

United States  
Department of  
Agriculture

Forest Service

Pacific  
Northwest  
Region

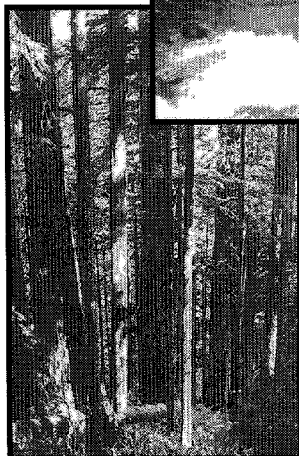
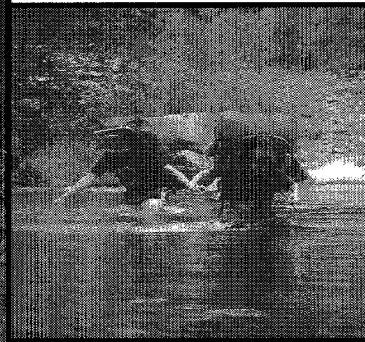
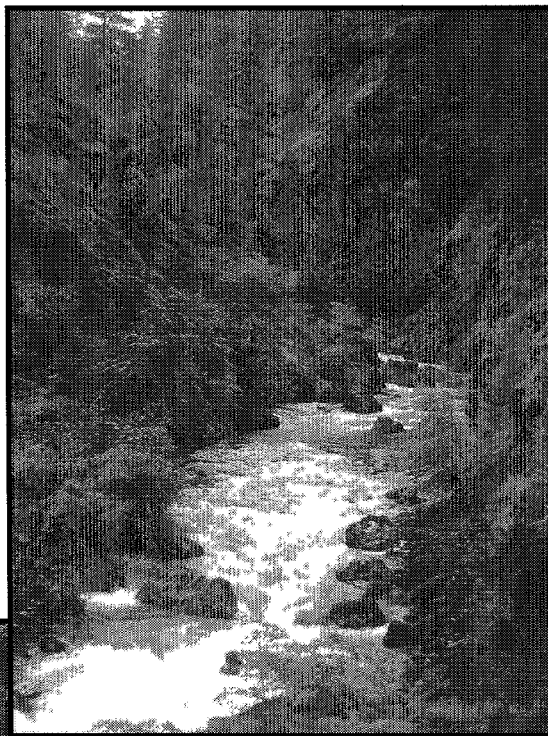
State of  
Oregon

# Management Plan

## Elk Wild and Scenic River

### Siskiyou National Forest State Parks and Recreation Department

1994



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United States  
Department of  
Agriculture

Forest  
Service

Siskiyou  
National  
Forest

200 NE Greenfield Road  
PO Box 440  
Grants Pass, OR 97526-0242

Reply to: 1920

Date: September 22, 1994

Dear Reader,

Enclosed is the Elk River Wild and Scenic River Plan. The Environmental Assessment and Decision Notice are located in Appendix A.

This plan is a joint effort with the State of Oregon. The Oregon Department of Parks and Recreation has the lead responsibility for the State for the planning for Elk River as a state designated scenic waterway.

Implementation of this plan will not occur until 30 days following the publication of the legal notice of the decision in the Grants Pass Daily Courier.

I appreciate the sincere efforts made by many people to help us develop the management plan for this valuable river. My thanks to each of you.

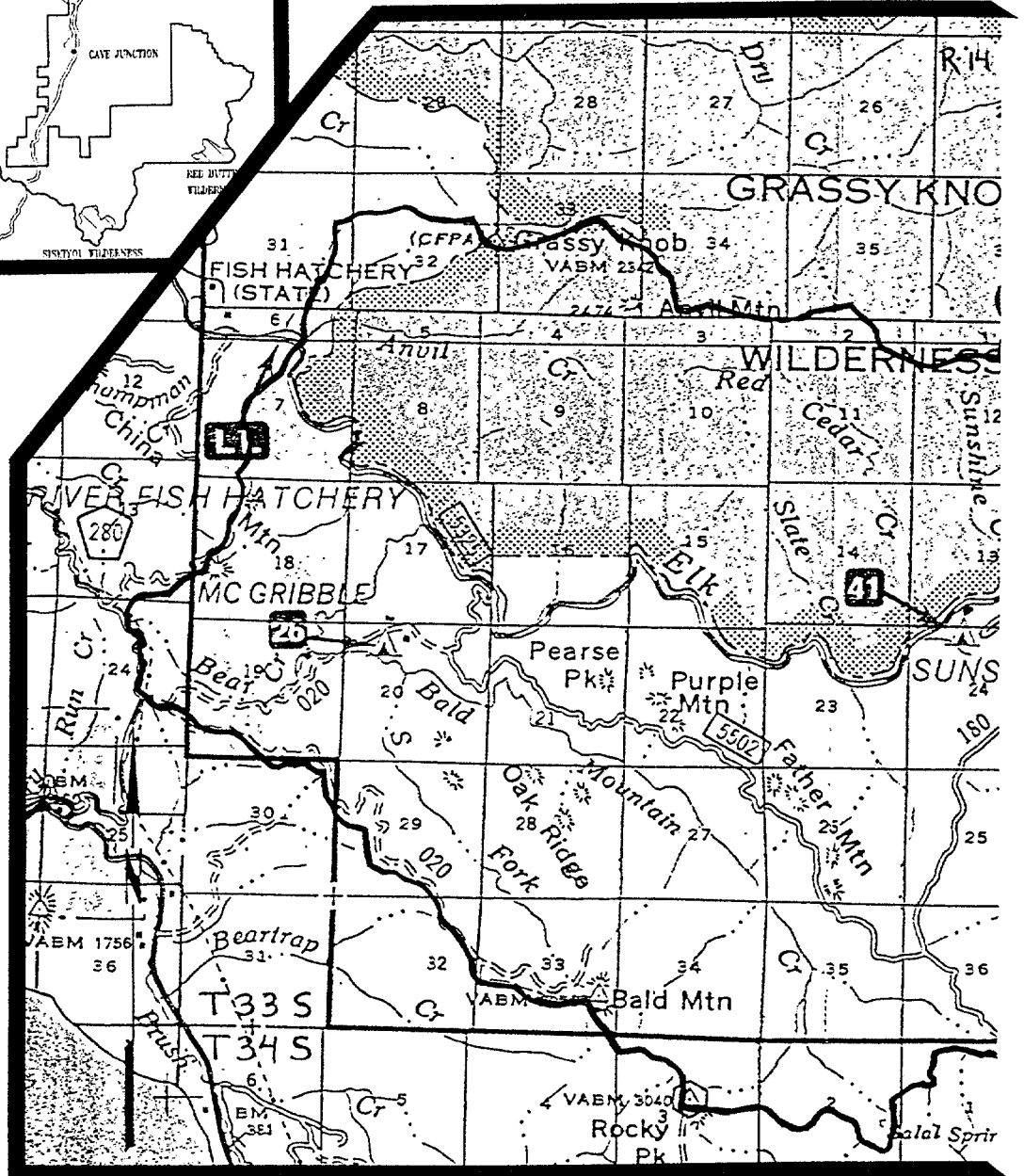
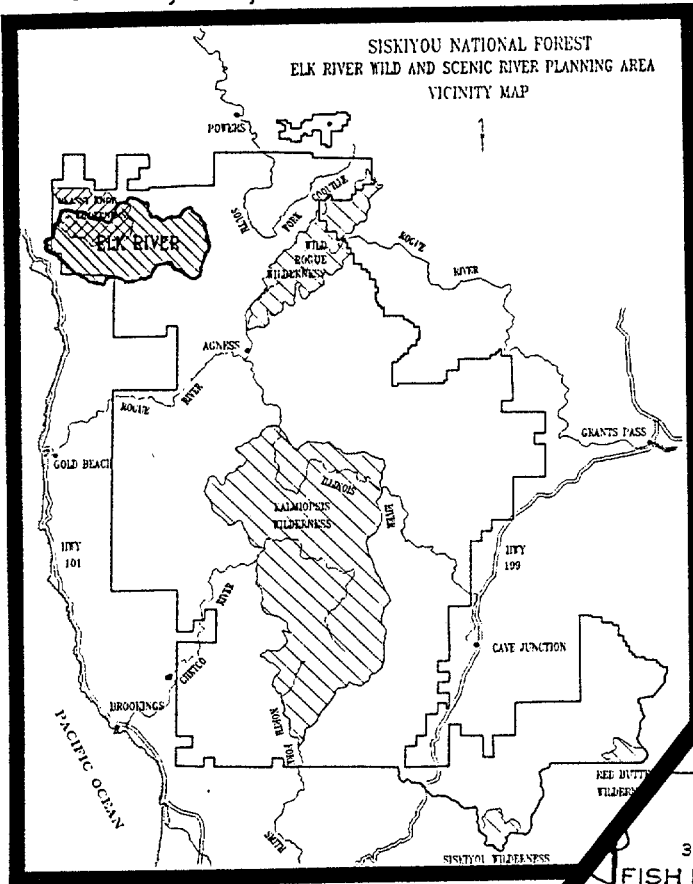


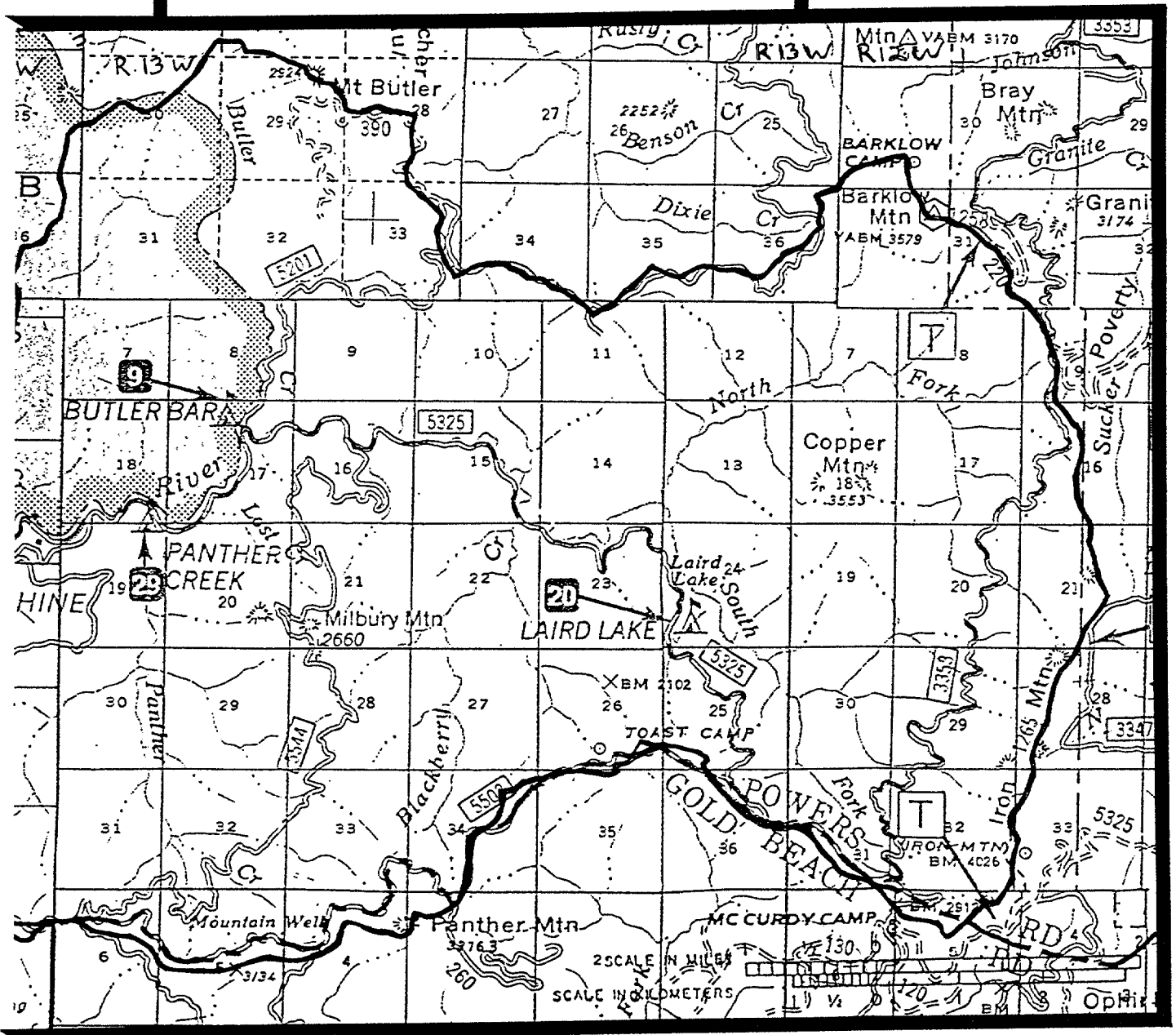
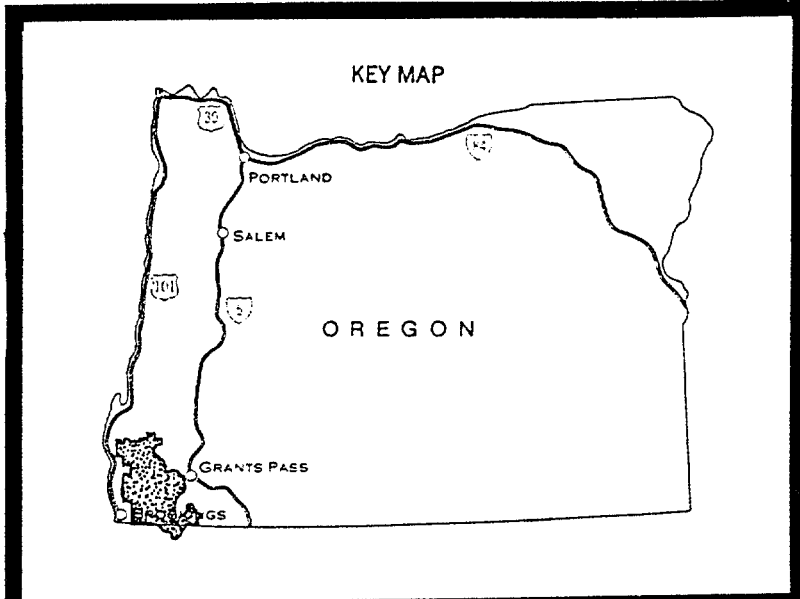
J. MICHAEL LUNN  
Forest Supervisor



Summary - Project Location

Figure S-1, Vicinity Map





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# **ELK RIVER MANAGEMENT PLAN**

## **CHAPTER I**





## *Purpose and Need*

- **The ROD and S & G's**

The Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range for the Northern Spotted Owl and the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Related Species Within the Range of the Northern Spotted Owl (April 13, 1994)
- **The Watershed Analysis**

The Elk River Watershed Analysis (1994) completed in accordance with the Aquatic Conservation Strategy in the President's Plan.
- **MA-2 - Wild River**

The Wild River area as defined and mapped as the Proposed Action Alternative
- **MA-10A - Scenic Recreation River**

The Scenic/Recreation River area as defined and mapped as the Proposed Action alternative.

## **Federal and State Designations for the Elk River**

### **Wild and Scenic River Designation**

Congress enacted the National Wild and Scenic Rivers Act in 1968. With this legislation, they established a system for protecting outstanding freeflowing rivers nationwide. The National Wild and Scenic Rivers Act requires that a river be freeflowing and possess one or more "outstandingly remarkable values". The Act provides protective management and control of development for rivers included in the system.

