably be expected to hold under foreseeable conditions.

COVER - Vegetation used by wildlife for protection from predators, to ameliorate conditions of weather, or in which to reproduce.

CRITICAL GROWTH PERIOD - A specified period of time in which plants need to develop sufficient carbohydrate reserves and produce seed, e.g. approximately the months of May and June for bluebunch wheatgrass.

CRITICAL WILDLIFE HABITAT - The area of land, water and airspace required for the normal needs and survival of an endangered species.

CRUCIAL WILDLIFE HABITAT - Parts of the habitat necessary to sustain a wildlife population at critical periods of its life cycle. This is often a limiting factor on the population, such as breeding habitat, winter habitat, etc.

CULTURAL RESOURCES - Physical remains of districts, sites, structures, buildings, networks, or objects used by humans in the past. They may be historic, prehistoric, archaeological, or architectural in nature. Cultural resources are land based and are nonrenewable.

CUMULATIVE EFFECTS - The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

D

DATA - Any recorded measurements, facts, evidence, or observations reduced to written, graphical, tabular, or computer forms.

DECISION CRITERIA - Essentially the rules or standards used to evaluate alternatives. They are measurements or indicators that are designed to assist a decisionmaker in identifying a preferred choice from an array of possible alternatives.

DEFERMENT - The withholding of livestock grazing until a certain stage plant growth is reached.

DEFERRED GRAZING - Discontinuance of livestock grazing on an area for a specified period of time during the growing season to promote plant reproduction, establishment of new plants or restoration of the vigor by old plants.

DEFERRED ROTATION GRAZING - Discontinuance of livestock grazing on various parts of a range in succeeding years, allowing each part to rest successively during the growing season. This permits seed production, establishment of new seedlings or restoration of plant vigor. Two, but more commonly three or more, separate pastures are required.

DEMAND - The amount of goods or services that will be consumed if offered over a given range of prices at a particular point in time.

DEMOGRAPHIC - Pertaining to the study of the characteristics of human populations, such as size, growth, density, distribution, and vital statistics.

DESIGNATED CORRIDOR - Both the wild and scenic corridor and the scenic waterway, including all areas that are part of either designation.

DESIRED FUTURE CONDITION - A vision of the desired future state of a specific area. Desired future condition gives managers goals for the area, but recognizes the dynamic state of the ecosystem, instead of listing future numerical outputs as goals.

DEVELOPED RECREATION - Recreation that requires facilities that, in turn, result in concentrated use of an area. Examples of recreation areas are campgrounds and ski areas; facilities in these areas might include roads, parking lots, picnic tables, toilets, drinking water, ski lifts, and buildings.

DISPERSED CAMPSITES - Campsites outside campgrounds, on National Forest or BLM land.

DISPERSED RECREATION - A general term referring to recreation use outside a developed recreation site; this includes activities such as scenic driving, hunting, backpacking, and recreation in primitive environments.

DIVERSITY - The distribution and abundance of different plant and animal communities and species within the area.

E

EARLY SERAL - Ecological status that corresponds to 0 to 25 percent of the plant composition found in the potential natural community. Synonymous with poor range condition.

ECOLOGICAL POTENTIAL - The ecological potential and the potential natural community (PNC) is the biotic community that would become established if all successional sequences were completed without interference by man under the present environmental conditions. It includes the total plant community that is best adapted to the unique combination of environmental factors and is in dynamic equilibrium with the environment. Such natural disturbances as drought, wild fires, grazing by native fauna, and insects are inherent in the development of any natural plant community. Plant communities that are protected from these natural influences for long periods do not always typify the PNC.

ECOLOGICALLY SOUND - The term "ecologically sound" in this case means a reliable, sensible, complete, thorough and valid method from an ecological standpoint.

ECOLOGICAL STATUS - Four classes of successional stages (or range condition) used to express the degree to which the composition of the present plant community relects that of climax. The four classes (followed by the percentage of plant community that is climax for the site) are: *Potential, Natural Community, 76-100; Late seral, 51-75; Mid-seral, 25-50; Early seral 0-25.*

ECOSYSTEM - The interacting system of a biological community and its nonliving environment.

EDGE - The place where plant communities meet or where successional stages or vegetative conditions within plant communities come together. It often contains organisms from both communities as well as those restricted to the interface area. The number of species present is often greater than the surrounding communities.

EFFECTS - Environmental consequences as a result of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place, and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects and impacts as used in the FEIS are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social, or health, whether direct, indirect,

or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial (40 CFR 1508.8).

ELIMINATION GRAZING - Relinquishment or cancellation of livestock grazing on public lands currently being grazed by livestock.

ENDANGERED SPECIES - Any species of animal or plant that is in danger of extinction throughout all or a significant portion of its range. Plant or animal species identified by the Secretary of the Interior as endangered in accordance with the 1973 Endangered Species Act.

ENDEMIC - A taxonomic category (e.g., genus, species, variety) whose natural occurrence is confined to a certain region and whose distribution is relatively limited.

ENHANCE - To improve, reinforce, enrich or strengthen the existing condition, value, or beauty of a resource.

ENVIRONMENT - The sum of all external conditions and influence affecting the life, development, and survival of an organism.

ENVIRONMENTAL ANALYSIS - An analysis of alternative actions and their predictable short- and long-term environmental effects, incorporating the physical, biological, economic, social, and environmental design arts and their interactions.

ENVIRONMENTAL ASSESSMENT (EA) - A concise public document required by the regulations implementing the National Environmental Policy Act.

EROSION - The processes whereby earthy or rocky material is worn away, loosened, dissolved and removed from any part of the earth's surface.

EXCELLENT RIPARIAN CONDITIONS - An extremely shady and brushy riparian condition with an abundance of tall overstory conifer trees and shorter hardwoods of alder, willow and aspen will be present; the site has the potential to produce conifer and/or hardwood species. Gentle bank slopes, high plant densities, thick root masses, embedded angular boulders and old logs characterize these areas. Channel scouring will be minimized with deposition replaced by mossy aquatic growth on assorted sizes of tightly packed rocks.

EXPECTATION - To surmise the probable occurrence or appearance of.

F

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA) - Public Law 94-579. October 21, 1976, often referred to as the BLM's "Organic Act", which provides the majority of the BLM's legislated authority, direction, policy, and basic management guidance.

FEDERAL LANDS - Any land or interest in land owned by the United States regardless of how or when the United States obtained ownership or which Federal agency administers such lands. This includes BLM and Forest Service land.

FINAL ENVIRONMENTAL IMPACT STATEMENT (FEIS) - The final version of the statement of environmental effects required for major Federal actions under Section 102 of the National Environmental Policy Act (NEPA). It is a revision of the Draft Environmental Impact Statement to include public and agency responses to the draft. It is a formal document which must meet legal requirements and is the document used as a basis for judicial decisions concerning compliance with NEPA.

FINDING OF NO SIGNIFICANT IMPACT (FONSI) - Required by NEPA when a Federal agency prepares an environmental assessment; documents the reasons why the impacts of the proposed action are not significant, and therefore, the agency is not preparing an environmental impact statement.

FIRE HAZARD REDUCTION - The treatment of fuels and residues, which reduces the potential fire's rate of spread or intensity.

FIREWOOD - Wood, either round, split or sawn, and burned primarily for heating purposes.

FISCAL YEAR (FY) - October 1st to September 30th.

FORAGE (LIVESTOCK) - All grass and grass-like plants.

FORAGE (WILDLIFE) - All browse and herbacious food that is available to wildlife for grazing.

FOREGROUND - A term used in scenic management to describe the stand of trees immediately adjacent to a high-value scenic area, recreation facility, or forest highway. (See "Background" or "Middleground.")

FOREST PLAN - The National Forest Land and Resource Management Plan (Forest Plan) guides all natural resource management activities and establishes management standards and guidelines for the Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management. It is prepared under the implementing regulations and requirements of NFMA.

FUELS - Anything that will burn. Usually live and dead woody vegetation (e.g., grass, shrubs, trees).

FUELS TREATMENT - Any manipulation or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control (e.g. lopping, chipping, crushing, piling, and burning).

FULL SUPPRESSION - Aggressive fire suppression actions to extinguish a fire at the smallest acceptable size. All work and activities associated with fire-extinguishing operations beginning with discovery and continuing until the fire is completely extinguished.

G

GOAL - A concise statement that describes a desired condition to be achieved sometime in the future. It is normally expressed in broad, general terms and is timeless in that it has no specific date by which it is to be completed. Goal statements form the principal basis from which objectives are developed.

GRAZING - Consumption of range or pasture forage by animals.

GRAZING SEASON - 1. A period of grazing to obtain optimum use of the forage resource. 2. On public lands an established period for which grazing permits are issued.

GROUND COVER - Vegetation, mulch, litter, rock, etc.

GROUND WATER - Water in a saturated zone of a geologic stratum.

GUIDELINE - An indication or outline of policy or conduct that is not a mandatory requirement (as opposed to a standard, which is mandatory).

H

HABITAT - The sum total of environmental conditions of a specific place occupied by a wildlife or plant species or a population of such species.

HABITAT EFFECTIVENESS (HE) - A combination of both quantity and quality of habitat, including both natural and introduced factors, which produces a specific habitat condition that either limits or generates habitat use by a wildlife species.

HERBACEOUS - Having little or no woody tissue and persisting usually for a single growing season.

HISTORIC - Refers to the period of time for which there are written records (after European contact). In Region 6, the historic era begins at roughly 1800 A.D., with the first explorers who kept journals.

HYDROLOGIC - Pertaining to the quantity, quality, and timing of water yield from forested lands.

I

IMPROVED ROAD - A constructed or maintained vehicle way for the use of highway-type vehicles having more than two wheels.

INTERDISCIPLINARY TEAM - A group of individuals with different training assembled to solve a problem or perform a task.

INTERPRETATION - Educational activity which aims to reveal meaning and relationships of the natural and cultural environment through first-hand experience.

IRRETRIEVABLE - Applies to losses of production, harvest, or use of renewable natural resources. For example, some or all of the timber production from an area is irretrievably lost during the time an area is used as a winter sports site. If the use is changed, timber production can be resumed. The production lost is irretrievable, but the action is not irreversible.

IRREVERSIBLE - Applies primarily to the use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity, that are renewable only over long periods. Irreversible also includes loss of future options.

ISSUE - A point, matter, or question of public discussion or interest to be addressed or decided through the planning process.

J

K

L

LAND EXCHANGE - The conveyance of non-Federal land or interest in the land to the United States in exchange for either National Forest System land, BLM land, or interest in the land.

LARGE WOODY DEBRIS (LWD) - Dead woody material greater than 16 inches, on the ground or in a stream or river; may consist of logs, trees, or parts of trees. Large woody debris contributes to long-term site productivity and health in several ways: it supplies nutrients to the soil, supports symbiotic fungi that are beneficial to conifers, and provides habitat for beneficial rodents and insects.

LIFESTYLE - A characteristic way of living which may be an individual variant within the cultural mainstream or may be an individual expression of a subculture.

LIMITS OF ACCEPTABLE CHANGE (LAC) - A concept for managing change in a natural area, based on the premise that ecological and social change will occur as a result of natural and human factors. With the LAC concept, management's goal is to keep the character and amount of change that results from human factors within acceptable levels that are consistent with objectives for the area.

LONG-TERM EFFECTS - Those effects which will be significant beyond the RPA planning horizon of 50 years.

LOW STANDARD TRAIL - A specific reference to system trail development in the North Fork Crooked River Scenic Corridor Management Area (MA-F24). The term is intended to describe a narrower than standard tread width (less than 12'), with no bridges (crossings will remain natural fords).

M

MACROINVERTEBRATE - Usually used to describe the group of visible animals which do not have backbones. This group which includes insects, mollusks, crustaceans, and worms live part or all of their lives in river systems or lakes.

MANAGED STAND - A stand of trees in which stocking level control is applied to achieve maximum growth.

MANAGEMENT CONCERN - An issue, problem or a condition which constrains the range of management practices identified by the Forest Service and BLM in the planning process.

MANAGEMENT DIRECTION - A statement of multiple-use and other goals and objectives, the associated management prescriptions, and standards and guidelines for attaining them.

MANAGEMENT PLAN - A plan guiding overall management of an area administered by a Federal or State agency; plan usually includes objectives, goals, standards and guidelines, management actions, and monitoring plans.

MANAGEMENT PRESCRIPTION - Management practices selected and scheduled for application on a specific area to attain multiple-use and other goals and objectives.

MECHANICAL SUPPRESSION - The utilization of mechanical equipment to suppress a fire or to stop fire progress. Earth moving equipment may be utilized as well as motorized vehicles with water carrying capacity and aircraft.

MIDDLEGROUND - The visible terrain beyond the foreground where individual trees are still visible, but do not stand out distinctly from the stand. (See "Foreground" and "Background.")

MITIGATION - Steps taken to avoid or minimize negative environmental impacts. Mitigation can include: avoiding the impact by not taking a certain action; minimizing impacts by limiting the degree or magnitude of the action; rectifying the impact by repairing or restoring the affected environment; reducing the impact by protective steps required with the action; and, compensating for the impact by replacing or providing substitute resources.

MIXED CONIFER (MC) - A stand of coniferous trees with a mixture of species. Ponderosa pine will usually make up 25 percent to 75 percent of the species composition.

MODIFICATION - See "Scenic Quality Objectives."

MONITORING - A process of collecting significant data from defined sources to identify departures or deviations from expected plan outputs.

MULTIPLE USE - The management of all the various renewable surface resources of the National Forest System so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

N

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA) - An act declaring a National policy to encourage productive harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and the biosphere and stimulate the health and welfare of man, to enrich the understanding of the ecological systems and natural resources important to the Nation and to establish a Council on Environmental Quality.

NATIONAL REGISTER OF HISTORIC PLACES - A register of cultural resources of national, state, or local significance, maintained by the Department of the Interior.

NATIONAL WILD AND SCENIC RIVER SYSTEM - Rivers with outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values designed by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition.

NATURAL FUELS - Fuels resulting from natural processes and not directly generated or altered by land management practices.

NEAR-NATURAL (OR SEMINATURAL) SETTING - Natural means a part of, or arising from nature, a state provided by nature often without man-made changes. For the Dispersed Recreation and Deep Creek Management Areas, near natural should be interpreted as a state approximating a natural setting.

NO ACTION ALTERNATIVE (Alternative 1) - The most likely condition expected to exist in the future if current management direction were to continue unchanged.

NONMECHANIZED TREATMENT - Fuel treatment methods that do not utilize mechanical treatments. This would include handpiling/burning and prescribed underburning.

O

OBJECTIVE - A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals.

OFF-ROAD or OFF-HIGHWAY VEHICLES (ORV's or OHV's) - Any vehicle, including ATV's, which is restricted by law from operating on public roads reserved for general motor vehicle traffic.