In 1988, the Omnibus Oregon Wild and Scenic Rivers Act added parts of forty rivers to the national wild and scenic river system. Part of the Elk River was designated Wild and Scenic under this legislation. The Congressional Record indicated that anadromous fishery, water quality and natural features qualify as outstandingly remarkable values on the Elk River.

Under the Wild and Scenic Rivers Act, a river may be classified as wild, scenic, or recreational. The classification of a river is based on the conditions of the river and adjacent lands, and the degree of development in the river corridor. The Elk River has two classifications:

- The 17-mile segment from the confluence of the North and South Forks of the Elk to Anvil Creek classified as a Recreational river. Recreational rivers are those rivers or segments of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundments or diversion in the past.
- The 2-mile segment of the North Fork Elk from the falls to its confluence with the South Fork, classified as a Wild river. Wild rivers are those rivers or segments 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.

During the interim period while the river management plan was being developed, the river corridor was defined as 1/4 mile on both sides of the river. Final boundaries were determined during the river planning process and vary considerably in width in order to incorporate critical fish habitat, variations in topography and geologic features adjacent to the river.

The 1989 Siskiyou National Forest Land and Resource Management Plan (Siskiyou Forest Plan) recognized the new legal status of the Elk River which was designated a Wild and Scenic River in 1988. The Siskiyou Forest Plan designated the recreation segment of the Elk River as Management Area 10 - Scenic/Recreation River, and designated the Wild segment of the river as Management Area 2 - Wild River. The Siskiyou Forest Plan also established Standards and Guidelines for Management Areas 10 and 2. These Standards and Guidelines have guided the interim management of the river corridor,

pending completion of the River Management Plan. The recently completed President's Plan amends the Siskiyou Forest Plan and through its Record of Decision and Standard and Guidelines (ROD and S&G's) establishes far greater protection than the Siskiyou Forest Plan. The River Management Plan will amend the Siskiyou Forest Plan to reflect changes in land allocations (Management Areas) and Standards and Guidelines for National Forest lands within the Elk River watershed.

### **Oregon State Scenic Waterway Designation**

Part of the Elk River is also designated as an Oregon State Scenic Waterway. The Oregon State Scenic Waterways program was established by voter initiative in 1970, and is administered through the Oregon State Parks and Recreation Department. This program also provides for river protection and some controls over development for rivers included in the system.

The Oregon Rivers Initiative, a statewide ballot measure, was passed in 1988 and added parts of many Oregon rivers, including the Elk River, to the State Scenic waterways program. Since both federal and state designations have the same general purpose, the dual federal and state designation does not present a conflict.

The U.S. Forest Service and the State Parks and Recreation department agreed to work together on the River Management Plan, and issue a joint plan. The Elk River Management Plan is a joint federal-state management plan for both the Wild and Scenic river and the State Scenic Waterway.

The termini and boundaries of the State Scenic Waterway designation are different from the Wild and Scenic Elk designation. The state designation includes the North Fork (6.1 miles), the South Fork (5.0 miles) and the mainstem (17.1 miles) from the confluence of the forks to the Elk River Fish Hatchery. The boundaries are 1/4 mile on both sides of the river, and by law are not subject to change in the river management plan.

### **Relationship of the River Management Plan to the Forest Plan**

The Wild and Scenic Rivers Act requires that a comprehensive River Management Plan be prepared to provide for the protection of river values. The Act requires that the plan address resource protection, development of lands and facilities, user capacities, and other management practices as needed. The Act directs that the River Management Plan shall be coordinated with and may be incorporated into resource management planning for the affected adjacent federal lands.

The Elk River Management Plan will amend the Siskiyou Forest Plan. The Siskiyou Forest Plan provides direction for all resource management programs, practices, uses and protection measures on the Siskiyou National Forest. Since the Siskiyou Forest Plan is already in effect, it will be amended to incorporate the River Management Plan and any changes to Standards and Guidelines. The following Management Areas will apply to the River Management Plan:

<b>Management Area No. - Name</b>	<b>Acres</b>
1 - Wilderness Within Corridor	392
2 - Wild River	642
10 - Recreation River	4,921
<b>Total</b>	<b>5,955</b>

The standards and guidelines for the new management areas will be incorporated into the Siskiyou Forest Plan as an amendment.

Planning for National Forests has two levels. The first level of planning, the programmatic level, includes the President's Forest Plan and the Siskiyou Forest Plan. This level provides overall goals, identifies potential projects, describes desired future conditions and establishes standards and guidelines for

## Values

management of various forest resources. The River Management Plan is in this category. The second level of planning is site-specific project planning. Individual projects are designed to achieve the goals and objectives of the Siskiyou Forest Plan. Project plans analyze proposals for specific sites such as new campgrounds or timber sales. Both levels are planned according to procedures in the National Environmental Policy Act (NEPA) including public notification and involvement.

The River Management Plan provides goals, desired future conditions, and standards and guidelines for the National Forest portion of the Elk River watershed. Second level, site-specific NEPA analysis must be done for specific projects designed to meet plan objectives. The River Management Plan establishes the final corridor boundaries for the Wild and Scenic Elk River and provides the necessary direction for lands within the river corridor.

## VALUES

The resource values are the "drivers" of plan development. The River Management Plan will protect and enhance the resource values, and address the issues. Early in the planning process, an interdisciplinary team completed a Resource Assessment (See Appendix D) in September 1991. The Resource Assessment evaluated the resource values, and determined which values were "outstandingly remarkable values" or "significant values" (federal planning process); or "special attributes" (state planning process).

Outstandingly Remarkable Values, Significant Values and Special Attributes:	-fish -water quality -scenic quality -ecological/botanical
---	---

### Outstandingly Remarkable Values and Special Attributes

The National Wild and Scenic Rivers Act requires that a river be freeflowing and possess one or more "outstandingly remarkable values." When the Elk River was designated Wild and Scenic in 1988, the Congressional Record indicated that anadromous fishery, water quality and natural features qualify as outstandingly remarkable values on the Elk River.

When the river planning team began work on a river management plan in 1990, they did a detailed, site-specific assessment of resource values on the Elk River. They found fisheries and water quality to be "outstandingly remarkable" river related values associated with federally designated sections of the river. Scenery and botanic/ecologic values were found to be "significant". While not found to be "outstandingly remarkable" or "significant" in themselves, geologic/hydrologic values were cited as contributing to the significant scenic values in the river corridor.

State of Oregon analysis indicated scenic quality and water quality to be to be "special attributes" along State Scenic Waterway sections. The state also supports fisheries as a "Special Attribute" in state scenic waterway sections except above the falls on the North Fork or on the South Fork.

To qualify as an outstandingly remarkable value/special attribute, each value must be a unique, rare, or exemplary feature that is significant at a regional or national level. The team's findings are summarized below.

#### Fish

The fisheries value of the federally designated sections of the Elk River is considered outstandingly remarkable based on the diversity of populations; excellent spawning and rearing habitat; downstream sport and commercial fishery (outside the designated portion); high productivity for its size; national reputation for excellent fishing; and the focus for fisheries research. The State of Oregon, however, does not find the fisheries above the falls on the North Fork or on the South Fork to be special attributes of the exclusively designated State Scenic Waterway.

## Water Quality

The excellent water quality in the Elk River is recognized as being a critical component of several river values and is found to be an outstandingly remarkable value of the federally designated section of the river and a "special attribute" of the state designated portions of the river.

1. The striking blue-green color and crystalline water quality is exceptional and contributes significantly to the high scenic values of the river.
2. The ability of the river to clear far more quickly than other heavily fished streams in the region following storms attracts sport fishermen to the river and adds to the downstream recreational fishing value. Water clarity also attracts swimmers, campers, boaters, and other recreationists.
3. Low turbidity, cool temperatures, and lack of pollutants contribute to the excellent habitat and high fisheries value.

## Scenic

The combination of water color, exposed rock surfaces, dynamic flow, and relatively undisturbed environment creates an interesting and beautiful landscape throughout the year. The scenic quality of the river corridor draws on the geology, landforms, water, and vegetative features to create a significant value along the federally designated sections.

The scenic value of the designated scenic waterways corridor along the main stem of the Elk River as well as the North fork and the South fork of the Elk River are considered by the State Parks Department to be a special attribute of the Elk River Scenic Waterway.

## Ecological/Botanical

The ecological significance of late-successional forest is important as it relates to other values (scenic, wildlife, fisheries), and all age classes in the corridor are important to the functioning of the river system. Late-successional stands with Douglas-fir as the major species cover approximately half of the corridor acres, primarily occurring in the Recreation segment.

While other coastal rivers may have the potential for having a higher diversity of species, Elk River is unique due to (1) being a river that is relatively long and far reaching into the forest interior, (2) having the majority of that length under publicly controlled management, and (3) already having existing stands of mature forest that contribute to exceptional scenic, fisheries, and water quality values.

## RIVER DESCRIPTION

The Elk River flows west and northwest from its headwaters on Iron Mountain to its mouth, located several miles north of Port Orford on the southern Oregon coast. The 19-mile segment of the Elk River designated as a component of the National Wild and Scenic Rivers System in 1988 is located almost entirely on Siskiyou National Forest land. The final boundary of the Federal designation varies from 1/4 to 3/4 mile in width and is described in Appendix B.

Located in Curry County of southwestern Oregon, the Elk River drainage encompasses 59,520 acres, with 46,965 acres within the Siskiyou National Forest boundary. The mainstem of Elk River enters the Pacific ocean about five miles north of the coastal town of Port Orford.

The 19 mile federally designated Wild and Scenic segment of the Elk River is subdivided into the following two segments: a 17-mile segment from the confluence of the North and South Forks of the Elk to Anvil Creek, classified as a Recreational river, and a two mile segment of the North Fork Elk from the falls to its confluence with the South Fork, classified as a Wild river.

## *River Use*

For the federally designated segments, the north bank of the Recreational segment extends 300 feet into the southern boundary of the 17,200-acre Grassy Knob Wilderness. Approximately 9.5 miles of the river corridor (totalling 392 acres) is in the Wilderness.

The Designated State Scenic waterway includes the entire North Fork (6.14 miles), the entire South Fork (4.97 miles), and 17.11 miles of the mainstem from the confluence of the Forks to the Elk River Fish Hatchery. The boundary for the State designation is administratively determined at 1/4 mile from the high water mark on both sides of the river.

The Elk River watershed is located in the northwestern corner of the Klamath Physiographic Province. Recent and on-going uplift has created high relief and rugged, steep terrain. The mainstem is fed by six major tributaries or subwatersheds and numerous small streams called facing drainages. The unique characteristics of the subwatersheds and facing drainages are important to understanding the complex interrelationships and interactions of the river ecosystem. Landslides and surface erosion are long-term processes which have formed the landscape. Numerous small debris slides and slumps occur along the banks of incised streams and deliver large wood and sediment directly to stream channels. Details of these processes are discussed in the Watershed Analysis for the Elk River (1994),(Appendix E).

The scenic quality in the river corridor is a result of a combination of the geology, landforms, water, and vegetation features. The lower section of the river corridor flows through a steep canyon with exposed rock surfaces, forming an inner-gorge environment. Upstream, the gorge widens slightly, but the adjacent lands remain very steep. The south fork of the Elk River is relatively undisturbed by logging activities but there have been a number of previous timber sales on the upper North Fork.

The narrowness of the main river canyon limits the viewtime of any one point of negative intrusion for travelers along the river road. The stream banks are well vegetated and limit the viewscape. Note: The principle viewpoints are from a paved road that parallels the river for nearly the entire recreation section.

There is an abundance and variety of vegetation including conifers, swordfern, red alder, bigleaf maple, and numerous species typical of the marine-influenced western hemlock plant associations. Conifer stands with large Douglas-fir as the major species cover approximately half of the corridor acres, primarily occurring in the Recreation section. These old growth stands are interspersed with younger conifer stands.

Annual precipitation in the Elk River Basin ranges from 90 inches near Anvil Creek to 120 inches at higher elevations. Approximately 80 percent of the precipitation occurs between October and March and only 4 percent occurs in June, July, and August.

## **Access**

National Forest Road 5325 parallels Elk River along the federally designated Recreation section from US Highway 101 and provides access to the many pools, swimming holes, campsites, and picnic areas located on the river. However, access to the river is limited with only 31 pullouts along 11 miles of paved road. Only 15 access points are known, many with steep narrow trails.

There is one existing developed campground at Butler Bar and a primitive campground at Sunshine Bar. Forest Service Road 5325 receives recreation, administrative, and timber haul traffic and provides few opportunities for passing.

The Wild Segment on the North Fork is accessible by road for a short distance near its confluence with the main stem by hiking into a canyon about 1/4 mile to the stream and then walking/wading up the rugged stream bed.

The river corridor of the South Fork is relatively narrow and steep. The South Fork is only accessible at one point by road. Visitors wishing to view the scenery must hike the rugged river bed or view it from ridge tops.

## **RIVER USE**

Recreation use in the designated corridor is low. Local citizens of Port Orford and other south coast communities use the river frequently in the summer months for swimming, picnicking, camping and sightseeing. Hunting, particularly within upland areas, is popular due to the habitat created as a result of timber harvest. Elk River receives a light amount of whitewater boating use primarily between Slate Creek and the fish hatchery. Kayaks make up the majority of users. Rafts occasionally use the reach, but drift boats are very rare. Low summer flows which average between 49 and 77 cubic feet per second (cfs) preclude float boating. High late winter and spring flows which range between 265 and 1303 cfs require expert skills.

The chinook salmon run on the Elk is regionally and nationally renowned and attracts hundreds of sport anglers every year. However, the vast majority of sport fishing is done outside of the designated corridor. A short segment of the lower Recreation section (from Bald Mountain Creek to Anvil Creek) is open for salmon and steelhead fishing. Drift boating in this section is virtually impossible and foot access is difficult. Both federal and state designated segments are open for trout fishing and get occasional use during the summer and fall for resident trout or sea-run cutthroat. Catch statistics are not available, but it appears that the trout fishery is used mostly by local residents. Estimated Recreation Visitor Days for fishing in the designated sections has averaged 1000 days for the last several years (1986-1989) and is predicted to increase slightly to 1122 by the year 2000.

Some local camping and hiking does occur, but is limited in the amount of use due to the wet winters and steep terrain. Eight dispersed campsites are located along the river including Sunshine Bar, with a capacity of 35 people. Most of these campsites are primitive. Only Sunshine Bar has a vault-type toilet. Butler Bar is the only developed campground in the corridor. Campground use runs less than 50% on summer weekends with very little use in the winter months. There are no trails within the river corridor.

## **LAND OWNERSHIP AND LAND USE**

Private land use below the National Forest boundary includes private residences, fishing resorts, RV parks, forest management, and various agricultural activities including grazing. The general zoning classifications are Rural Community, Rural Exception, Timber, Rural Resort, and Agriculture.

Private land use within the National Forest boundary is under the jurisdiction of county and state land use regulations including the State Scenic Waterways Program. State officials advise local land use agencies when their regulations are inconsistent with the provisions of the Oregon Scenic Waterways Act.

The federal government may identify areas within the National Forest boundary where purchase of conservation easements on private lands is desirable to protect river-related values.

### **Private Lands within the Federal Wild and Scenic River Corridor**

There are 12 acres of private land within the federally designated corridor which are zoned timber Zone (T) (timber lands). The federal government does not control development and use of private land except through Conservation Easements. No Conservation Easements are needed within the corridor at this time.

### **Private Lands within the Scenic Waterways Corridor**

Within the State Scenic Waterways corridor there exists only one privately owned parcel of land consisting of 38 acres which is zoned Timber Zone (T) (timber lands). The rest of the State Scenic Waterway corridor is federal land managed by the Siskiyou National Forest.