OLD GROWTH STAND - Timber stands with the following characteristics: large mature and over-mature trees in the overstory, large standing dead trees (snags), dead and decaying logs on the ground, and a multi-layered canopy with trees of several age classes. To be defined as old growth, a timber stand must meet the standards set by Research Note PNW-447 for these characteristics.

> **(USDA - Forest Service definition)** An old-growth stand is defined as any stand of trees 10 acres or greater generally containing the following characteristics: 1) stands contain mature and overmature trees in the overstory and are well into the mature growth stage; 2) stands will usually contain a multilayered canopy and trees of several age classes; 3) standing dead trees and down material are present; and 4) evidence of man's activities may be present, but does not significantly alter the other characteristics and would be a subordinate factor in a description of such a stand.

OPERATION AND MAINTENANCE COSTS - Costs associated with operating and maintaining facilities, program management, and support costs associated with management of other resources.

OUTSTANDINGLY REMARKABLE VALUES (ORV) - Term used in the National Wild and Scenic Rivers Act of 1968; to qualify as outstandingly remarkable, a resource value must be an unique, rare, or exemplary feature that is significant at a regional or national level.

P

PARTIAL RETENTION - See "Scenic Quality Objectives."

PEAK FLOW - The highest flow of water attained during a particular flood for a given stream or river.

PERIOD OF USE - The time of livestock grazing on a range area based on type of vegetation or stage of vegetative growth.

PERMIT/LEASES (Grazing) - Under Section 3 of the Taylor Grazing Act, a permit is a document authorizing use of public lands within grazing districts for the purpose of grazing livestock. Under Section 15 of the Taylor Grazing Act, a lease is a document authorizing livestock grazing use of public lands outside grazing districts.

PERSONS-AT-ONE-TIME (PAOT) - The number of people in an area or using a facility at the same time. Generally used as "maximum PAOT" to indicate the capacity of an area or facility to support peak usage within established user density standards and without degradation to biophysical resources.

PLANNING PERIOD - Generally one decade. The time interval within the planning horizon that is used to show incremental changes to yields, costs, effects, and benefits.

PLANT COMPOSITION - The proportions of various plant species annual production in relation to the total annual production of all plants on a given area.

PLANT SUCCESSION - The process of vegetative development whereby an area becomes successively occupied by different plant communities of higher ecological orders.

PREHISTORIC - Relating to the period of time before written records (prior to European contact). In Region 6, before 1800 A.D., or before the advent of written records.

PRESCRIBED BURNING - Use of fire in forest management for hazard reduction and vegetative manipulation.

PRESCRIBED FIRE - A fire burning within prescription, resulting from planned or unplanned ignition. A prescription is a written statement defining objectives to be attained as well as temperature, humidity, wind direction, wind speed, fuel moisture content, and soil moisture under which the fire will be allowed to burn, generally expressed as acceptable ranges of the various indices, and the limit of the geographic area to be covered.

PRESERVATION - See "Scenic Quality Objectives."

PRIMITIVE ROADS - Roads constructed with no regard for grade control or designed drainage, sometimes by merely repeated driving over an area. These roads are single lane, usually with native surfacing and sometimes passable with 4-wheel drive vehicles only, especially in wet weather.

PUBLIC ISSUE - A subject or question of widespread public interest relating to management of National Forest System or BLM lands.

PUBLIC PARTICIPATION - Meetings, conferences, seminars, workshops, tours, written comments, responses to survey questionnaires, and similar activities designed and held to obtain comments from the public about Forest Service and BLM planning.

R

RANGE ALLOTMENT - A designated area available for livestock grazing upon which a specified number, kind of livestock and season of use may be grazed under a term grazing permit. The basic land unit used to facilitate management of the range resource on National Forest System, associated lands administered by the Forest Service, and BLM lands.

RANGE CONDITION - The state or health of the range vegetation and soil to produce a stable biotic community based on the composition, density, and vigor of the vegetation and the physical characteristics of the soil. Condition is expressed as satisfactory or unsatisfactory.

RANGE IMPROVEMENT - Any structure or nonstructural improvement to facilitate management of rangelands or livestock.

RANGELAND - Land where the vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for livestock grazing and browsing.

RANGE MANAGEMENT - The art and science of planning and directing range use to obtain sustained maximum animal production, consistent with perpetuation of the natural resource.

RAPTOR - Bird of prey with sharp talons and strongly curved beaks, e.g. hawks, owls, vultures, eagles.

RECREATION CAPACITY - The number of people that can take advantage of the supply of a recreation opportunity during an established use period without substantially diminishing the quality of the recreation experience of the biophysical resources.

RECREATION OPPORTUNITY - Those outdoor recreation activities which offer satisfaction in a particular physical, social, and management setting in the EA areas; these activities are primarily hunting, fishing, wildlife viewing, photography, boating, and camping.

RECREATION OPPORTUNITY SPECTRUM (ROS) - Land delineations that identify a variety of recreation experience opportunities categorized into six classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use. The six classes are:

1. *Primitive* - Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

2. *Semiprimitive Nonmotorized* (SPNM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other uses. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational experience opportunities.

3. *Semiprimitive Motorized* (SPM) - Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use of local primitive or collector roads with predominantly natural surfaces and trails suitable for motor bikes is permitted.

4. *Roaded Natural* (RN) - Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

5. *Rural* (R) - Area is characterized by a natural environment that has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

6. *Urban* - Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant on site. Large numbers of users can be expected both on site and in nearby areas. Facilities for highly intensified motor

use and parking are available with forms of mass transit often available to carry people throughout the site.

RECREATION VISITOR DAY (RVD) - A measure of recreational use of an area. One recreation visitor day consists of 12 hours of recreation use of a site or area. Recreation visitor days are used as a recreation production or output capacity measure.

REHABILITATION - Actions taken to protect or enhance site productivity, water quality, or other values for a short period of time.

RESEARCH NATURAL AREAS (RNA's) - An area set aside by the BLM or Forest Service to preserve a representative sample of an ecological community; primarily for scientific and educational purposes. Commercial exploitation is not allowed and general public use is discouraged.

RESIDENT FISH - Fish species that complete their entire life cycle in freshwater; non-anadromous fish; an example is the rainbow trout.

RESOURCE - An aspect of human environment which renders possible or facilitates the satisfaction of human wants and the attainment of social objectives.

RESOURCE ASSESSMENT - An evaluation of the resources and values associated with a wild and scenic river and the river corridor; the evaluation determines the level of significance of river-related values.

RESOURCE VALUES - The tangible and intangible worth of forest resources.

RESTORATION - The long-term placement of land back into its natural condition or state of productivity.

RESTRICTED - Some limitations on what would otherwise be the norm or acceptable would be set. In the standards and guidelines where the term is used in a number of places, the limitations are spelled out.

RETENTION - A scenic quality objective which means human activities are not evident to the casual forest visitor.

REVEGETATION - The re-establishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of man - reforestation or range reseeding.

RIPARIAN AREAS - The riparian ecosystem (area) is that land, next to water, where plants that are dependent on a perpetual source of water occur. Riparian sites include fluvial surfaces such as streambanks, active channel shelves, active floodplains, and overflow channels. Some Class III streams and all of the Class IV streams, and all lakes, springs, bogs, wet meadowss and floodplains have not been included in the Riparian Management Areas (MA-F15, MA-G9). Although these stream courses may include a fair number of miles, the actual acreage involved is not thought to be significant. Many of the Class IV stream courses do not support riparian vegetation at all because of the short duration of water flow during the year. These areas will be managed in concert with other resources using the Standards and Guidelines and Best Management Practices (BMPs).