## Navigability of the Elk River

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. The beds of non-navigable waterbodies remained in the ownership of the United States or its grantees. The navigability of the Elk River from Butler Bar to the Pacific Ocean has not been established. Currently, the state, and in some instances private property owners, claim ownership of the river's bed and bank below the Elk River Fish Hatchery. This river plan does not propose to address the issue of navigability. Rather, this river plan is intended to provide a management philosophy for the segment above the fish hatchery.

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 public recreation are of paramount importance, too.

The original federal test for determining navigability was established in *The Daniel Ball* case over 100 years ago. This U.S. Supreme Court admiralty 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 adopted this test for title purposes and have ruled that a waterbody is navigable if it was capable of use, at the time of statehood, as a public highway for transporting goods or for travel in the customary modes of trade and travel on water.

DSL has determined that there is sufficient evidence to support a claim of navigability and state ownership for the beds and banks of the Elk River at least from the Elk River Fish Hatchery to the Pacific Ocean. The position of the Forest Service is that the navigability of the river has not been established.

For purposes of managing the portion of this river (where navigability has not been established), any non-federal activities or land uses such as new utility or transportation corridors and boat ramps or similar facilities that impose into or cross a waterway below ordinary high water will require an easement from the State Land Board. Existing non-federal 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 non-federal use that occupies any area of submerged or submersible land requires a waterway lease.

Further, 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 the State's waterways. The permit-review process involves coordination with the natural resource and land use agencies from the local through the federal levels. Within Oregon Scenic Waterways, special authorization is needed from the Board and DSL for "any alteration of the beds and banks" of the Elk River within the plan area. (ORS 390.835).

Nothing set forth herein shall limit the ability of the Forest Service to administer this segment of river.

As with any jointly managed resource, jurisdiction is not as important as care for the resource. The DSL and the 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.

## County Land Use Regulations

The Curry County Comprehensive Plan acknowledges the existence of the State Scenic Waterway and the Federal Wild and Scenic River status for the Elk River. The following provisions for protection currently exist:



### **Section 3.230 Scenic Waterway Areas Overlay Zone (SW)**

Designated state and federal scenic rivers have a Scenic Waterway Areas Overlay Zone applied. This overlay zone identifies the area as 1/4 mile from the centerline of the river. The law, however, identifies the zone as 1/4 mile from the banks of the river. This results in an inconsistency.

### **Section 3.231 Uses Permitted in Identified Scenic Waterways Areas**

Any use permitted in a zoning district shall be allowable on lands adjacent to Scenic Waterways located in the county provided that:

- If the property proposed for use is located within one quarter mile of the centerline of the river, then no building permit shall be issued unless the applicant has obtained a notice to proceed from the Scenic Rivers Program, Parks Division, Oregon Department of Transportation; or the time limit for State acquisition has expired.
- If the property proposed for use is located within the legal boundaries of a National Wild and Scenic River, as established by Act of Congress, then no building permit shall be issued unless the applicant has obtained an authorization from the administering agency for construction on property subject to a scenic easement.
- The uses allowed by the Curry County Zoning Ordinance are consistent with those permitted by the Nation Wild Scenic Rivers Act and the Oregon Scenic Waterways Act on those lands regulated by these laws.
- Single-family residential densities in the scenic waterway areas shall be defined by the densities allowed by the National Wild and Scenic River Act and the Oregon Scenic Waterways Act and the Curry County Zoning Ordinance.
- No divisions of land for developmental purposes within the scenic waterways areas shall be approved by the County until the residential density of the property is established under the National Wild and Scenic River Act and/or the Oregon Scenic Waterways Act.
- Minimum lot sizes for divisions of land for the purpose of construction of a dwelling within the scenic waterways area shall be determined by the area necessary to provide an adequate water supply, sewage disposal, access, and setback requirements and not the lot specified for resource use of the land.

Further protection that the county provides is found in Article IV Supplementary Provisions and states as follows:

### **Section 4.011. Riparian Vegetation Set-back**

All structural development shall be set back fifty (50) feet from the stream bank of all perennial streams unless after consultation with the Oregon Department of Fish and Wildlife it is found that reduction of the setback will not jeopardize stability, water, and wildlife habitat quality. The present riparian set back for construction is important but does not control what a landowner does with riparian vegetation.

# **ELK RIVER MANAGEMENT PLAN**

## **CHAPTER II**

## **CHAPTER II**

# **MANAGEMENT GOALS AND DESIRED FUTURE CONDITIONS**

### **FEDERAL MANAGEMENT GOALS**

Management Goals for the Siskiyou National Forest are found in Chapter IV of the Siskiyou Forest Plan. The management goals in the following table supplement Management Goals in the Siskiyou Forest Plan and will help guide implementation of the Elk River Management Plan and also help to define the desired future conditions for the various management areas in the Elk River watershed. Many of these goals come directly from the President's Forest Plan.

1. Protect the river's freeflowing character and maintain and enhance its outstandingly remarkable values, significant values and special attributes: fish, water quality, scenery, and botanic/ecologic.
2. Maintain or enhance the natural and rustic characteristics of existing developments.
3. Maintain, restore and enhance the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.
4. Maintain, restore and enhance the distribution, diversity, and complexity of the river to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.
5. Maintain and restore the sediment regime which the aquatic system evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.
6. Maintain in-stream flows sufficient to create and sustain riparian and aquatic habitats and to retain patterns of sediment, nutrient, and wood loading. The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.
7. Maintain, restore and enhance water quality necessary to support healthy riparian and aquatic ecosystems. Water quality must remain in the range that maintains or enhances the biological, physical, and chemical integrity of the ecosystem, benefitting survival, growth, reproduction, and migration of individuals composing its aquatic and riparian communities.
8. Maintain, restore and enhance the species composition and structural diversity of plant communities in riparian zones to provide adequate summer thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion and channel migration and to supply amounts and distributions of large wood sufficient to sustain physical complexity and stability.
9. Maintain, restore and enhance habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.
10. Protect and enhance conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth related species including the northern spotted owl and marbled murrelet.
11. Protect the integrity of wilderness areas and associated wilderness values.
12. Protect threatened, endangered, and sensitive species of plants, fish and wildlife found in the corridor.

## *Desired Future Condition of the River Corridor*

13. Strive to develop effective, compatible, and consistent land use management through coordination with local land use planning authorities.
14. Emphasize user education and information. Establish as few regulations as possible and ensure that any regulations established are enforceable and enforced.
15. Develop a management plan that is reasonable, cost-effective, viable and achieves protection of the river's outstandingly remarkable values.

## **STATE MANAGEMENT GOALS**

1. To protect the freeflowing character of designated rivers for fish, wildlife, and recreation. No dams, reservoirs, impoundments, or placer mining activities are allowed on scenic waterways.
2. To protect and enhance scenic, aesthetic, natural, recreation, scientific, and fish and wildlife values along scenic waterways. New development or changes of existing uses proposed within a scenic waterway are reviewed before they may take place.
3. To protect special attributes of the river while recognizing existing land uses and management practices on adjacent lands.
4. To protect private property rights. The Scenic Waterways Act discourages unsightly structures or inappropriate development that could be a nuisance to neighboring landowners or even depreciate property values. It prohibits pollution and the disturbance of adjacent surface lands by placer mining. It also prohibits public use of private property without explicit consent of the landowner.
5. To promote expansion of the scenic waterway system. The Scenic Waterways Act sets up a process for adding new rivers to the system and establishes criteria for candidate rivers, duration, and spatial distribution of peak, high, and low flows must be protected.
6. To encourage other local, state, and federal agencies to act consistently with the goals of the program, Oregon State Parks reviews plans and decisions made by other agencies to ensure consistency with scenic waterways program.

## **DESIRED FUTURE CONDITION OF THE RIVER CORRIDOR**

### **Management Area 10 - Recreation River**

#### **Scenery and Vegetation**

**LANDSCAPE VIEW** - The overall character and appearance of the Recreation segment of the Elk River corridor will be dominated by late successional forest. The overall vegetative landscape will be natural with standing dead and down trees common. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.

**STAND LEVEL VIEW** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. The visually sensitive travel corridors will be managed to maintain a natural or near natural setting. Openings in vegetation that provide views of the river from the road will be maintained or enhanced in a manner which maintains the natural character of the landscape. Routine activities such as road and campground maintenance will be conducted in a manner that maintains the late successional character of the forest.

## **Water Quality and Quantity**

The Elk River has high quality water. The water quality and quantity of the Elk River will provide for the Outstandingly Remarkable Values of the river, including its fisheries, recreational activities, and wildlife. Management will continue to provide for the high water quality that makes the river important, including low turbidity (except during high flow periods), low levels of contaminants and pollutants, and suitable cool temperatures for the fish using the river.

Riparian areas along the river will be improved where they have been degraded in the past and existing high quality areas will continue to be protected, maintained and where possible, improved. These important areas will better be able to improve water quality, reduce erosion and sedimentation, provide shade, and supply large wood to the stream.

## **Botany/Ecology**

The different ecosystems in the river corridor will be perpetuated and where possibly enhanced. This will maintain native plant communities and their habitats, and provide protection to federal, state and Oregon Natural Heritage Program listed rare, sensitive, threatened and endangered species. No increase in noxious weed species will be evident. In many locations colonies of noxious weeds will be eliminated or reduced. Management activities and facility development will limit any adverse impacts to vegetation, and revegetation activities will be done with native species, where possible.

## **Wildlife**

Habitat quality for wildlife species will be maintained or improved throughout the river corridor with a focus on late-successional coniferous forest habitat.

## **Fisheries and Fish Habitat**

The future condition of the Elk River and its tributaries will be one in which abundant high quality habitat will be capable of supporting healthy wild anadromous and resident fish populations. Fishing management activities, (including regulations and enforcement) will provide for the protection of wild stocks and for continued high quality fishing experiences in the lower river.

Management for wild fish stocks will continue to be the priority of all partners in the watershed. The escapement goals for wild fish will be compatible with the South Coast Basin Fish Management Plan by ODF&W. In the interim, the following escapement numbers for the different species of fish are the best estimates for seeding the available habitat and providing nutrients which benefit the stream ecosystem. Note: these numbers only apply to the habitat on the Siskiyou National Forest upstream from the fish hatchery.

Chinook:

2200 to 2900 female adult fish with normal age composition (mostly age 4 and age 5 fish).

Winter Steelhead:

690 to 750 female adult fish

Coho:

125 to 150 female adult fish

Sea-run and resident cutthroat trout:

1000 to 1200 female adult fish

These interim numbers will change as new information becomes available and the Oregon Department of Fish and Wildlife's south coast basin plan is completed. The actual numbers and spatial and temporal distribution will vary with environmental factors, ocean conditions, harvests, and local disturbances. These subjective numbers can help evaluate the health of the populations.

## **Recreation**

The high quality of Elk River recreational experiences will continue to attract a growing number of users. Actions will reduce resource problems for parking, camping and access points along the river. In some cases facilities will reduce sanitation problems. Overall, the use along the river will be very similar to what is currently taking place and be compatible with the Forest Plan, as amended by the President's Plan (Page C-34, RM-1 to RM-3).

## **Facilities**

In order to accommodate current and anticipated use, some areas will have been upgraded and improved to provide better sanitation facilities and improved access to the river. All upgraded facilities will be designed to blend in with the natural setting. Special emphasis will be to provide opportunities for barrier-free access to selected sites along the river. Rest room facilities will be provided in higher use locations so proper sanitation is maintained. Facilities will continue to provide a less developed type of experience than is found in state and private campgrounds typical of the Oregon Coast.

**TRAILS** - No trail will be built to access the North Fork Elk River. Proposals to reestablish existing trails or create new ones will be studied on a case by case basis. Where such proposals are consistent with management goals for the river and provide protection of Outstandingly Remarkable Values, they may be approved.

**OVERNIGHT CAMPING** - There will be a slight improvement in developed camping opportunities owing to improvements at Butler Bar Campground. Dispersed campsites will be improved as well at Sunshine Bar. Most other dispersed campsites along the river will remain open. However, some dispersed sites may be closed temporarily or permanently to protect vegetation and prevent degradation of the site.

**OFF-HIGHWAY VEHICLES** - Motorized vehicle use will be confined to roads and trails marked open for this use.

## **Mining**

The Recreation segment will be formally recommended for withdrawal from mineral entry. Mining will be allowed within the recreation section on claims that predate the withdrawal where valid existing rights are determined through mineral examination. Operations will be subject to mitigation measures that fully protect Outstandingly Remarkable Values.

Recreational gold panning, basic "rockhounding", and personal use collection of common variety minerals such as soapstone will be allowed provided such activities are done in a manner compatible with the management goals for the river.

## **Cultural Resources**

Prehistoric and historic cultural resources in the corridor will be documented and evaluated as to their significance and eligibility to the National Historic Register. Those resources found to be significant will be protected, maintained or enhanced. Any project or activity that will affect known or have potential to affect unknown cultural resources will assess their effects on cultural resources and any adverse effects will be mitigated.

## **Private Property**

Private Property rights will be recognized and protected. Information will be provided to landowners to assist them in the management of their lands to better protect the river's values.

## **Relationships**

Cooperation between the Forest Service, State Agencies and Curry County will continue to be emphasized, resulting in efficient, consistent management of the Elk Wild and Scenic River Corridor. The public will be given a meaningful opportunity to participate in decision making that affects the management of the river. Partnership opportunities will be expanded between governmental agencies and different groups that may be using the river.

## **Management Area 2 - Wild River**

### **Scenery and Vegetation**

**LANDSCAPE VIEW** - The overall character and appearance of the Wild segment of the Elk River corridor will be dominated by late successional forest. The landscape will have many standing dead and down trees. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.

**STAND LEVEL VIEW** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. There will be very little evidence of human intrusion.

### **Water Quality and Quantity**

Same as Recreation segment.

### **Botany/Ecology**

The Wild segment will develop late-successional forest characteristics.

### **Wildlife**

The Wild segment will continue to provide habitat for wildlife, especially species inhabiting riparian and late-successional forest habitat.

### **Fisheries and Fish Habitat**

The high quality habitat for resident and anadromous fish will continue to be maintained. The Wild River segment will provide a refuge for anadromous fish for reproduction and rearing.

### **Recreation**

Recreational use of the Wild Segment will be discouraged. No signs, trails or facilities will be provided. Motorized vehicle use will be prohibited. For visitors willing and able to explore the area on foot, the Wild segment will provide an opportunity for peace and solitude.

### **Mining**

The Wild segment is withdrawn from mineral entry. Mining may occur on claims that predate the withdrawal where valid existing rights exist and with mitigation measures that fully protect Outstandingly Remarkable Values.

*Desired Future Condition of the River Corridor*

### **Cultural Resources**

Same as Recreation Segment.

### **Monitoring**

Same as Recreation Segment.

### **Management Area 1 - Wilderness within Corridor**

Desired Future Conditions for wilderness within the corridor are the same as those found for Management Area 1 - Wilderness, as stated in the Siskiyou Forest Plan.



# **ELK RIVER MANAGEMENT PLAN**

## **CHAPTER III**

## CHAPTER III

# STATE SCENIC WATERWAY MANAGEMENT PROGRAM

### OVERVIEW

State Scenic Waterways are administered by the Oregon State Parks and Recreation Commission, and staffed by the Oregon State Parks and Recreation Department. In practice, this means that the Commission makes decisions such as approving a river management plan or approving major development proposals within the scenic waterway. The Department carries out work such as developing a draft management plan, reviewing minor and major development proposals, and making recommendations to the Commission.

Land management rules have been adopted to govern scenic waterways (OAR 736-40-30, 35); a copy of these is included in Appendix C. In addition to the general rules, specific rules are created for the management of each river segment. These rules are developed to maintain the existing character of the designated river corridor. The specific rules for the scenic waterway portion of the Elk River are listed later in this chapter.

The State Scenic Waterways Act and the Commission's rules require the evaluation of proposed land use changes and development within 1/4 mile from each side of the river. Any land use changes and development proposals must be evaluated for their potential impacts on aesthetic and scenic values, as viewed from the river. Property owners who want to build roads or houses, develop mines, harvest timber, or begin other similar projects, must provide written notification to the Oregon State Parks and Recreation Department before beginning the project. The Department's evaluation of the project will be coordinated with the local jurisdiction and with other natural resource agencies, both federal and state, that have regulatory responsibilities. Using its river classifications and land management rules, the State Parks and Recreation department will determine if the proposed project or development is compatible or incompatible with the scenic waterway. The landowner may not begin the project until written approval has been given by the Department. The Department and/or the Commission will work with the landowner to reach a mutually satisfactory resolution of any conflicts. When a resolution cannot be reached within one year of the original notification, the Commission must either pay the property owner for the land or the development rights, or allow the project to go ahead.

Local and state agencies must comply with the scenic waterway law and land management rules. The State Parks and Recreation Department also works closely with other state agencies and federal agencies to ensure that their actions are compatible with the scenic waterway law, land management rules, and resource management recommendations. A memorandum of understanding between the United States Forest Service and the Bureau of Land Management with Oregon State Parks and Recreation Department has provided the framework by which USFS and BLM will notify and consult with the Oregon State Parks Department regarding land use activity on federal lands. A copy of the memorandum of understanding is included in this appendix.

### CLASSIFICATIONS

Each scenic waterway is classified into one or more of six possible classifications, according to its present level of land development or landscape alterations. The six classifications reflect a range of land uses and development conditions along the river. The standards for acceptable development vary among the six classifications; the goal is to maintain the existing scenic condition of the river. Once the classifications are established for a scenic waterway, proposals for new developments or landscape alterations are evaluated by the standards of acceptable development for that classification.

The six classifications are defined below. The classifications used for the Elk River Scenic Waterway are marked with an asterisk(\*).

<b>Natural River Area *</b>	Area is undeveloped, and its condition is generally pristine or near pristine. It is accessible only by trail, boat, or airplane. These areas are primitive, very scenic, conveying a sense of solitude. Human use in a Natural River Area is usually limited, any structures or indication of settlement are rare or scattered.
<b>Accessible Natural River Area</b>	An Accessible Natural River Area is similar to a Natural River Area in character and lack of development. The only difference between the two classifications is that an Accessible Natural River Area can be usually reached by road. Typically, the access road is unsurfaced and passable only during warm dry seasons.
<b>Natural Scenic View Area</b>	One riverbank is largely undeveloped, inaccessible, or primitive in character, while the opposite bank is accessible and developed. Because of the difference between the two riverbanks, each riverbank may be classified separately.
<b>Scenic River Area *</b>	Area may be accessible by roads, but is largely undeveloped with a natural appearance, except for agriculture and grazing. Area is managed to maintain or enhance its high scenic quality, recreational value, fishery, and wildlife habitat; area's largely undeveloped character is preserved, but agricultural uses are allowed to continue.
<b>Recreational River Area</b>	Area is readily accessible by road or railroad, with some agricultural, commercial, and/or residential development along the banks; river may have undergone some impoundment or diversion in the past. Area is managed to allow river-oriented public recreation to continue to the extent that it does not substantially impair the natural beauty of the scenic waterway or diminish its aesthetic, scientific, recreational, and fish and wildlife values.
<b>River Community Area</b>	Area is densely developed, with residential housing or a subdivision. Area is managed to allow development compatible with county zoning to allow development compatible with county zoning and that blends into the surrounding natural landscape. Area is also managed to protect riparian vegetation, and encourage activities that enhance the landscape.

## STATE CLASSIFICATIONS FOR THE ELK RIVER SCENIC WATERWAY

### Fish Hatchery to the West Boundary of the Grassy Knob Wilderness

This scenic waterway segment is classified as a Scenic River Area.

Explanation: The classification for this segment recognizes the presence of the paved highway along Elk River along the south side of the main stem.

### River Fronting the Grassy Knob Wilderness

This segment of Elk River has a dual classification. The north side fronting the Grassy Knob Wilderness is classified as a Natural River Area. The side of the river with the road is classified as a Scenic River Area.

Explanation: The dual classification for this segment recognizes the presence of a Wilderness Area on one side of the river and a paved road which parallels the river on the other side with several developed campground areas that are along the river.

### **Main Stem from the East Edge of the Grassy Knob Wilderness to the Confluence of the North Fork and the South Fork**

This segment of Elk River is classified as a Scenic River Area.

Explanation: The classification for this segment recognizes the presence of the highway and dispersed camping along the south bank of the river at the Butler Bar campground.

### **North Fork from the Confluence up to Northwest Corner of Section 17**

This segment of Elk River is classified as a Natural River Area.

Explanation: This classification recognizes the Federal Designation for this stretch of river as a Wild River section and is undeveloped and undisturbed.

### **North Fork from the Northwest Corner of Section 17 up to the Source Headwaters**

This segment of Elk River is classified as a Scenic River Area.

Explanation: The classification for this segment recognizes that this area has had significant timber management activities in the past which have altered this area. It is no longer in its natural state.

### **South Fork from Confluence of Main Stem to the Intersection of Elk River with Section 30**

This segment of Elk River is classified as a Natural River Area.

Explanation: The classification for this segment recognizes that this area is relatively undisturbed by human made alterations.

### **South Fork from Intersection with Section 30 Up to the Source Headwaters**

This segment of Elk River is classified as a Scenic River Area.

Explanation: The classification for this segment recognizes that significant timber management activities in the past have altered this area and it is no longer in its natural state.

## **LAND MANAGEMENT RULES FOR THE ELK RIVER SCENIC WATERWAY**

The land management rules established for each river classification generally allow continued use of existing structures and improvements, and some new construction (OAR Chapter 736 Division 40 listed in this appendix). Though some improvements require notification, review, and approval, many others do not. Notification and approval is not needed for the construction of new fences; maintenance of farm buildings, fences, or outbuildings; laying of irrigation lines; crop rotation; removal of danger trees; construction of grain storage facilities under certain conditions; maintenance of existing residences and outbuildings; minor residential remodeling; construction of garages adjacent to existing homes; certain changes in homesite landscaping; maintenance of roads and bridges; and firewood cutting for personal use. However, few of these situations exist on the Elk River.

## **LAND MANAGEMENT RULES FOR INDIVIDUAL SEGMENTS OF THE ELK RIVER SCENIC WATERWAY**

Based on existing public/private land ownership patterns it is found that no rules beyond those provided in OAR 736-40-035 are needed at this time.

## **MINIMUM FLOW REQUIREMENTS FOR THE ELK RIVER SCENIC WATERWAY**

Flows are strongly dependent on rainfall patterns. Low flows on the Elk River are between 20 and 100 cfs and occur between June and October. High flows during storms are typically between 1,000 and 6,000 cfs and occur between November and April. Winter base flows are 200-500 cfs. Because of the frequency of storms in winter, flows can commonly stay above 1,000 cfs for several weeks at a time. From 1977 to 1987 the maximum flow recorded at USGS gauge #143272.60 at the Elk River Fish Hatchery and published by State of Oregon Water Resources Department was 8,660 cfs and the minimum was 16 cfs.

In 1988, the Oregon State Supreme Court (*Diack vs. City of Portland*) ruled that before authorizing a diversion of water from within or above a State designated Scenic Waterway, the Water Resources Commission must find that the requirements of the Scenic Waterways Act are met. The principal requirement is that the free-flowing character of these waters must be maintained in quantities necessary for recreation, fish and wildlife. Because the Elk River is designated as a State Scenic Waterway, the Oregon Department of Water Resources has identified the flows shown below as those necessary to protect these values. The flows identified for protection of fishery values have also been applied for as Instream Water Rights by the Oregon Department of Fish and Wildlife.

In 1991 the Oregon Department of Water Resources identified preliminary stream flows for scenic waterway purposes. Preliminary streamflows to preserve the existing range of recreational, fish and wildlife uses have been identified based on information from user guides, agency reports and expert opinions. This method produces a qualitative estimate of flow needs and is not as accurate as more detailed studies, such as the Instream Flow Incremental Methodology (IFIM) study for fisheries.

The following table identifies minimum flow requirements for the mainstem Elk River from the confluence of the North and South Forks to the Elk River Fish Hatchery (Water Resources Department Draft Flow Assessment, June 17, 1991).

**Recommended Scenic Waterway Flows - Confluence of North and South Forks to Fish Hatchery**

Mean Monthly Flow (Measured in CFS (Cubic Feet per Second))						
Month	Minimum Range	Maximum Flow	Average Flow	Flow for Fish	Recreation Range	Scenic Flow
January	146	6,340	956	300	-	-
February	182	8,660	945	300/225	-	-
March	269	2,400	784	225	-	-
April	154	1,580	487	225	-	-
May	45	1,820	265	225	-	-
June	60	2,630	144	80/45	80/45	80/45
July	48	162	77	45	45	45
August	48	69	49	45	45	45
September	46	1,350	60	45	45	45
October	38	2,520	141	60/150	60/150	60/150
November	207	3,770	587	300	-	-
December	229	2,070	1,303	300	-	-

1/ Minimum and maximum flows are mean monthly flows by WRD

2/ Average flow is the 50% exceedance mean monthly flow value as estimated by the WRD

3/ Flows for fish are those recommended by ODFW instream water right application for fish habitat protection.

# **ELK RIVER MANAGEMENT PLAN**

## **CHAPTER IV**

## CHAPTER IV

# FEDERAL WILD AND SCENIC RIVER MANAGEMENT PLAN

### OVERVIEW

The management program for Management Area 1 - Wilderness within Corridor, is the same as that of Management Area 1 - Wilderness, as described in the Siskiyou Forest Plan. The Management program for National Forest Lands within Management Areas 2 and 10 - Wild River and Recreation River is divided into the following four sections:

- **Management Actions** - Those direct actions the Siskiyou National Forest will take (funding permitted) to address management area concerns.
- **Boundary Designation** - Discussion of adjustments to the original Management Area Boundaries.
- **Standards and Guidelines** - Standards and guidelines for site-specific project development and implementation on national forest land within the management area.
- **Monitoring Plan** - A program for tracking effects on key resource indicators, evaluating the effectiveness of prescribed management actions, and directing further management actions, as necessary to protect resource values.

### MANAGEMENT ACTIONS

The management program includes distinct actions designed to help attain the desired future condition for the Elk River. The major management concerns are listed below, along with the planned management actions. The management intent is that these actions be implemented as soon as the necessary funding can be secured through the agency's budgeting process.

#### Fish Habitat Enhancement

- Plant conifers in areas where hardwoods have replaced conifers and are not tall enough to shade the channel.
- Install structures made of natural materials on point bars and high gravel bars where work is feasible to provide interim stability to aid establishment of conifers planted in these areas.
- Encourage other landowners to improve instream habitat on the lower reaches of Elk River below the National Forest boundary with structures and/or other management actions and share technical expertise. Explore the feasibility of installing instream habitat structures on the lower reaches of Bald Mountain Creek and Purple Mountain Creek.

#### Recreation Facilities

- Upgrade Butler Bar and Sunshine Bar campgrounds to modern standards with full accessibility. Recreation facilities at Butler Bar and Sunshine Bar campgrounds would have drinking water, vault toilets, and hardened campsites, all designed to be compatible with the Aquatic Conservation Strategy.
- Upgrade and maintain access points to the river along Forest Service Road 5325, including pullouts and parking areas.



## *Boundary Location*

- Inventory and log conditions for all dispersed/primitive campsites used along the Elk River. Initiate upgrade, maintenance or rehabilitation where warranted. If warranted, consider closing sites that are receiving excessive resource damage.

## **Mining Impacts**

- Recommend the Recreation Segment for Mineral Withdrawal.
- Perform mineral examinations to establish valid existing rights before Plan of Operation approval.

## **Enhancement of Scenery**

- Identify scenic enhancement opportunities along National Forest Road 5325 to restore scenic views. The Forest Service would maintain views of the river by selectively clearing, thinning or pruning vegetation along the river to maintain riparian values and provide visual enjoyment.

## **Maintaining Ecological and Botanical Integrity**

- Eradicate the undesirable non-native plant species gorse and tansy, within the Wild and Scenic River corridor. The protection of ecological/botanical values associated with the corridor would be accomplished by aggressively eradicating gorse and tansy within the River Corridor. A program to control these species would be financed and implemented.

## **Watershed Restoration Projects**

- Inventory all roads within the corridor and identify opportunities for stabilization, rehabilitation and closure.
- On roads that will be closed, remove culverts, pull back sidecast fill material, outslope to restore natural drainage, deep rip, and plant with appropriate native species.
- On roads that will be left open but infrequently maintained, evaluate drainage for functioning during storms. Perform work such as outsloping, removing outside berms and waterbarring above culverts.

## **Private Land Use**

- Encourage private landowners to identify opportunities to enhance water quality and fish habitat on private lands both above and below the Wild and Scenic River corridor. Share technical expertise with private landowners.

## **BOUNDARY LOCATION**

The Wild and Scenic Rivers Act (Section 3b) specifies that after a river is designated, the agency charged with its administration must establish detailed boundaries delineating the land area within the river corridor that will be managed under the Act and corresponding management plan. The Act specifies that the area within each corridor should not average more than 320 acres per river mile on both sides of the river (an average of 1/4 mile from each bank). The boundaries can vary in width or location as long as the total acreage within the boundaries for the entire length of the river does not exceed the Act's requirements of the 320 acres/mile average. This allows for irregular boundaries on either side of the river.

Boundary delineation decisions are made on the basis of topography, location of important resources (i.e. habitat, tributaries, physical features), land ownership and use patterns, roads and access, and other physical features as well as input from the public. The agencies strive to select logical, resource based boundaries that are easily identifiable and legally describable.

Initially the boundary for the Elk River was set at 1/4 mile from each bank and was the boundary shown in the Siskiyou Forest Plan (1989). This boundary was modified by the Elk River Planning Team and was shown in the Draft Environmental Impact Statement, Elk Wild and Scenic River Management Plan (November 1992) as MA 10a and MA 2 in Alternatives D, E and F. The boundaries were irregular in shape to include as many areas as possible that contain or directly support the identified river related values.

Since then, the boundary has been slightly modified to make it easier to describe in legal terms. This final boundary establishes a total combined management area of 5,995 acres or 316 acres per river mile. The boundary and management areas are shown in Figure 1. The legal description of the boundary can be found in Appendix B.