RIPRAP - A structure built of broken rock or other material used for protecting exposed soil from erosion along stream channels or road ditches.

ROS - See Recreation Opportunity Spectrum.

S

SALVAGE HARVEST - Removal of dead or dying trees resulting from insect and disease epidemics or wildfire.

SCENIC QUALITY - The degree of harmony, contrast and variety within a landscape.

SCENIC QUALITY OBJECTIVES - Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape.

1. *Preservation* - Ecological change only.
2. *Retention* - Human activities are not evident to the casual Forest visitor.
3. *Partial Retention* - Human activity may be evident, but must remain subordinate to the characteristic landscape.
4. *Modification* - Human activity may dominate the characteristic landscape, but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.
5. *Maximum Modification* - Human activity may dominate the characteristic landscape, but should appear as a natural occurrence when viewed as background.

SCENIC RESOURCE - The composite of basic terrain, geologic features, water features, vegetative patterns, and land-use effects that typify a land unit and influence the visual appeal the unit may have for visitors.

SCOPING - Determination of the significant issues to be addressed in an EIS.

SEASONAL (Season long) GRAZING - Grazing use throughout a specific season.

SEDIMENT - Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice and has come to rest on the earth's surface either above or below sea level.

SENSITIVE SPECIES - Plant or animal species which are susceptible or vulnerable to activity impacts or habitat alterations. Those species that are recognized by the BLM Oregon State Director or the Regional Forester as needing special management to prevent placement on Federal or State lists. Species not yet officially listed, but which are undergoing a status review or are proposed for listing according to a *Federal Register* Notice published by the Secretary of the Interior or Secretary of Commerce, or according to comparable States' documents published by State Officials. (Reference BLM Instruction Memorandum WO 80-722.)

SERAL - A plant and animal community which is transitional in stage of succession, being either short- or long-term. If left alone, the seral stage will pass, and another plant and animal community will replace it.

SHORT-TERM EFFECTS - For resource management planning, those effects which will not be significant beyond the planning horizon of 50 years; for DEQ water quality, short-term effects are defined as two days or less. Generally, short-term effects are within the planning period.

SHRUB - A low woody plant, usually with several stems, that may provide food and/or cover for animals.

SNAG - A nonliving standing tree. The interior of the snag may be sound or rotted.

SOCIOECONOMIC - Pertaining to, or signifying the combination or interaction of, social and economic factors.

SOIL EROSION - The detachment and movement of soil from the land surface by wind, water, or gravity.

SOIL COMPACTION - Increase in soil bulk density.

SPAWNING GRAVEL - Sorted, clean gravel patches of a size appropriate for the needs of resident or anadromous fish.

SPECIAL STATUS (plants) - "Special Status Species" (BLM Manual 6840.01 and ***IM OR-91-57***): "...species which are proposed for listing, officially listed (T/E), or candidates for listing as threatened or endangered by the Secretary of the Interior under the provisions of the Endangered Species Act (ESA); those listed or proposed for listing by a State in a category implying potential endangerment or extinction; (and) those designated by each State Director as sensitive"; ***and those designated by the Bureau as Assessment Species, which are those species not included in the above lists but are on List 2 (Threatened/ Endangered in Oregon but more common elsewhere) of the Oregon Natural Heritage Program.***

STAND - An aggregation of trees occupying a specific area and sufficiently uniform in composition, age arrangement, and condition as to be distinguishable from the forest in adjoining areas.

STANDARD - Performance criteria indicating acceptable norms or specifications that actions must meet. A principle requiring a specific level of attainment, a rule to measure against.

STATE HISTORIC PRESERVATION OFFICER (SHPO) - An official appointed by the Governor of each State to direct implementation of the National Historic Preservation Act of 1966 and subsequent regulations and Executive Order. Responsibilities include: State-wide cultural resource inventory, development of a State Historic Preservation Plan, review of National Register of Historic Places nominations, administration of Federal historic preservation grants, and review of Federal undertakings which might affect cultural resources listed on or eligible for the National Register of Historic Places.

SUCCESSION - The changes in vegetation that take place as a plant community evolves from bare ground to climax.

SUMMER RANGE - A portion of the total range on which big game animals normally find food and cover during summer months.

SUPPRESSION - The action of extinguishing or confining a fire.

T

TERMINUS - The beginning or ending point; in this case, the beginning or ending point of a legally designated corridor, such as the Wild and Scenic North Fork of the Crooked River.

THERMAL COVER - Cover used by animals to lessen the effects of weather; for elk the types of cover are:

Summer Range - A stand of coniferous trees at least 40 feet tall with an average crown closure of 40 percent or more.

Winter Range - A stand of coniferous trees 10 feet or more tall with an average crown closure of 40 percent or more.

THREATENED SPECIES - Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range and which has been designated in the Federal Register by the Secretary of the Interior as a threatened species.

TIMBER - A general term for the major woody growth of vegetation in a forest area.

TIMBER BASE - Commercial forestland judged to be environmentally and economically suitable and available for the continuous production of timber; the land from which the allowable cut is calculated and harvested.

TRAILHEAD - The parking, signing, and other facilities available at the terminus of a trail.

TURBIDITY - The relative clarity of the water, which may be affected by material in suspension in the water.

U

UNDERSTORY VEGETATION - Grass, small trees, shrubs, and other plants found beneath the overstory (the trees comprising the forest).

V

VEGETATION (Ground) COVER - The percent of land surface covered by all living vegetation (and remnant vegetation yet to decompose) within 20 feet of the ground.

VIABLE POPULATION - The number of individuals of a species required to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their region.

VIEWSHED - The total landscape seen or potentially seen from all or a logical part of a travel route, use area, or water body.

W

WATER QUALITY - The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

WATERSHED - The area that contributes water to a drainage or stream.

WETLANDS - Areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction (Executive Order 11990).

WILD AND SCENIC RIVERS - Those rivers or sections of rivers designated as such by congressional actions under the 1968 Wild and Scenic Rivers Act, as wild, scenic, or recreational by an act of the Legislature of the State or States through which they flow. Wild and scenic rivers may be classified and administered under one or more of the following categories:

1. *Wild River Areas* - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

2. *Scenic River Areas* - Those rivers or sections of rivers that are free of impoundments, with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

3. *Recreational River Areas* - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

WILDERNESS - Areas designated by congressional action under the 1964 Wilderness Act. Wilderness is defined as undeveloped Federal land retaining its primeval character and influence without permanent improvements or human habitation. Wilderness areas are protected and managed to preserve their natural conditions, which generally appear to have been affected primarily by the forces of nature, with the imprint of human activity substantially unnoticeable; have outstanding opportunities for solitude or for a primitive and confined type of recreation; include at least 5,000 acres or are of sufficient size to make practical their preservation, enjoyment, and use in an unimpaired condition; and may contain features of scientific, educational, scenic, or historical value as well as ecologic and geologic interest.

WILDERNESS ACT - Establishes a National Wilderness Preservation System to be composed of Federally-owned areas designated by Congress, administered for use and enjoyment as Wilderness, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as Wilderness.

WILDERNESS RESOURCE SPECTRUM (WRS) - Classification used to further divide a wilderness into zones based on degrees of primitiveness. Areas of the Ochoco Wilderness will be managed under two classes of the WRS system:

1. *Primitive* - characterized by an essentially unmodified environment. Concentration of users is low and evidence of human use is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls.

2. *Semiprimitive* - characterized by a predominately unmodified natural environment of moderate size. The concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle.

WILDERNESS STUDY AREA (WSA) - An area determined to have wilderness characteristics. Study areas will be subject to interdisciplinary analysis and public comment to determine wilderness suitability. Suitable areas will be recommended to the President and Congress for wilderness designation.

WILDFIRE - Any wildland fire that is not a prescribed fire. All wildfires require suppression.

WILDLIFE - All nondomesticated mammals, birds, reptiles, and amphibians living in a natural environment, including both game species and nongame species. Animals or their progeny, which once were domesticated but escaped captivity and are running wild (i.e., feral animals), such as horses, burros, and hogs, are not considered wildlife.

WILDLIFE HABITAT DIVERSITY - The distribution and abundance of different plant and animal communities and species within a specific area.

WINTER RANGE - A range, usually at lower elevation, used by big game during the winter months; usually smaller and better-defined than summer ranges.

WITHDRAWAL - The withholding of an area of Federal land from settlement, sale, location, or entry, under some or all of the general land laws for the purpose of limiting activities under those laws in order to maintain other public values in the area.

Y

Z

B

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C

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D

Wild and Scenic Rivers Act

WILD AND SCENIC RIVERS ACT

An Act to provide a National Wild and Scenic Rivers System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United State of America in Congress assembled, That (a) this Act may be cited as the "Wild and Scenic Rivers Acts".

(b) It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic river system, by designating the initial components with that system and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

SEC.2(a) The national wild and scenic rivers system shall comprise rivers (i) that are authorized for inclusion therein by Act of Congress, or (ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are gound by the Secretary of the Interior, upon application of the Governor of the State of the Governors of the States concerned, or a person or persons therunto duly appointed by him or them, to meet the criteria supplementary thereto as he may prescribe, and that are approved by him for inclusion in the system....Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the Federal Register. Each river designated under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts made available to any State or political subdivision under the Land and Water Conservation Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

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* The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) consists of Public Law 90-542 (October 2, 1968) as amended. P.L. 99-590 (October 30, 1986) was the last Act that added generic amendments to the Act.

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in section 1, subsection (b) of this Act. Every wild, scenic or recreational river in tis free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, administered as one of the following:

(1) Wild river areas- Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

(2) Scenic river areas- Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

(3) Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

SEC. 3 (a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

(Designation language for individual W & S rivers)

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the date of designation of such component under subsection (a) (except where a different date is provided in subsection (a)) establish detailed boundaries therefor; determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments. Notice of the availability of the boundaries and classification, and of subsequent boundary amendments shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

(c) Maps of all boundaries and descriptions of the classifications of designated river segments, and subsequent boundary amendments to such boundaries, shall be available for public inspection in the offices of the administering agency in the District of Columbia and in locations convenient to the designated river.

(d) (1) For rivers designated on or after January 1, 1986, the Federal agency charged with the administration of each component on the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values, The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act. The plan shall be coordinated with and may be incorporated into resource management planning for affected adjacent Federal lands. The plan shall be prepared, after consultation with State and local governments and the interested public within three full fiscal years after the date of designation. Notice of the completion and availability of such plans shall be published in the Federal Register.

(2) For rivers designated before January 1, 1986, all boundaries, classifications, and plans shall be reviewed for conformity within the requirements of this subsection within 10 years through regular agency planning processes.

SEC. 4 (a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture, or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or nonsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act...In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers (i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and (ii) which possess the greatest proportion of private land within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 43 U.S.C. 1962 et seq.).

Each report, including maps and illustrations, shall show among other things the area included within the report; the characteristics which do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area' the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system' the Federal agency (which in the case of a river which is wholly or substantially within a national forest, shall be the Department of Agriculture) by which it is proposed the area, should it be added to the system, be administered; the extent to which the costs thereof, be shared by State and local agencies; and the stimated cost to the United States of acquiring necessary land and interests in land and of administering the area, should it be added to the system. Each such report shall be printed as a Senate or House document.

(b) Before submitting any such report to the President and the Congress, copies of the proposed report shall, unless it was prepared jointly by the Secretary of the Interior and the Secretary of Agriculture, be submitted by the Secretary of the Interior to the Secretary of Agriculture or by the Secretary of Agriculture to the Secretary of the Interior, as the case may be, and to the Secretary of the Army, the Chairman of the Federal Power Commission, the head of any other affected Federal department or agency and, unless the lands proposed to be included in the area are already owned by the United States or have already been authorized for acquisition by Act of Congress, the Governor of the State or States in which they are located or an officer designated by the Governor to receive the same. Any recommendations or comments on the proposal which the said officials furnish the Secretary or Secretaries who prepared the report within ninety days of the date on which the report is submitted to the, together with the Secretary's or Secretaries' comments thereon, shall be included with the transmittal to the President and the Congress.

(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of a State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Federal Power Commission, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date of which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the Federal Register.

(d) The boundaries of any river proposed in section 5 (a) of this Act for potential addition to the National Wild and Scenic Rivers System shall generally comprise that area measured within one-quarter mile from the ordinary highwater mark on each side of the river. In the case of any designated river, prior to publication of boundaries pursuant to section 3 (b) of this Act, the boundaries also shall comprise the same area. This subsection shall not be construed to limit the possible scope of the study report to address areas which may lie more than one-quarter mile from the ordinary high water mark on each side of the river.

SEC. 5. (a) The following rivers are hereby designated for potential addition to the national wild and scenic river system:

(designation language for individual W & S study rivers)

(b)(4) For the purposes of conducting the studies of rivers named in subsection (a) there are authorized to be appropriated such sums a necessary.

(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

(d) In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

SEC. 6. (a)(1) The Secretary of the Interior and the Secretary of Agriculture are each authorized to acquire lands and interests in land within the authorized boundaries of any component of the national wild and scenic rivers system designated in section 3 of this Act, or hereafter designated for inclusion in the system by Act of Congress, which is administered by him, but he shall not acquire fee title to an average of more than 100 acres per mile on both sides of the river. Lands owned by a State may be acquired only by donation or by exchange in accordance with subsection (d) of this section. Lands owned by an Indian tribe or a political subdivision of a State may not be acquired without the consent of the appropriate governing body thereof as long as the Indian tribe of political subdivision is following a plan for management and protection of the lands which the Secretary finds protects the land and assures its use for purposes consistent with this Act.

Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to the use of appropriations form other sources, be available to Federal departments and agencies for the acquisition of property for the purposes of this Act.

(2) When a tract of land lies partially within and partially outside the boundaries of a component of the National Wild and Scenic System, the appropriate Secretary may, with the consent of the land owners for the portion outside of the boundaries, acquire the entire tract. The land or interest therein so acquired outside the boundaries shall not be counted against the average one-hundred-acre-per-mile limitation of subsection (a)(1). The lands or interests therein outside such boundaries, shall be disposed of, consistent with existing authorities of law, by sale, lease, or exchange.

(b) If 50 per centum or more of the entire acreage outside of the ordinary high water mark on both sides of the river within a federally administered wild, scenic or recreational river area is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act. Nothing contained in this section, however, shall preclude the use of condemnation when necessary to clear title or to acquire scenic easements or other such easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof.