## **STANDARDS AND GUIDELINES**

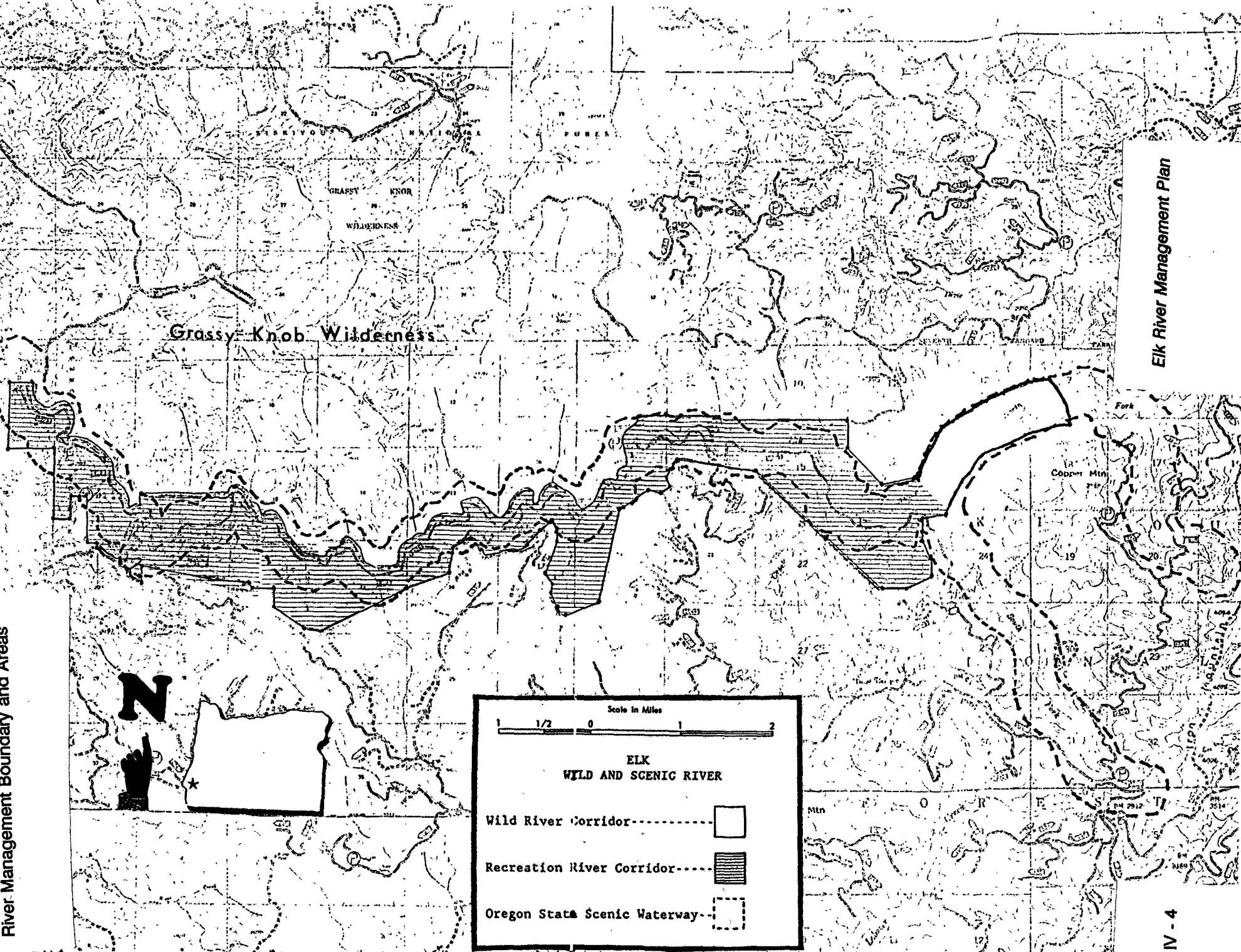
All land allocations have specific management direction regarding how those lands are to be managed, including actions that are prohibited and descriptions of the conditions that should occur there. This management direction for specific lands is known as "standards and guidelines"--the rules and limits governing actions, and the principles specifying the environmental conditions or levels to be achieved and maintained.

### **Hierarchy of Standards and Guidelines**

Throughout the Elk Wild and Scenic River corridor, land allocations overlap. For example, the Recreation Segment (Management Area 10E) includes Wilderness, Late-Successional Reserve, Riparian Reserve and the entire area is in a Key Watershed. Late-Successional Reserves, Riparian Reserves, and Key Watersheds are land allocations established by the Forest Plan as amended by the President's Forest Plan. The Grassy Knob Wilderness and the Wild segment of the Elk Wild and Scenic River are Congressionally Reserved Areas. Standards and Guidelines for Congressionally Reserved Areas must be met first. Second, Riparian Reserve standards and guidelines apply and are added to the standards and guidelines of other designated areas. For example, where Riparian Reserves occur within Late-Successional Reserves, the standards and guidelines of both designations apply. Key Watershed designation overlays all allocations. In this case, the standards and guidelines for the allocations apply, and the Key Watershed designation adds additional requirements. Standards and guidelines in the Siskiyou Forest Plan apply where they are more restrictive or provide greater benefits to late-successional forest related species. For example, thinning in the Recreation Segment of the Wild and Scenic River corridor could only be permitted if it is consistent with the standards and guidelines in the President's Forest Plan, and also is consistent with the standards and guidelines of the underlying Siskiyou Forest Plan.

Although these standards and guidelines supplement existing plans, they also incorporate the Standards and Guidelines from the Siskiyou Forest Plan as amended by the President's Forest Plan. The Siskiyou Forest Plan and the President's Forest Plan are a base for developing these standards and guidelines for the Elk Wild and Scenic River.

Figure 1  
River Management Boundary and Areas



## Watershed Analysis

In accordance with the President's Forest Plan, Watershed Analysis is required in all Key Watersheds (including Elk River) prior to resource management. The Elk River Watershed Analysis was completed in June, 1994 and is available to the public. Recommendations from the Elk River Watershed Analysis have been incorporated into this River Management Plan.

### MANAGEMENT AREA 10 - SCENIC/RECREATION RIVER

The following are taken from the Management Area 10 - Scenic/Recreation River Standards and Guidelines in the Siskiyou National Forest Land and Resource Management Plan, 1989, (Siskiyou Forest Plan) but they have been edited to apply to the specific characteristics of the Elk River. An example of this would be that all Standards and Guidelines relating to other rivers on the Siskiyou National Forest or to Scenic segments have been deleted since they don't apply to the Elk River. **Standards and Guidelines that are new or are modifying the intent of the original Standards and Guidelines are highlighted in bold print.**

#### Standards and Guidelines

##### Timber

**MA10-1E** Within the Recreational segment of the Elk River, regulated timber harvest shall be prohibited. Unregulated timber harvest and salvage of timber may only occur in the Recreation segment of the Elk River in circumstances of catastrophic events (fire, flood, wind, etc.), to improve fish habitat, or to remove threats to human safety. Such salvage shall follow the "Guidelines for Salvage" in Late-successional reserves and conform to the Management Goals for the Elk River.

Apply silvicultural practices to control stocking, reestablish and manage stands, and acquire vegetation characteristics needed to benefit the creation and maintenance of late-successional forest conditions. Such treatments should be focused on young stands and must conform to the Management Goals for the Elk River.

##### Facilities

**MA10-2E** The Elk River Road should be maintained to accommodate recreational use and access to the River.

No new road construction is allowed in the Recreation segment of the Elk River except as needed to provide for valid existing mining and leasing rights.

All new dams, major water diversions, and hydroelectric power facilities shall be prohibited.

Construction of new utility and/or transmission lines (e.g. gas lines, geothermal and water pipelines, and electrical transmission lines) should not be allowed within the Recreation segment of the Elk River.

##### Fire Management

**MA10-3E** All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. Direct attack using a modified range of suppression technology and equipment should be emphasized. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.

A moderate level of fire prevention activities should be provided. Contacts with the public should be encouraged along the river areas, in addition to a signing program at key area

entrances. Hazard reduction activities around heavily-used camping and picnic areas should be conducted.

Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.

**Fire Suppression Activities.** In the Recreation segment of the Elk River use of tractors to construct firelines may be permitted only in emergency fire suppression situations. Fireline locations shall consider protection of river related resource values.

Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

#### Minerals

**MA10-5E** Locatable minerals shall be recommended for withdrawal from development under the mining law (1872 Mining Law) within the Recreation segment of the Elk River. Provision shall be made for valid existing mining rights.

Where valid existing rights are determined to exist the following standards will be applied to all Placer Mining with Suction Dredge operations:

1. Dredge size will be limited to 4 inches or less.
2. Only one dredge per claim will be allowed.
3. The operating period will be from July 15 to September 15.
4. Camp locations on National Forest System Lands (NFSL) will be a minimum of 100 feet from any stream or lake and must be approved in writing by the Forest Service.
5. Pit type toilets are not allowed unless authorized through a county sanitary permit. Placement and design of pit toilet facilities must meet state and county regulations and will be no closer than 300 feet if authorized in writing by the Forest Officer in charge.
6. A reclamation bond will be required if ground surface disturbance is proposed by the operation or if a camp site is used.
7. All structures, trailers and equipment will be removed from NFSL by October 15 of each year.
8. Cutting of vegetation requires written permission of the Forest Officer in charge.
9. New road construction or major reconstruction of existing roads is not authorized. Any road work will be approved as part of the operating plan.
10. Ten gallons of gasoline is the maximum that can be stored within the river corridor without special spill protection measures. Fifty-five gallons may be stored if a containment structure can be built to contain a spill of the entire 55 gallons and the location is approved in writing by the Forest Officer in charge.
11. Signing on the claim is prohibited unless authorized in writing by the Forest Officer in charge.
12. Turbidity increases will be limited to 10 percent above background levels. A mixing zone of 300 feet down stream from the dredge or sluice box will be the maximum allowed. If the turbidity at the end of the mixing zone can be seen, the operation is exceeding the allowable limit and will be required to shut down until corrective measures are taken or other arrangements are made.
13. Operations will be confined to the gravels and stream bed between the vegetation lines of both banks. Under cutting of vegetation or banks will not be allowed.
14. Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.

**Visual Resource**

**MA10-6E** The Visual Quality Objective (VQO) for the Recreation segment shall be Retention as seen from Elk River and Elk River road.

**Recreation**

**MA10-6E** Within the recreation segment of Elk River, motorized use shall be limited.

1. Motorized vehicles shall be permitted only on open roads.
2. Off-road vehicles (ORV) use should not be permitted.

**Miscellaneous Product Gathering**

**MA10-7E** Commercial and private miscellaneous product gathering will be allowed in areas 200 feet from the edge of the river, stream or wetland. Each permit application will be reviewed by the District Ranger prior to approval. Special attention will be given to ensure that the desired visual character and ecological integrity are maintained.

**MANAGEMENT AREA 2 - SCENIC/RECREATION RIVER**

The following are taken from the Management Area 2 - Wild River Standards and Guidelines in the Siskiyou National Forest Land and Resource Management Plan, 1989, (Siskiyou Forest Plan). Standards and Guidelines that are new or are modifying the intent of the original Standards and Guidelines are highlighted in bold print.

**Standards and Guidelines**

**Fire Management**

**MA2-1E** All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. A modified range of suppression technology and equipment emphasizing indirect attack should be used. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.

A high level of wildfire prevention activities with a low level of visibility should be maintained. Only limited field contacts should be made, with most of the contact effort handled through the media.

Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.

Fire retardent "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

**Facilities**

**MA2-2E** Future utility corridor siting shall be excluded from this Management Area.

**Timber**

**MA2-3E** Timber management activities are not applicable in this management area.

Fuelwood gathering is prohibited except for on-site personal use.

*Standards and Guidelines*

**Miscellaneous Product Gathering**

**MA2-4E** Miscellaneous forest product gathering is prohibited except for on-site personal use.

**Recreation**

**MA2-5E** Prohibit motorized/mechanized (bicycles, etc.) use in the Wild segment of the Elk River.

Construct no trails in the Wild Segment of the Elk River.

**Visual Resource**

**MA2-6E** Manage the area for the Preservation Visual Quality Objective as viewed from the river.

**Minerals**

**MA2-7E** Locatable minerals are withdrawn from development under the mining law (1872 Mining Law) within the Wild segment of the Elk River. Provision shall be made for valid existing mining rights. Standards for Placer Mining where a valid existing right exists are listed under MA10-5E.

Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.

**MANAGEMENT AREA 1 - WILDERNESS IN CORRIDOR**

The following are taken from the Management Area 1 - Wilderness Standards and Guidelines in the Siskiyou National Forest Land and Resource Management Plan, 1989, (Siskiyou Forest Plan).

**Standards and Guidelines**

**Administration**

**MA1-1E** While seeking to achieve the stated goals for Wilderness, a nondegradation policy of management shall be followed. This policy recognizes that in Wilderness a range of natural and social settings exist from the most pristine to those where the natural feeling and opportunities for solitude have been diminished by established uses. It is the intent of this policy to assure that appropriate diversity and existing wilderness character are maintained. The most pristine areas should not be reduced to the minimum acceptable standard of natural state simply to disperse and accommodate more use.

**Recreation**

**MA1-2E** *Semi-primitive WRS.* This area is characterized by a predominately unmodified natural environment. The area should be managed so that natural processes and an unmodified character are maintained. Access is limited to trails and minimum controls, and restrictions may be present but are subtle. Facilities are only provided for the protection of wilderness resource values. Motorized or mechanized equipment is prohibited unless authorized by the Forest Supervisor or Regional Forester. Encounters with other users should be infrequent (five to seven encounters per day).

Signing within the wilderness shall be at the minimum level necessary to insure the safety of the public. Signs should be checked for accuracy throughout the year.

*Grassy Knob Wilderness.* The wilderness should be managed to provide a Semi-primitive recreation experience. The wilderness area should be maintained in a condition that would provide an estimated 4,000 RVD capacity.

**Visual**

- MA1-3E** All management activities within the wilderness shall meet the Preservation Visual Quality Objective (Agriculture Handbook #462, Visual Management System, and FSM 2320); except mineral entry as approved in operating and rehabilitation plans.

**Cultural**

- MA1-4E** To date, no cultural sites within the wildernesses are listed on the National Register of Historic Places, however certain historic and/or prehistoric properties may be eligible for nomination. Due to the rugged nature of much of the wilderness acreage, there is limited potential for a high quantity of sites. However, those present are likely undisturbed except for the deterioration caused by natural weathering.

Cultural resource research within the wilderness shall meet the following criteria: (a) must be necessary to support the values set forth in Section 4(b) of the Wilderness Act, or (b) must be done in compliance with preservation ethic for the wilderness resource.

On-site interpretation of sites shall not be done. Interpretation may be done off-site through brochures and audio-visual programs.

**Wildlife and Sensitive (Rare) Plants**

- MA1-5E** Wildlife and plant habitat will be subject to natural processes. Fire may play its natural ecological role in maintaining specific habitats. Fire may maintain meadows in grass cover and reduce encroachment of trees, or may maintain the habitat of rare plants.

**Fish**

- MA1-6E** Management direction is to protect **or enhance** existing fish habitat subject to natural processes.

**Timber**

- MA1-8E** No timber management practices are allowed inside designated Wilderness areas.

**Minerals**

- MA1-10E** Mineral entry was permissible as provided by the Wilderness Preservation Act of 1964. After December 31, 1983, mining only on valid claims is permitted, subject to approved operating plans. Provisions in operating plans shall satisfy the rights of the claimant while creating the least impact on wilderness values. Provide for restoration of the disturbed lands as near as practical to their natural condition as soon as possible during or after the mining activity. Site specific mitigation shall be required seasonally for active mining operations. Rehabilitation of the surface area shall be required upon completion of all mining activities.

**Facilities**

- MA1-11E** Roads shall not be constructed or reconstructed within designated Wildernesses except those that are permitted within the constraints specified in approved operating plans for mineral development. Close any existing mining roads if they are abandoned or determined that the claim is invalid. Trails should be maintained to keep the trails passable and drainage structures functioning (Level 2). Fire protection facilities may be constructed,



provided they meet the intent of the Wilderness Preservation Act of 1964. Future utility corridor siting shall be excluded from this Management Area.