(c) Neither the Secretary of the Interior nor the Secretary of Agriculture may acquire lands by condemnation, for the purpose of including such lands in any national wild, scenic or recreational river area, if such lands are located within any incorporated city, village, or borough which has in force and applicable to such lands a duly adopted, valid zoning ordinance that conforms with the purposes of this Act. In order to carry out the provisions of this subsection, the appropriate Secretary shall issue guidelines, specifying standards for local zoning ordinances, which are consistent with the purpose of this Act. The standards specified in such guidelines shall have the object of (A) prohibiting new commercial or industrial uses other than commercial or industrial uses which are consistent with the purposes of this Act, and (B) the protection of the bank lands by means of acreage, frontage, and setback requirements on development.

(d) The appropriate Secretary is authorized to accept title to non-Federal property within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress and, in exchange therefor, convey to the grantor any federally owned property which is under his jurisdiction within the State in which the component lies and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged shall be approximately equal or, if they are not approximately equal, shall be equalized by the payment of cash to the grantor of the Secretary of the circumstances require.

(e) The head of any Federal department of agency having administrative jurisdiction over any lands or interests in land within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act of hereafter designated for inclusion in the system by Act of Congress is authorized to transfer to the appropriate Secretary jurisdiction over such lands for administration in accordance with the provisions of this Act. Lands acquired by or transferred to the Secretary of Agriculture for the purposes of this Act within or adjacent to a national forest shall upon such acquisition or transfer become national forest lands.

(f) The appropriate Secretary is authorized to accept donations of land and interests in land, funds, and other property for use in connection with his administration of the national wild and scenic rivers system.

(g)(1) Any owner of owners (hereinafter in this subsection referred to as "owner") of improved property on the date of its acquisition, may retain for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a definite term not to exceed twenty-five years or, in lieu thereof, for a term ending at the death of the owner, or the death of his spouse, of the death of either or both of the. The owner shall elect the term to be reserved. The appropriate Secretary shall pay to the owner the fair market value of the property on the date of such acquisition less the fair market value on such date of the right retained by the owner.

(2) A right of use and occupancy retained pursuant to this subsection shall be subject to termination whenever the appropriate Secretary is given reasonable cause to find that such use and occupancy is being exercised in a manner which conflicts with the purposes of this Act. In event of such a finding, the Secretary shall tender to the holder of that right an amount equal to the fair market value of that portion of the right which

remains unexpired on the date of termination. Such right of use or occupancy shall terminate by operation of law upon tender of the fair market price.

(3) The term "improved property", as used in this Act, means a detached one-family dwelling (hereinafter referred to as "dwelling"), the construction of which was begun before January 1, 1967, (except where a different date is specifically provided by law with respect to any particular river), together with so much of the land on which the dwelling is situated, the said land being the same ownership as the dwelling, as the appropriate Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures accessory to the dwelling which are situated on the land so designated.

SEC. 7. (a) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 U.S.C. 791a et seq.) on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the National Wild and Scenic Rivers System. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior of the Secretary of Agriculture, as the case may be in writing of its intention so to do at least sixty days in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request construction of such project would be in conflict with the purposes of this Act.....

(b) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended on or directly affecting any river which is listed in section 5, subsection (a), of this Act,and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary charged responsible for its study or approval -

(i) during the ten-year period following enactment of this Act of for a three complete fiscal year period following any Act of Congress designating any river for potential addition to the national wild and scenic rivers system, whichever is later, unless, prior to the expiration of the relevant period, the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, on the basis of study, determine that such river should not be included in the national wild and scenic river system and notify the Committees on Interior and Insular Affairs of the United States Congress, in writing, including a copy of the study upon which the determination was made, at least one hundred and eighty days while Congress is in session prior to publishing notice to that effect in the Federal Register: Provided, That if any Act designating any river or rivers for potential addition to the national wild and scenic river system provides a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and

(ii) during such interim period from the date a report is due and the time a report is actually submitted to Congress; and

(iii) during such additional period thereafter as, in the case of any river the report for which is submitted to the President and the Congress for inclusion in the national wild and scenic rivers system, is necessary for congressional consideration thereof or, in the case of any river recommended to the Secretary of the Interior under section 2(a)(ii) of this Act, is necessary for the

Secretary's consideration thereof, which additional period, however, shall not exceed three years in the first case and one year in the second.

Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to developments below or above a potential wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or diminish the scenic, recreational, and fish and wildlife values present in the potential wild, scenic or recreational river area on the date of designation of a river for study as provided by section 5 of this Act. No department or agency of the United States shall, during the periods hereinbefore specified, recommend authorization of any water resources project on any such river or request appropriations to begin construction of any such project, whether heretofore or hereafter authroized, without advising the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture in writing of its intention so to do at least sixty day in advance of doing so and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

(c) The Federal Power Commission and all other Federal agencies shall, promptly upon enactment of this Act, inform the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, of any proceedings, studies, or other activities within their jurisdiction which are now in progress and which affect or may affect any of the rivers specified in section 5, subsection (a), of this Act. They shall likewise inform him of any such proceedings, studies, or other activities which are hereafter commenced or resumed before they are commenced or resumed.

(d) Nothing in this section with respect to the making of a loan or grant shall apply to grants made under the Land and Water Conservation Act of 1965 (78 Stat. 897; 16 U.S.C. 4601-5 et seq.).

SEC. 8. (a) All public lands within the authorized boundaries of any component of the national wild and scenic rivers system which is designated in section 3 of this Act or which is hereafter designated for inclusion in that system are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States. This subsection shall not be construed to limit the authorities granted in section 6(d) or 14A of this Act.

(b) All public lands which constitute the bed or bank, or are within one- quarter mile of the bank, of any river which is listed in section 5, subsection (a), of this Act are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States for the periods specified in section 7, subsection (b), of this Act.....

SEC. 9. (a) Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that --

(i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act;

(ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior or, in the case of national forest lands, by the Secretary of Agriculture.

(iii) subject to valid existing rights, the mineral in Federal lands which are part of the system and constitute the bed or bank or are situated within one-quarter mile of the bank of any river designated a wild river under this Act or any subsequent Act are hereby withdrawn from all forms of appropriation

under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto.

Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the components in question.

(b) The mineral in any Federal lands which constitute the bed or bank or are situated within one-quarter mile of the bank of any river which is listed in section 5, subsection (a) of this Act are hereby withdrawn from all forms of appropriation under the mining and leasing laws during the periods specified in section 7, subsection (b) of this Act. Nothing contained in this subsection shall be construed to forbid prospecting or the issuance of leases, licenses, and permits under the mineral leasing laws subject to such conditions as the Secretary of the Interior and, in the case of national forest lands, the Secretary of Agriculture find appropriate to safeguard the area in the event it is subsequently included in the system.....

SEC. 10 (a) Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of the values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

(b) Any portion of a component of the national wild and scenic rivers system that is within the national wilderness preservation system, as established by or pursuant to the Act of September 3, 1964 (78 Stat. 890; 16 U.S.C., ch. 23), shall be subject to the provisions of both the Wilderness Act and this Act with respect to preservation of such river and its immediate environment, and in case of conflict between the provisions of these Acts the more restrictive provisions apply.

(c) Any component of the national wild and scenic rivers system that is administered by the secretary of the Interior through the National Park Service shall become a part of the national park system, and any such component that is administered by the Secretary through the Fish and Wildlife Service shall become a part of the national wildlife refuge system. THe lands involved shall be subject to the provisions of the Act and the Acts under which the national park system or national wildlife system, as the case may be, is administered, and in the case of conflict between the provisions of these Acts, the more restrictive provisions shall apply. The Secretary of the Interior, in his administration of any component of the national wild and scenic rivers system, may utilize such general statutory authorities relating to areas of the national park system and such general statutory authorities otherwise available to him for recreation and preservation purposes and for the conservation and management of natural resources as he deems appropriate to carry out the purposes of this Act.