### **Fire Management**

**MA1-14** *Grassy Knob Wilderness.* All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less, 90 percent of the time. A limited range of suppression equipment and technology emphasizing direct attack and adherence to basic wilderness firefighting techniques should be used in the suppression of wildfires. Wildfires occurring at FIL 1 shall be handled as outlined in the basic suppression direction for the Forest.

A low level of prevention activities should be provided. Public contacts should be limited, with most of the prevention efforts concentrated on techniques that accomplish the fire prevention mission prior to the user entering the area.

## **MONITORING PLAN**

The monitoring prescribed in this plan is in addition to the extensive forest-wide monitoring already prescribed in the Siskiyou National Forest Land and Resource Management Plan (pages V-9 thru V-14).

The goal of management is to keep the character and rate of change due to human factors within levels that are consistent with plan objectives and protection of the river's Outstandingly Remarkable Values. For each river value to be monitored, one or more indicators are selected which allow managers to keep attuned to changes in the ecosystem or social setting. A standard value sets the rate at which change is desired or acceptable. These standards, when not achieved, will cause predetermined questions to be asked.

The monitoring process is designed to be the foundation for the long-term protection and enhancement of the primary river-related values in the wild and scenic corridor. The process must, however, be flexible enough to allow for unique site-specific situations, and to provide ample opportunity for public involvement and adjustment as our resource and social knowledge base increase.

The following section outlines the indicators and monitoring that will be conducted on the Elk Wild and Scenic River.

# **ELK RIVER MANAGEMENT PLAN**

## **CHAPTER V**

## **CHAPTER V**

### **IMPLEMENTATION**

#### **ROLES AND RESPONSIBILITIES OF MANAGEMENT PARTNERS**

Successful implementation of the Elk River Management Plan will require close coordination and cooperation between numerous federal, state and local government agencies. The primary roles and responsibilities of these management partners are outlined below. Specific plans and policies that may affect the designated corridor are described under the agency responsible for that plan or policy.

#### **Federal Agencies**

##### **Forest Service**

The Forest Service manages and administers the National Forest System lands. The Forest Service is responsible for administration of the Elk Wild and Scenic River, and will take the lead in this administration through the Powers Ranger District of the Siskiyou National Forest. In this administration it will be necessary to coordinate very closely with Curry County and several of the Oregon State agencies which have jurisdiction in the area.

Powers Ranger District will be the primary public contact for issues relating to wild and scenic river management, including: safety, public information and education, special use permit compliance, resource protection, project planning and implementation, and monitoring of social and physical conditions on and along the river.

The federal government does not have authority to regulate what happens on private land within or outside of the wild and scenic river or the state scenic waterway designation. Land use controls on private lands are solely a matter of state and local county zoning.

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, as is the case with the Elk Wild and Scenic River. The Wild and Scenic Rivers Act does provide the federal government with authority to purchase land from willing sellers, or enter into land exchanges or scenic easement agreements if deemed necessary to maintain the outstandingly remarkable values that resulted in the river's designation.

##### **U.S. Fish and Wildlife Service**

The U.S. Fish and Wildlife Service administers the federal Endangered Species Act of 1973, as amended. The Forest Service consults with that agency to obtain a biological opinion on appropriate courses of action when it is determined that a threatened or endangered species, or its critical habitat, may be affected by a proposed management activity. Resulting decisions could mean the proposed activity is modified or abandoned.

##### **Interagency Steering Committee**

The Interagency Steering Committee establishes overall policies governing prompt, coordinated and effective implementation of the President's Forest Plan by all relevant federal agencies, and addresses and resolves issues referred to it by the Regional Interagency Executive Committee. The committee consists of representatives from the offices of the Secretary of the Interior, Secretary of Agriculture, Administrator of the Environmental Protection Agency, Under Secretary of Commerce for Oceans and Atmosphere, and is chaired by the Director of the White House Office of Environmental Policy or the director's designee. A White House appointed representative of the Interagency Steering Committee serves as interagency coordinator to provide general oversight and guidance of regional activities.

## **Regional Interagency Executive Committee (RIEC)**

This group consists of the Pacific northwest federal agency heads of the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Marine Fisheries Service, Bureau of Indian Affairs, and Environmental Protection Agency. Other participants on this committee include: the National Park Service; Soil Conservation Service; the States of Washington, Oregon and California; and three tribal organizations. The RIEC will serve as the senior regional entity to assure the prompt, coordinated, and successful implementation of the Standards and Guidelines for the President's Forest Plan. It serves as the principal conduit for communications between the Interagency Steering Committee and the agencies in the planning area. It will be responsible for implementing the directives of the Interagency Steering Committee, reporting regularly on implementation progress, and referring issues relating to the policies or procedures for implementing the standards and guidelines in the President's Forest Plan to the Interagency Steering Committee. The RIEC's policy and planning decisions and recommendations will be made collaboratively, and will be consistent with federal and state laws, federal trust responsibilities, and government-to-government relationships with American Indian tribes. The RIEC provides direction to the Regional Ecosystem Office, Province Teams and the Research and Monitoring Committee (see below). The RIEC also works with the Regional Community Economic Revitalization Team (RCERT) to develop criteria and priorities for ecosystem investment opportunities.

## **Regional Ecosystem Office (REO)**

This office provides staff work and support to facilitate RIEC decision making and prompt interagency issue resolution in support of implementation of standards and guidelines in the President's Forest Plan. It will also be responsible for evaluation of major modifications arising from the adaptive management process and will coordinate the formulation and implementation of data standards. This office reports to the RIEC and will be responsible for developing, evaluating, and resolving consistency and implementation issues with respect to specific topics including, but not limited to Geographic Information Systems (GIS), pilot watershed analyses, restoration guidelines, Endangered Species Act requirements, adaptive management guidelines, monitoring and research.

## **Research and Monitoring Committee**

This committee, comprised of full time scientists in the Regional Ecosystem Office and a standing group of agency liasons provides recommendations to the RIEC on implementation of these standards and guidelines through monitoring and research plans. The Research and Monitoring Committee will review and evaluate ongoing research; develop a research plan to address critical natural resource issues; address biological, social, economic, and adaptive management research topics; and develop and review scientifically credible, cost efficient monitoring plans; and facilitate scientific review of proposed changes to the standards and guidelines. The Research and Monitoring Committee is under the direction of and is responsible to, the Regional Interagency Executive Committee, and reports to the RIEC through the Regional Ecosystem Office.

## **Province Team**

The Elk River lies within the Southwest Oregon Province planning and analysis area. The Province Team consists of representatives of federal agencies, states, American Indian Tribes, and others. This team will provide or coordinate analyses for the province and will provide the basis for amendments to Forest and District Plans and will provide monitoring reports for the province. Province Teams will also encourage and facilitate information exchange and complementary ecosystem management among federal and nonfederal land managers.

## **State Agencies**

### **Oregon State Parks and Recreation Department**

The Oregon State Parks and Recreation Department (State Parks) is responsible for the acquisition, improvement, maintenance, and operation of Oregon's State Park system. State Parks is also responsi-

ble for giving technical assistance to local government agencies on park matters, develops and maintains the Statewide Comprehensive Outdoor Recreation Plan (SCORP), and administers the Federal Land and Water Conservation Fund matching grant program in Oregon.

### **Oregon Water Resources Department (WRD)**

Oregon's Water Resources Department (WRD) is responsible for the management and allocation of the State's water resources. The Water Resources Commission, a citizen body, develops policy. These policies are included in basin programs. Each of Oregon's 18 river basins has a basin program that is periodically updated. Basin programs generally classify the streams and lakes. The classifications include domestic, livestock, municipal, irrigation, power, industrial, mining, recreation, wildlife, and fish uses. The programs are adopted as administrative rules which reflect how water is currently used, and predict its future use and allocation.

### **Division of State Lands (DSL)**

The Division of State Lands 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 as well as for administering the Oregon Removal-Fill Law. The School Fund's assets include the beds and banks of Oregon's navigable waterways, and are to be managed for the greatest benefit for the people of Oregon, consistent with the conservation of this resource under sound techniques of land management. Protection of public trust values of navigation, fisheries, and public recreation are of paramount importance, too.

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

### **Oregon Department of Fish and Wildlife (ODFW)**

The ODFW is the responsible agency for managing and protecting Oregon's fish and wildlife resources and for recommending seasons, methods, and bag limits for recreational and commercial take of the resources. The ODFW prepares fish and wildlife management plans which are implemented through administrative rules. The Elk River is managed under the Draft South Coast Basin Plan. This plan sets strategies for release of Fall Chinook hatchery stock and sets goals for management of all fish species in the river. Desired future conditions for both habitat, fish numbers, in-stream fish harvest, and river access are described. Habitat management includes protection, enhancement and monitoring objectives.

### **Department of Land Conservation and Development (DLCD)**

DLCD works with cities, counties, and state agencies to develop and maintain Oregon's comprehensive land use plans, and regulations. As part of these responsibilities, DLCD ensures that counties have included federal Wild and Scenic Rivers in their Goal 5 (natural resources) planning. In Goal 5 planning, counties must inventory the resource, identify conflicting uses which could impact the resource, and develop implementation strategies to resolve those conflicting uses. They should coordinate with the Wild and Scenic River's administering agency (Forest Service) of proposed changes in land use within the designated river corridors. Counties are required to protect identified resources through mandatory plans, policies, and zoning requirements.

### **Department of Environmental Quality (DEQ)**

As the regulator of air and water quality in the state, DEQ guards against the degradation of air and water quality in Oregon and along scenic waterways. DEQ implements the Statewide Water Quality Management Plan, which establishes standards of water quality for each of WRD's eighteen basins in Oregon.

## Management Actions

Beneficial uses of rivers and streams that are to be protected by DEQ are public, private, and industrial water supplies; irrigation; livestock watering; anadromous fish passage; salmonid rearing and spawning; resident fish and aquatic life; wildlife; hunting and fishing; boating; water contact recreation; and aesthetic quality.

The purpose of DEQ's antidegradation policy is to guide decisions that affect water quality such that unnecessary degradation from point and nonpoint sources of pollution is prevented, and to protect, maintain, and enhance existing surface water quality to protect all existing beneficial uses. The standards for DEQ's antidegradation policy are set forth in OAR 340-41-120 through 962.

The DEQ antidegradation policy states that high quality waters are to be protected from degradation, unless the Environmental Quality Commission finds it necessary to make an exception based on economic or social needs. DEQ has standards and procedures for on-site sewage systems, issues permits for dredge and fill of wetlands, and maintains water quality monitoring stations throughout Oregon. DEQ has the ability to apply for in-stream water rights to protect and maintain water quality standards (ORS 537.336(2)).

### **Oregon Department of Forestry (ODF)**

Besides managing state-owned forests, ODF enforces the Forest Practices Act, which is designed to protect water quality, soil, fish, and wildlife from any adverse impacts of forestry activities, such as logging and road construction, which occur on privately-owned lands. The Forest Practices Act rules regulate reforestation, road construction and maintenance, harvesting, application of chemicals and disposal of slash. A forest operations permit from ODF is required for logging and other forestry activities.

The Forest Practices Act regulations do not include special requirements for operations within Wild and Scenic River corridors. However, there are rules to protect "riparian management areas." Under these rules, a proposed commercial forest operation within the riparian management area of a Class I stream must be described in a written plan. The plan must describe how the operation will meet the minimum standards prescribed by the Forest Practices Act, and must be submitted to ODF for approval.

### **Local Government**

The local government involved with the Elk Wild and Scenic River is Curry County. The county must include the Wild and Scenic River in their comprehensive land use planning and zoning under Goal 5 (natural resources). Chapter 16 of the Curry County Code regulates management and activities in the "riparian setback area" of Class I streams. The county also provides law enforcement and search and rescue.

## **MANAGEMENT ACTIONS**

The specific actions listed below are to be taken to help attain the desired future condition for the Elk River.

- **Primary Responsibility** - Identifies the specific agency or agencies responsible for initiating the particular action. It does not necessarily mean that the agency identified will carry out all aspects of the action, only that it will insure that necessary steps are taken to coordinate and facilitate the completion of the action.
- **Schedule** - Identifies when the action will be initiated or the time period over which it will be conducted.
- **Estimated Costs** - Estimates the costs associated with implementing the specific action. Costs identified include staffing or personnel needed, as well as material, contract or construction costs. Costs listed are one-time costs unless as identified as ongoing or annual management costs. Dependent upon final analysis of specific actions and what may be necessary to implement those actions, costs may vary substantially from what is listed here.

*Budget Note: Although the plan establishes standards and guidelines, monitoring elements and potential projects; accomplishment and implementation will depend upon final budget allocations. If budget allocations are insufficient, activities proposed in the plan may need to be rescheduled. Insufficient budgets over a period of several years could cause an inability to implement proposed activities, to apply standards and guidelines and achieve some of the desired conditions.*

## **Fish Habitat Enhancement**

Plant conifers in suitable areas where hardwoods have replaced conifers or where disturbance has removed conifer component from riparian zone.

Install structures made of natural materials on point bars, stream banks, and high gravel bars where work is feasible to provide interim stability to aid establishment of conifers planted in these areas.

Large wood complexes placed at nick points in the channel will also complement upslope restoration work. These will emulate historic wood deposition features.

- **Primary Responsibility:** USFS
- **Schedule:** Identify and inventory potential sites, FY 1996; Installation of structures by 1997-98, Conifer Planting FY 1999
- **Estimated Cost:** Inventory and Plan \$5,000; Structure Installation \$40,000; Planting \$5,000

Install instream structures on lower reaches of Bald Mountain and Purple Mountain Creeks.

Evaluate lower stream reaches and identify sites for stream structure placement.

Install instream structures (large wood, boulders, etc.) at selected sites.

- **Primary Responsibility:** USFS
- **Schedule:** Planning, FY 96; Installation 1998
- **Estimated Cost:** Planning \$2,500; Installation \$30,000

## **Recreation Facilities**

Upgrade Sunshine Bar campground from a dispersed site to a developed site with modern standards and full accessibility.

Upgrade Sunshine Bar by providing drinking water, installing vault toilets, and improving each campsite.

At least 20% of campsites will be fully accessible.

- **Primary Responsibility:** USFS
- **Schedule:** Feasibility, FY 98; Completion by 2000
- **Estimated Cost:** Planning \$20,000; Construction \$130,000

Upgrade Butler Bar campground to modern standards with full accessibility.

Upgrade Butler Bar by installing vault toilets, and improving each campsite.

At least 20% of campsites will be fully accessible.

## Management Actions

- **Primary Responsibility:** USFS
- **Schedule:** Feasibility, FY 97; Completion by 1999
- **Estimated Cost:** Planning \$20,000; Construction \$150,000

Upgrade and Maintain access points and dispersed campsites adjacent to the river along Forest Service Road 5325, including pullouts and parking areas.

Inventory non-system river access points and campsites.

Rehabilitate, stabilize or close 4-5 access points and/or campsites as determined from inventory.

- **Primary Responsibility:** USFS
- **Schedule:** Inventory, FY 96; Treat access points, FY 97 or beyond.
- **Estimated Cost:** Inventory, \$2,500; Treatment \$5-20,000

## Mining Impacts

Restrict commercial mining in the river corridor in order to fully protect river-related values including fish and water quality;

Recommend the Recreation segment for permanent (20 year) mineral withdrawal.

Conduct validity examinations on existing mining claims after the mineral withdrawal goes into effect.