(d) The Secretary of Agriculture, in his administration of any component of the national wild and scenic rivers system area, may utilize the general statutory authorities relating to the national forest in such manner as he deems appropriate to carry out the purposes of this Act.

(e) The Federal agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State- or County-owned lands.

SEC. 11. (a) The Secretary of the Interior shall encourage and assist the States to consider, in formulating and carrying out their comprehensive statewide outdoor recreation plans and proposals for financing assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897), needs and opportunities for establishing State and local wild, scenic and recreational river areas.

(b) (1) The Secretary of the Interior, the Secretary of Agriculture, or the head of any Federal agency, shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice, and cooperation

may be through written agreements or otherwise. This authority applies within or outside a federally administered area and applies to rivers which are components of the Wild and Scenic Rivers System and to other rivers. Any agreements under this section may include provisions for limited financial or other assistance to encourage participation in the acquisition, protection and management of river resources.

)2) Whenever appropriate in furtherance of this Act, the Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to utilize the following:

(A) For activities on federally owned land, the Volunteers in the Parks Act of 1969 (16 U.S.C. 18g-J) and the Volunteers in the Forest Act of 1972 (16 U.S.C. 558a-558d).

(B) For activities on all other lands, section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of statewide comprehensive outdoor recreation plans).

(3) For purposes of this subsection, the appropriate Secretary or the head of any Federal agency may utilize and make available Federal facilities, equipment, tools, and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal agency deem necessary or desirable.

(4) No permit or other authorization provided for under provisions of any other Federal law shall be conditioned on the existence of any agreement provided for in this section.

SEC. 12 (a) The Secretary of the Interior, the Secretary of Agriculture, and the head of any other Federal department or agency having jurisdiction over any lands which include, border upon, or are adjacent to, any river included within the National Wild and Scenic Rivers System or under consideration for such inclusion in accordance with section 2(a)(ii), 3(a), or 5(a), shall take such action respecting management policies, regulations, contracts, plans, affecting such lands, following the date of enactment of this sentence, as may be necessary to protect such rivers in accordance with the purposes of this Act. Such Secretary or other department or agency head shall, where appropriate, enter into written cooperative agreements with appropriate State and local official for the planning, administration, and management of Federal lands which are within the boundaries of any rivers for which approval has been granted under section 2(a)(ii). Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act.

(b) Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party.

(c) The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Administrator, Environmental Protection Agency and the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river.

SEC. 13 (a) Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, those lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

(b) The jurisdiction of the States and the United States over waters of any stream included in a national wild, scenic, or recreational river area shall be determined by established principles of law. Under the provisions of this Act, any taking by the United States of a water right which is vested under wither State or Federal lsw at the time such river is included in the national wild and scenic rivers system shall entitle the owner thereof to just compensation. Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(c) Designation of any stream or portion thereof as a national wild, scenic or recreational river area shall not be construed as a reservation of the waters of such streams for purposes other than those specified in this Act, or in quantities greater than necessary to accomplish these purposes.

(d) The jurisdiction of the States over waters of any stream included in a national wild, scenic or recreational river area shall be unaffected by this Act to the extent that such jurisdiction may be exercised without impairing the purposes of this Act or its administration.

(e) Nothing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by any States which contain any portion of the national wild and scenic rivers system.

(f) Nothing in this Act shall affect existing rights of any State, including the right of access, with respect to the beds of navigable streams, tributaries, or rivers (or segments thereof) located in a national wild, scenic, or recreational river area.

(g) The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, across, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act.

SEC. 14. (a) The claim and allowance of the value of an easement as a charitable contribution under section 170 of title 26, United States Code, or as a gift under section 2522 of said title shall constitute an agreement by the donor on behalf of himself, his heirs, or assigns that, if the terms of the instrument creating the easement are violated, the donee or the United States may acquire the servient estate of its fair market value as of the time the easement was donated minus the value of the easement claimed and allowed as a charitable contribution or gift.

(b) For the conservation purposes of preserving or enhancing the values of components of the National Wild and Scenic River System, and the environs thereof as determined by the appropriate Secretary, landowners are authorized to donate or otherwise convey qualified real property interests to qualified organizations consistent with section 170(h)(3) of the Internal Revenue Code of 1954. Such interest may include, but shall not be limited to, rights-of-way, open space, scenic, or conservation easements without regard to any limitations on the nature of the estate or interest otherwise transferable within the jurisdiction where the land is located. The conveyance of any such interest in land in accordance with this subsection shall be deemed to further a Federal conservation policy and yield a significant public benefit for purposes of section 6 of Public Law 96-541.

SEC. 14A. (a) Where appropriate in the discretion of the Secretary, he may lease federally owned land (or any interest therein) which is within the boundaries of any component of the National Wild and Scenic Rivers system and which has been acquired by the Secretary under this Act. Such lease shall be subject to such restrictive covenants as may be necessary to carry out the purposes of this Act.

(b) Any land to be leased by the Secretary under this section shall be offered first for such lease to the person who owned such land immediately before its acquisition by the United States.

SEC. 15.....

SEC. 16. As used in this Act, the term--

(a) "River" means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, creeks, runs, kills, rills, and small lakes.

(b) "Free-flowing", as applied to any river or section of a river, means existing or flowing in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic river system shall not automatically bar its consideration for such inclusion: **Provided**, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

(c)"Scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the wild and scenic river system, for the purpose of protecting the natural qualities of a designated wild, scenic, or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. For any designated wild and scenic river, the appropriate Secretary shall treat the acquisition of fee title with the reservation of regular existing uses to the owner as a scenic easement for the purposes of this Act. Such an acquisition shall not constitute fee title ownership for purposes of section 6(b).

SEC.17.....

(Provisions of the Wild and Scenic Rivers Act that are applicable only to specific rivers have been deleted from this version of the Act in the interest of brevity. The Federal Power Commission is now the Federal Energy Regulatory Commission.)

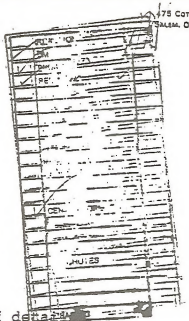
E

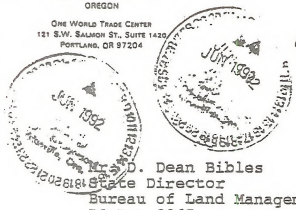
Letter from Senator Hatfield

MARK O. HATFIELD
OREGON

ONE WORLD TRADE CENTER
121 S.W. SALMON ST., SUITE 1420
PORTLAND, OR 97204

475 COTTAGE NE.
SALEM, OR 97301





United States Senate

WASHINGTON, DC

June 2, 1992

Mr. O. Dean Bibles
State Director
Bureau of Land Management
PO Box 2965
Portland, Oregon 97208

Dear Dean:

It has come to my attention that as a result of de[illegible] management planning on the Wild and Scenic North Fork Crooked River, an error has been found in the lower boundary of the river. Specifically, it is my understanding that when boundaries were being transferred to large scale maps, an error was found as to the location of the one mile point. I further understand that as a result of this error, approximately .3 mile of private land is included within the designated wild and scenic river boundary.

While there were instances where private lands were intentionally included in designated river segments in the 1988 Omnibus Oregon Wild and Scenic Rivers Act (P.L. 100-557), it was not the intention of the act's authors or the Congress to include this parcel of private land within the designated boundary in this case. It is my hope that you will exercise whatever administrative authority you may have to correct the maps so that the river corridor begins at the public land boundary.