- **Primary Responsibility:** USFS and BLM
- **Schedule:** Permanent withdrawal, CY 95, Validity Exams, FY 96-97
- **Estimated Cost:** Withdrawal \$0; Exams \$10,000

## Enhancement of Scenery

Identify scenic enhancement opportunities along Forest Service Road 5325 to restore scenic views.

Inventory potential viewpoints along the road where vegetation can be removed or pruned to improve views of river scenery,

Clear a minimum of six sites.

- **Primary Responsibility:** USFS
- **Schedule:** Inventory, FY 96, Clear view points FY 97-98
- **Estimated Cost:** Inventory, \$1200; Exams \$3,000.

## Maintaining Ecological and Botanical Integrity

Eradicate the undesirable non-native plant species gorse and tansy, within the Wild and Scenic River corridor.

Continue to inventory and map occurrence of these species.

Implement an effective eradication program and monitor sites for re-occurrence.

- **Primary Responsibility:** USFS
- **Schedule:** Inventory, FY 96, Eradication program FY 97 and beyond.
- **Estimated Cost:** Inventory, \$1200; Eradication \$20,000 plus \$1000/yr thereafter.



## Watershed Restoration Projects

Stabilize and/or close roads that have potential to fail or erode and deliver sediment to streams.

Inventory all roads within the corridor and identify opportunities for stabilization, rehabilitation and closure.

Stabilize or decommission roads using a variety of techniques including pull back of sidecast fill material, outsloping to restore natural drainage, deep ripping, culvert removal, native species planting, etc.

- **Primary Responsibility:** USFS
- **Schedule:** Inventory, FY 95; Complete projects FY 95-96
- **Estimated Cost:** Inventory/planning \$7,000; Projects \$60,000.

## Private Land Use

Identify opportunities to enhance water quality and fish habitat on private lands both above and below the Elk Wild and Scenic River corridor. Contact landowners and educate them regarding the resource values affected and explore ways of accomplishing enhancement opportunities.

Attend Elk River Watershed Council meetings, send various resource specialists to aid in analysis of enhancement opportunities on private lands.

Provide use of technical expertise to design and complete projects for the lower river.

- **Primary Responsibility:** USFS
- **Schedule:** Ongoing
- **Estimated Cost:** Participation/technical skills \$2000-4000/yr; Project funding as federal funds for such work becomes available.

# **APPENDIX A**

## **ENVIRONMENTAL ASSESSMENT**

DECISION NOTICE  
AND  
FINDING OF NO SIGNIFICANT IMPACT

ELK WILD AND SCENIC RIVER  
ENVIRONMENTAL  
ASSESSMENT

FOREST PLAN AMENDMENT NO. 7

Curry County, Oregon  
USDA Forest Service  
Siskiyou National Forest  
Powers Ranger District

**DECISION**

The Omnibus Oregon Wild and Scenic Rivers Act designated the Elk River as a Wild and Scenic River in 1988. The Act directs the Forest Service to preserve the free flowing character of the river and to develop a management plan for the protection and/or enhancement of the outstandingly remarkable values (ORV's) of the designated river and associated corridor. The ORV's for the Elk Wild and Scenic River are fisheries and water quality. This Decision Notice designates what the management regime will be for the Elk Wild and Scenic River.

This decision affects two key areas:

1. The Wild River corridor
2. The Recreation River corridor

It is my decision to implement Alternative 2 of the Environmental Assessment for the Elk River. This Decision Notice documents my rationale for making this choice.

**TIERING**

The Elk Wild and Scenic River Environmental Assessment (EA) documents the results of the river analysis. The EA tiers to the Final Environmental Impact Statement (FEIS), Record of Decision, and associated Resource Management Plan (Forest Plan) for the Siskiyou National Forest, as amended by the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (SFEIS or President's Plan) and its associated Record of Decision (1994).. It also tiers to the Draft Environmental Impact Statement for the Elk River Wild and Scenic River Management Plan (DEIS, 1992).

I have reviewed the Elk Wild and Scenic River Environmental Assessment, FEIS, Forest Plan, the 1992 DEIS for Elk River, the SFEIS (President's Plan), and the associated Records of Decisions. I have found the Standards and Guidelines in the Forest Plan as amended by the SFEIS, and Records of Decisions for the Forest Plan and SFEIS to be adequate protection for all river resource values except where additional protective measures have been added in Alternative 2 of the Elk River Wild and Scenic River Environmental Assessment. The additions of a more detailed desired future condition, standards and guidelines, and monitoring plan will clarify or enhance the protection of river values.

My review found existing Forestwide and Management Area Standards and Guidelines, as amended by the SFEIS (President's Plan), to be adequate. Any additional standards and guidelines will further enhance river values. Consequently, I found no need to direct the Interdisciplinary Team to do a basinwide analysis similar

to that of the Elk Wild and Scenic River Management Plan DEIS. In addition, all projects that occur in the Elk River drainage basin will be further evaluated site specifically for their effects to the Elk Wild and Scenic River resource values.

The Environmental Assessment and associated documents are available for review at the Powers Ranger Station and the Siskiyou National Forest Supervisor's Office.

#### LOCATION OF THE WILD AND SCENIC RIVER

The 19-mile segment of the Elk River designated as a component of the National Wild and Scenic Rivers System in 1988 is located almost entirely on National Forest land and includes the following river segments:

- (A) the 17 mile segment from the confluence on the North and South Forks of the Elk to Anvil Creek, classified as a Recreational River, and
- (B) the two mile segment of the North Fork Elk from the falls to its confluence with the South Fork, classified as a Wild River.

In addition, the State of Oregon designated the North Fork, South Fork, and the mainstem from the confluence of the forks to the Elk River Fish Hatchery an Oregon Scenic Waterway.

The Elk Wild and Scenic River federal corridor boundary averages approximately 320 acres per river mile and is described specifically in Appendix B of the River Management Plan and is shown on the River Management Plan corridor map.

#### DESCRIPTION OF SELECTED ALTERNATIVE

Alternative 2 is the selected alternative. Boundary adjustments to the interim 1/4 mile corridor were made to include areas of high fish productivity (Panther Creek) while maintaining the average acres per river mile at or below 320 acres in conformance with the Wild and Scenic Rivers Act.

The **Desired Future Condition** of the River Corridor will be a landscape dominated by late successional forest. Management will continue to provide for the high water quality that makes the river important, including low turbidity (except during high flow periods), low levels of contaminants and pollutants, and suitable cool temperatures for the fish using the river. Riparian areas along the river will be improved where they have been degraded in the past and existing high quality areas will continue to be protected, maintained and where possible, improved. The different ecosystems in the river corridor will be perpetuated, and where possible, enhanced. In many locations noxious weeds will be eliminated or reduced. Management activities and facility development will limit any adverse impacts to vegetation, and revegetation activities will be done with native species, where possible. Habitat quality for wildlife species will be maintained or improved throughout the river corridor with a focus on late-successional coniferous forest habitat.

The future condition of the Elk River and its tributaries will be one in which abundant high quality habitat will be capable of supporting healthy wild anadromous and resident fish populations. Management for wild fish stocks will continue to be the priority of all partners in the watershed. The escapement numbers for wild fish will be compatible with the South Coast Basin Fish Management Plan by ODF&W. In the interim, the following escapement numbers for the different species of fish are the best estimates for seeding the available habitat and providing nutrients which benefit the stream ecosystem. Note: these numbers only apply to the habitat on the Siskiyou National Forest upstream from the fish hatchery.

Chinook:  
2200 to 2900 female adult fish with normal age composition (mostly age 4 and age 5 fish).

Winter Steelhead:  
690 to 750 female adult fish

Coho:

125 to 150 female adult fish

Sea-run and resident cutthroat trout:

1000 to 1200 female adult fish

These interim numbers will change as new information becomes available and the Oregon Department of Fish and Wildlife's south coast basin plan is completed. The actual numbers and spatial and temporal distribution will vary with environmental factors (many of which are not under the administration of the Forest Service), ocean conditions, harvests, and local disturbances. These subjective numbers can help evaluate the health of the populations.

The high quality of Elk River recreational experiences will continue to attract a growing number of users. In order to accommodate current and anticipated use, some areas will be upgraded and improved to provide better sanitation facilities and improved access to the river. No trail will be built to access the North Fork Elk River. Proposals to reestablish existing trails or create new ones will be studied on a case by case basis. There will be a slight improvement in developed camping opportunities owing to improvements at Butler Bar Campground. Dispersed campsites will be improved as well at Sunshine Bar. Most other dispersed campsites along the river will remain open. However, some dispersed sites may be closed temporarily or permanently to protect vegetation and prevent degradation of the site.

The Recreation segment will be formally recommended for withdrawal from mineral entry. Valid, existing operations will be subject to mitigation measures that fully protect the River's Outstandingly Remarkable Values. Recreational gold panning, basic "rockhounding", and personal use collection of common variety minerals such as soapstone will be allowed provided such activities are done in a manner compatible with the management goals for the river.

Prehistoric and historic cultural resources in the corridor will be documented and evaluated as to their significance and eligibility to the National Historic Register. Those resources found to be significant will be protected, maintained or enhanced.

Information will be provided to landowners to assist them in the management of their lands to better protect the river's values. Cooperation between the Forest Service, State Agencies and Curry County will continue to be emphasized, resulting in efficient, consistent management of the Elk Wild and Scenic River Corridor. The public will be given a meaningful opportunity to participate in decision making that affects the management of the river.

**The Standards and Guidelines** for the selected alternative will include the Forest Plan, as amended by the President's Plan, Standards and Guidelines. In addition, the following highlighted items will be added (for a complete list of standards and guidelines, refer to Alternative 2 in Chapter II of the Environmental Assessment.):

#### MANAGEMENT AREA 10 - SCENIC/RECREATION RIVER

Exclude programmed timber harvest.

Apply silvicultural practices on young stands to benefit the creation and maintenance of late-successional forest conditions.

Construct no new roads except as needed to provide for valid existing mining and leasing rights. Prohibit all new dams, major water diversions, and hydroelectric power facilities.

Do not construct new utility and/or transmission lines (e.g. gas lines, geothermal and water pipelines, and electrical transmission lines) within the Recreation segment of the Elk River.

In the Recreation segment of the Elk River, only use tractors to construct firelines in emergency fire suppression situations. Fireline locations shall consider protection of river related resource values.

Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

Recommend withdrawal from development of locatable minerals under the mining law (1872 Mining Law) within the Recreation segment of the Elk River.

Where valid existing rights are determined to exist, apply the following standards to all Placer Mining with Suction Dredge operations:

1. Dredge size will be limited to 4 inches or less.
2. Only one dredge per claim will be allowed.
3. The operating period will be from July 15 to September 15.
4. Camp locations on National Forest System Lands (NFSL) will be a minimum of 100 feet from any stream or lake and must be approved in writing by the Forest Service.
5. Pit type toilets are not allowed unless authorized through a county sanitary permit. Placement and design of pit toilet facilities must meet state and county regulations and will be no closer than 300 feet if authorized in writing by the Forest Officer in charge.
6. A reclamation bond will be required if ground surface disturbance is proposed by the operation or if a camp site is used.
7. All structures, trailers and equipment will be removed from NFSL by October 15 of each year.
8. Cutting of vegetation requires written permission of the Forest Officer in charge.
9. New road construction or major reconstruction of existing roads is not authorized. Any road work will be approved as part of the operating plan.
10. Ten gallons of gasoline is the maximum that can be stored within the river corridor without special spill protection measures. Fifty-five gallons may be stored if a containment structure can be built to contain a spill of the entire 55 gallons and the location is approved in writing by the Forest Officer in charge.
11. Signing on the claim is prohibited unless authorized in writing by the Forest Officer in charge.
12. Turbidity increases will be limited to 10 percent above background levels. A mixing zone of 300 feet down stream from the dredge or sluice box will be the maximum allowed. If the turbidity at the end of the mixing zone can be seen, the operation is exceeding the allowable limit and will be required to shut down until corrective measures are taken or other arrangements are made.
13. Operations will be confined to the gravels and stream bed between the vegetation lines of both banks. Under cutting of vegetation or banks will not be allowed.
14. Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.

Within the recreation segment of Elk River motorized vehicles shall be permitted only on open roads. Commercial and private miscellaneous product gathering will be allowed in areas 200 feet from the edge of the river, stream or wetland. Special attention will be given to ensure that the desired visual character and ecological integrity are maintained.

#### MANAGEMENT AREA 2 - WILD RIVER

Exclude Future utility corridor development from this Management Area.

Do not apply timber management activities in this management area.

Prohibit Fuelwood gathering except for on-site personal use.

Miscellaneous forest product gathering is prohibited except for on-site personal use.

Prohibit motorized/mechanized (bicycles, etc.) use in the Wild segment of the Elk River.

Construct no trails in the Wild Segment of the Elk River.

Locatable minerals are withdrawn from development under the mining law (1872 Mining Law) within the Wild segment of the Elk River. Provision shall be made for valid existing mining rights. Standards for Placer Mining where a valid existing right exists are listed under MA10-5E.

Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.

**Specific projects** under this direction will be:

This Alternative will have the fish habitat protection measures listed under the "No Action" alternative in Chapter II of the Environmental Assessment. In addition, the following projects will be implemented, depending on a site specific environmental analysis:

1. Plant conifers in riparian areas where hardwoods have replaced conifers and are not tall enough to shade the channel.
2. Install structures of native material (rocks and logs) on point bars to aid establishment of conifers.
3. Examine the feasibility for improving instream habitat in Purple Mountain Creek and Bald Mountain Creek.
4. Recreation facilities at Butler Bar and Sunshine Bar campgrounds will have full accessibility, drinking water, vault toilets, and hardened campsites, compatible with the Aquatic Conservation Strategy. The numerous dispersed campsites adjacent to the river along Forest Service Road 5325 will be maintained or closed, depending on the individual site and resource damage. These dispersed campsites that remain open will be hardened to prevent erosion and damage to the Elk River.
5. The Forest will recommend a permanent mineral withdrawal on the Recreation segment of the River. The Wild River segment is already withdrawn from new mineral entry.
6. The Forest Service will maintain views of the river by selectively clearing, thinning or pruning vegetation along the river to maintain riparian values and provide visual enjoyment.
7. The protection of ecological/botanical values associated with the corridor will be accomplished by aggressively eradicating gorse and tansy within the River Corridor. A program to control these species will be financed and implemented.
8. This alternative will inventory all roads within the corridor and stabilize, rehabilitate, or close roads which are actively or potentially contributing sediment to the River. Examples of projects include pullback of sidecast materials, restoring natural drainage, deep ripping, establishing native vegetation, and removing culverts.

This alternative will provide for more exchange of ideas and resources with the private landowners within the watershed to enhance the fish habitat. The Forest Service and Powers Ranger District will share technical expertise and Encourage landowners to improve instream habitat on the lower reaches of Elk River below the Forest boundary.

The **monitoring plan** for the selected alternative explicitly emphasizes the forest-wide monitoring already prescribed in the Siskiyou National Forest Land and Resource Management Plan (pages V-9 thru V-14 and Appendix D).

Values	Topics	Monitoring Projects
Scenery	Viewpoints from Road	Photo points of visual quality from viewpoints on main road
Public Use	Recreation	Number of visitors using recreation facilities
Environmental Quality and Ecology	Vegetation	Location and number of non-native plants eradicated; trends/location

Values	Topics	Monitoring Projects
Environmental Quality and Ecology	Landslides and Surface Erosion Large Wood in Streams Stream Temperature Channel Morphology Fish Habitat	Photo Inventory Riparian stocking surveys and large wood in channel Stream Shade - Solar Pathfinder and thermographs Photo points and channel cross sections Hankin and Reeves type survey, macroinvertebrate sampling, and photographic inventory of aquatic and riparian restoration projects.