Please let me know if you require additional background on the legislative history of this matter.

Warm regards.

Sincerely,

Mark O. Hatfield
United States Senator

MOH:ms

cc: The Honorable Bob Packwood
The Honorable Bob Smith
Mr. James L. Hancock

F

Regional Forester's Memo

United States Department of Agriculture | Forest Service | RO

Reply to: 2200 | Date: December 5, 1991

Subject: Implementation of Range Standards and Guidelines

To: Forest Supervisors

It has come to my attention there is a lack of consistency across the Region in the implementation of the range standards and guidelines found in the Forest Plans. Some Forests are implementing Forest Plan direction in the annual operating plans for the permittees, while others are implementing the standards through the development of new allotment management plans. The preferred approach is implementation through new or updated allotment management plans; however, the Region does not have adequate funds or staffing to address current range management issues in a timely manner through revision of allotment management plans. It is important that we move toward meeting Forest Plan direction as rapidly as possible within our capability. To accomplish this, we must place greater emphasis on annual operating plans and overall administration of permitted grazing. By copy of this letter, I am directing each of you to notify, in writing, each of your range permittees that the Forest Plan grazing standards and guidelines will be incorporated into their annual operating plan for the 1992 grazing season.

It is important every permittee understand the Forest Plan standards and guidelines for grazing use on their allotment. It is equally important that we work with each permittee to develop an operating plan that will move us towards meeting Forest Plan objectives. We must be sensitive to the needs of the permittees and their livestock operation. It is important for permittees to know we will work with them in the implementation of the new grazing standards with the understanding that it will take 2 to 3 years for some operations to make the adjustment. At the same time, the permittees need to demonstrate they are working towards full compliance with the terms and conditions of their grazing permit. The permittees need to be informed that in cases of blatant disregard of the requirements placed in the annual operating plan or terms and conditions of their grazing permits, the Forest Service will take appropriate actions to deal with the situation.

More than ever before, it will be important that conversations with permittees and findings during allotment inspections be well documented in the allotment and permit files. If you have questions or comments concerning the contents of this letter, please contact Noel Larson, Director of Ecology, Range and Watershed.

/s/ John F. Butruille

JOHN F. BUTRUILLE
Regional Forester

cc:
Directors

G

Memorandum of Understanding --Forest Service/ BLM

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
BUREAU OF LAND MANAGEMENT, PRINEVILLE DISTRICT
AND
UNITED STATES FOREST SERVICE, OCHOCO NATIONAL FOREST

I. Purpose

This agreement provides procedures to: (a) facilitate preparation of joint FS-BLM river plans and environmental studies on contiguous rivers within their areas of jurisdiction included in the Oregon Omnibus Wild and Scenic Rivers Act of 1988 (PL 100-557) and (b) further FS-BLM cooperation in meeting the requirements of the Wild and Scenic Rivers Act, National Environmental Policy Act (NEPA), National Forest Management Act (NFMA) and Federal Land Policy and Management Act (FLPMA).

II. Authority

The Forest Supervisor, Ochoco National Forest (USFS) has the delegated authority to enter into this agreement by Sec. 3, P.L. 90-542 and amendments thereto; and the District Manager, Prineville District (BLM) has the delegated authority under the Federal Land Policy and Management Act P.L. 94-579 and amendments thereto. Other authorities include:

A. National Environmental Policy Act (42 U.S.C. 4321 et. seq.)
B. Wild and Scenic Rivers Act (16 U.S.C. 1271-1287)
C. Economy Act (31 U.S.C. 686, 686b)
D. E.O. 11514
E. 40 CFR 1500-1508
F. 36 CFR 219, Subpart A

III. Definitions

A. Management Planning: The establishment of river boundaries and the development of a detailed management plan and environmental studies required by the Wild and Scenic Rivers Act.

B. Lead Agency: The Federal agency that will provide principle leadership and oversight in ensuring that a joint management plan is developed and reported.

C. Cooperating Agency: The agency that will support the lead agency in planning for and the execution of management plan, environmental studies and public participation.

IV. Responsibilities

A. The Bureau of Land Management, Prineville District, will serve as the lead agency and the USFS, Ochoco National Forest as the cooperating agency.

B. The two agencies will collaborate in establishing boundaries and preparing management plans and environmental studies for the following rivers designated under PL 100-557:

1. North Fork Crooked, Oregon - The 32.3-mile segment from its source at Williams Prairie to one mile from its confluence with the Crooked River in the following classes:

   a. the 3-mile segment from its source at Williams Prairie to the Upper End of Big Summit Prairie as a recreational river; to be administered by the Secretary of Agriculture;

   b. the 3.7-mile segment from the Lower End of Big Summit Prairie to the confluence with Deep Creek as a recreational river; to be administered by the Secretary of Agriculture;

   c. the 8-mile segment from the confluence with Deep Creek to the private land boundary one-half mile from Lame Dog Creek as a scenic river; to be administered by the Secretary of Agriculture;

   d. the 1.5-mile segment from the private land boundary to Upper Falls as a scenic river; to be administered by the Secretary of the Interior;

   e. the 11.1-mile segment from Upper Falls to Committee Creek as a wild river; to be administered by the Secretary of the Interior; and

   f. the 5-mile segment from Committee Creek to one mile from its confluence with the Crooked River as a recreational river; to be administered by the Secretary of the Interior.

2. South Fork John Day, Oregon - the 47-mile segment from the Malheur National Forest to Smokey Creek as a recreational river to be administered by the Secretary of the Interior. This segment includes Ochoco National Forest land adjacent to Black Canyon Creek and South Fork of the John Day River.

3. Crooked, Oregon - the 9.3-mile segment from the National Grassland boundary to Lake Billy Chinook, one mile west of Highway 97, as a recreational river to be administered by the Secretary of the Interior.

4. Deschutes, Oregon - the 19-mile segment from Oden Falls to the upper end of Lake Billy Chinook as a scenic river; to be administered by the Secretary of the Interior.

C. Develop joint program strategies and pool staffing and funding to accomplish work within legislated schedules. Contributions in the form of personnel or funding are based on percent of each agency's land included within a given river segment.

D. Develop and implement a joint public participation plan.

V. Administration/Agreement

It is agreed and understood by and between USFS and BLM that:

A. As the need arises, amendments may be proposed by either agency and shall become effective on approval by all parties.

B. It is recognized that parties to this agreement have responsibilities under statute or otherwise which cannot be waived or abrogated. This agreement does not affect such nondiscretionary mandates.

C. Nothing in this agreement shall commit the parties or their agencies to the expenditure of funds not authorized by law.

D. Either party may terminate this agreement by providing 60 days' written notice to the other party. This agreement will remain in force until work is completed.

E. No member of, or delegate to, Congress, or resident commission, shall be admitted to any share or part of this agreement or to any benefit that may arise therefrom.

F. This agreement shall be effective upon execution of both parties hereto.

VI. Effective Date: This agreement will become effective on the date of the last signature, and will remain in force unless and until terminated by Ochoco Forest Supervisor or Prineville District Manager.

Terry G. Dolberg
Forest Supervisor
Ochoco National Forest, USFS

Donald K. Smith 5/31/89
District Manager (Acting)
Prineville District, BLM

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PRINEVILLE DISTRICT OFFICE
185 EAST 4TH STREET
PRINEVILLE, OREGON 97738

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

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