**REASONS FOR THE DECISION**

The rationale for my decision is that the Selected Alternative will:

- maintain and enhance the Outstandingly Remarkable Values of the Wild and Scenic Elk River;
- limit any potential for new future mining claims to have a cumulative adverse impact on fish habitat and on the rearing of anadromous fish at the ODF&W Elk River Fish Hatchery by recommending withdrawal of the Recreation Segment from future mineral entry.

I recognize the uncertainty and disagreement among scientists and the public on the impacts of suction dredge mining on fish habitat. However, I will not recommend future access for new mining claims on Elk River due to the possibility of cumulative impacts to the highly valued fish habitat and to the rearing of anadromous fish at the hatchery.

- reduce stream temperature sooner than Alternative 1 and will supply large wood to the stream ecosystem more quickly.
- provide accessible recreational facilities while maintaining a healthy ecosystem.
- maintain existing scenic views of the river.
- reduce populations of noxious weeds in the watershed.
- control surface erosion on existing roads.
- provide technical watershed improvement assistance at the request of private land owners.

Alternatives 1 and 3 would not limit the potential cumulative adverse impact on fish habitat and water quality from new future mining claims because the Recreation Segment could have future mineral entries. In addition, Alternative 1 would not provide accessible recreational facilities, maintain existing views of the river, reduce populations of noxious weeds, and take an active cooperative approach with other landowners.

**AMENDMENTS TO THE FOREST PLAN**

This Amendment No. 7 to the Siskiyou Forest Plan will do the following things:

1. Describe the final corridor boundary, acreage and map for inclusion in Management Areas 2, Wild River, and 10, Scenic River.
2. Incorporate the Desired Future Condition, Standards and Guidelines, and monitoring plan described in the River Management Plan for both Management Areas 2 and 10 into the Forest Plan.
3. Adopt the implementation section (projects) of the River Management Plan into the Forest Plan, Chapter V - Implementation of the Forest Plan. The completion of projects listed under the management actions in Chapter IV of the River Management Plan are dependent upon site-specific NEPA analysis and available funding where appropriate. Activities on private lands are not subject to these items.



These changes are determined to be non-significant amendments to the Siskiyou Forest Plan for the following reasons:

1. The changes to the final river corridor boundary from the interim corridor boundary are minor and still maintain approximately the same total acres of corridor and average acres of corridor per river mile.
2. The Desired Future Conditions, Standards and Guidelines, and Monitoring Plan are consistent with those of the Forest Plan. These items add specific references to the Forest Plan for the Elk Wild and Scenic River.
3. The implementation of management actions, activities, and monitoring do not make significant changes in the multiple use goals and objectives for the long-term land and resource management.

## **PUBLIC PARTICIPATION**

Public participation was an integral part of the river planning process. Interested citizens, groups, local governments, and state and federal agencies were involved and contributed to the development of the major issues. The river planning team used a variety of methods to contact and record public input. The scoping process is described further in Chapter I of the Environmental Assessment and in the DEIS for the Elk Wild and Scenic River Management Plan.

## **ALTERNATIVES CONSIDERED IN DETAIL**

The river planning team developed three alternatives in detail in the Environmental Assessment.

**Alternative 1 (No Action):** This would prescribe no change from existing management direction and the river would be managed under existing Forest Plan Standards and Guidelines, and interim river management direction. No final river management plan would be developed. No additional standards and guidelines, desired future conditions, monitoring items, and projects would be added.

**Alternative 2:** This is my selected alternative which is described previously.

**Alternative 3:** This alternative focuses on maintaining future mining access for new claims on the Recreation segment of the River. It would add Desired Future Conditions, Standards and Guidelines, Monitoring Plan, and projects specific to the Elk River. These would be in addition to the Forest Plan direction, as amended by the President's Plan (SFEIS).

## **OTHER ALTERNATIVES CONSIDERED, BUT ELIMINATED FROM DETAILED STUDY**

Other alternatives to address the major issues were not developed because of the limited scope of the issues in the Recreation and Wild segments. Other issues, brought up by the public during the scoping process, were important. However, these issues were resolved by the Forest Plan, as amended by the President's Plan.

## **FINDING OF NO SIGNIFICANT IMPACT**

Following a review of the Environmental Assessment and project file, I have determined that this is not a major federal action that will significantly affect the quality of the human environment. Therefore, an Environmental Impact Statement is not necessary and will not be prepared. This determination is based on the following considerations:

1. Irreversible and irretrievable commitments of resources and adverse cumulative or secondary effects will not exceed those evaluated in the Final Environmental Impact Statement for the Siskiyou Forest Plan, as amended by the SFEIS (President's Plan).
2. Direct, indirect, and cumulative environmental impacts were disclosed in the Environmental Assessment, and were not found to be significant.

3. There will be no negative effects to wetlands, floodplains, prime farmlands, rangelands, or forest lands; and no civil rights of minority groups, women, or consumers will be adversely affected.
4. Activities planned in the Elk Wild and Scenic River corridor will not adversely affect the environment beyond or down river from the designated corridor.
5. River Management Plan direction will not cause any significant adverse impacts to any threatened, endangered, or sensitive plant or animal species. Site-specific biological evaluations will be done for specific projects.
6. The River Management Plan is in compliance with relevant federal, state and local laws, regulations, and requirements designed for the protection of the environment. The River Management Plan meets the State of Oregon water and air quality standards.
7. There are no anticipated impacts on cultural/heritage resources or on Pacific yew from implementation of the River Management Plan.
8. Projects proposed and listed in the River Management Plan will be evaluated separately for their environmental effects and no project determined to have significant environmental effects will be implemented without first completing an Environmental Impact Statement.

The River Management Plan and Environmental Assessment meet all requirements of the National Environmental Policy Act of 1969 (NEPA); the National Forest Management Act of 1976 (NFMA); the National Wild and Scenic Rivers Act of 1968; and all other applicable laws.

Biological Evaluations for plants and animals have been done and are in the Elk Wild and Scenic River file. The Biological Evaluations assess the impacts of the River Management Plan on all threatened, endangered, and sensitive species that could potentially be found in the Elk Wild and Scenic River corridor. The Biological Evaluations conclude that the River Management Plan is not expected to cause any adverse effects to any of these species. Further site-specific surveys for these threatened, endangered and sensitive species and appropriate interagency consultation will be conducted for any proposed project.

#### RIGHT TO APPEAL

There are wetlands and floodplains within the planning area. Therefore, implementation of this decision shall not occur within 30 days following publication of the legal notice of the decision in the Grants Pass Daily Courier.

This decision is subject to appeal pursuant to 36 CFR 217. Any written Notice of Appeal of this decision must be fully consistent with 36 CFR 217.9 (Content of a Notice of Appeal) and must include the specific reasons for appeal. A written Notice of Appeal, in duplicate, must be filed with the Reviewing Officer, John Lowe, Regional Forester, P.O. Box 3623, Portland, Oregon 97208-3623, within 45 days of the date the legal notice of this decision appears in the Grants Pass Daily Courier.

For further information contact: Joel King, Forest Planner, Siskiyou National Forest Supervisor's Office, (503) 471-6582.

Responsible Official:



J. Michael Lunn  
 Forest Supervisor  
 Siskiyou National Forest  
 P.O. Box 440  
 Grants Pass, Oregon 97526

*Sept. 22, 1994*  
 Date

# **ENVIRONMENTAL ASSESSMENT**

## **ELK RIVER MANAGEMENT PLAN**

## CHAPTER I

### PURPOSE AND NEED FOR ACTION

#### INTRODUCTION

The purpose and need for the Proposed Action for a Elk River Management Plan are a direct result of the river's congressional designation by the Omnibus Oregon Wild and Scenic Rivers Act of 1988. The Elk River from its confluence with Anvil Creek upstream to a point on the North Fork approximately two miles above the confluence of the North and South Forks was designated by Congress as a National Wild and Scenic River in 1988. The Elk River from the Elk River State Fish Hatchery to the headwaters of the north and south forks was also designated as an Oregon Scenic Waterway in 1988. The Forest Service and Oregon State Parks and Recreation Department agreed to develop a joint federal-state management plan for the designated portions of the Elk River. The federal legislation requires the Forest Service to develop a management plan for the Wild and Scenic River.

This joint plan - the Elk River Management Plan - will guide management of both the federal and state designated portions of the Elk River. The River Management Plan will provide the direction to protect the Outstandingly Remarkable Values, preserve the free-flowing character of the river, and designate a final corridor boundary for the river, all meeting the need required by the National Wild and Scenic Rivers Act of 1968 (Public Law 90-542, October 2, 1968, as amended).

This Environmental Assessment gives the public information about the planning process used and the analysis for the federally designated segments of the River Management Plan. The document describes alternative methods for managing National Forest Lands within the Elk River and describes the environmental effects posed by such management to the resources and values in the federally designated segments. The "Proposed Action" alternative (Alternative 2) is the proposal for the River Management Plan. Prior to this analysis of the Elk River Management Plan, the Elk River watershed has been managed according to the Siskiyou Land and Resource Management Plan (1989) (the "No Action" alternative, Alternative 1).

The "Proposed Action" alternative (Alternative 2) has a very specific desired future condition, standards and guidelines, projects, and monitoring plan. The biggest change from the existing direction is the recommendation for the permanent withdrawal from future mining in the river corridor. Chapter II has a more detailed description of the "Proposed Action".

The Elk River Management Plan may result in non-significant changes to the Siskiyou Land and Resource Management Plan as amended by the Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (1994) and consequently amend the plan to reflect the changes identified in this analysis.

This assessment is documented according to guidelines established by the National Environmental Policy Act (NEPA) of 1969. It provides the rationale for the final selection of management actions, boundary designation, standards and guidelines for managing the river, and a monitoring program, which will be the River Management Plan. All alternatives would implement a "comprehensive river management plan to provide for the protection and enhancement of the outstandingly remarkable river-related values," of the Elk River.

The Environmental Assessment is presented in three chapters.

**Chapter I**, Purpose and Need for Action, describes the planning process (i.e. public involvement, resource assessment, boundary process, and the issues), the document's relationship to the Siskiyou Forest Plan and the President's Forest Plan, and the decisions to be made.

**Chapter II, The Alternatives**, presents and compares the management alternatives, with information on how they would be implemented including measures to protect the environment; and discusses alternatives that were considered, but eliminated from further analysis.

**Chapter III, Environmental Consequences**, describes the likely effects of each alternative, in relation to the identified issues, and the Outstandingly Remarkable Values.

## **PLANNING PROCESS**

### **Public Involvement**

Public involvement in the Elk River planning process began in 1990 with development of a Resource Assessment (Appendix D). Comments from various experts, individuals, and agencies helped to determine the final Outstandingly Remarkable Values for the River with the final Resource Assessment completed in September, 1991. Meanwhile, a public participation workshop, held in Coos Bay, Oregon, May, 1991, began the public scoping and participation. One key action from the meeting established an independent Technical Review Team composed of three researchers in the fields of hydrology, fisheries, and geomorphology. They reviewed the technical analysis and provided advice for this plan.

The Elk Wild and Scenic River Plan was announced in the Federal Register (56 FR 42974) in August 1991. The plan included all National Forest lands in the Elk River watershed. This new way of designing a River Management Plan recognized values such as water quality and fisheries could not be adequately protected without considering upslope activities such as road building and timber harvest.

In the fall of 1991, alternatives for managing the watershed were presented to the public for comment. Some of the alternatives included significant changes resulting in significant impacts on the human environment. For example, alternative programmed timber harvests ranged from zero to nearly 12 million board feet per year. As such, a Draft Environmental Impact Statement (DEIS) was prepared with a notice of availability published in the Federal Register (57 FR 54789) on November 20, 1992. This DEIS addressed the following issues:

How to protect and enhance the fisheries?

How to protect and/or enhance the water quality of the river?

How to protect or enhance the significant visual quality associated with the river?

How to protect or enhance the significant ecological and botanical characteristics associated with the river including the old growth characteristics?

How to minimize impacts to social economic outputs of timber, fish, and recreation?

How to minimize impacts to private land use?

The District received a total of 341 responses during the DEIS review period. This included 260 form letters and 81 actual letters. The top five areas which received comments in these responses were related to fisheries, water quality (turbidity, sedimentation), geology (stability), mining and silviculture (prescriptions and Port-Orford-cedar concerns).

### **The President's Forest Plan**

After release of the DEIS, the Scientific Analysis Team (SAT, March 1993), Forest Ecosystem Management Assessment Team Report (FEMAT, July 1993), and the Draft Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related species within the Range of the Northern Spotted Owl (Draft President's Plan, July 1993) were released. The Draft President's Plan named the Elk River a Key watershed and proposed large riparian and terrestrial reserves for the watershed. Further work on the Elk River EIS was suspended pending the outcome of

the President's Forest Plan. The President's Plan was signed through the Record of Decision on April 13, 1994, amending the Siskiyou Forest Plan. The President's Plan and its accompanying Environmental Impact Statement took precedent over all alternatives studied in the Elk River DEIS. Land allocations under the President's Forest Plan became policy and affect the Elk River Watershed as follows:

**Land Allocations Under the President's Forest Plan (for lands within the**

Siskiyou National Forest Boundary) Management Area No. - Name	Acres
1 - Wilderness (Wilderness within River Corridor)	9,394 (392)
2 - Wild River	642
8 - Late-Successional Reserves	22,782
10 - Scenic/Recreation River	4,921
11 - Riparian Reserves	3,100
14 - General Forest Matrix	3,304
Private Lands	2,810
<b>Total</b>	<b>46,953</b>

As a result, the President's Forest Plan amended the Siskiyou Forest Plan (1989) and effectively resolved many of the issues originally addressed in the Elk River DEIS as follows:

**FISH PROTECTION ISSUE**

**Fish and Water Temperature**

High level of protection for reducing stream temperatures. Rehabilitation from past events and retention of all vegetation in riparian reserves, Late Successional Reserves, unstable areas, and sensitive areas would greatly decrease time for temperature reductions.

**Basin-wide Fish Habitat**

A high level of protection. Large areas in no timber harvest with additional protection of large riparian reserves has a high likelihood of achieving fish habitat goals.

**Susceptible Species Habitat**

A high level of protection. No harvest is scheduled in most productive fish areas except under limited conditions in Panther Creek.

**WATER QUALITY ISSUE**

Has a high likelihood for maintaining water clarity.

**SCENIC ISSUE**

High level of protection for foreground and middleground areas.

Dispersed harvest activities would occur over an extended time across 3,300 acres. No evidence of new human activity would be present over 40,700 acres.

## **ECOLOGICAL/BOTANICAL ISSUE**

Would have a close approximation to even distribution of seral stages in the near future. Over many decades, the large reserves would tilt the balance to late-seral vegetation in excess of what has occurred historically.

A high level of protection of riparian areas with no chronic disturbance in riparian reserves.

A high level of maintaining habitat connections and large late-seral blocks. Size of seral blocks would range from one to 32,000 acres.

## **SOCIOECONOMIC ISSUE**

Area suitable for harvest over time - 3,300 acres.

## **TIERING TO OTHER PLANNING DOCUMENTS**

This assessment tiers to the the Land and Resource Management Plan of the Siskiyou National Forest (Siskiyou Forest Plan), as amended by the Record of Decision for Amendments of Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl in April, 1994 (President's Forest Plan). This assessment also tiers to the Draft Environmental Impact Statement for the Elk Wild and Scenic River Management Plan (1992) and the process records associated with it.

The President's Forest Plan provides strict guidelines for managing the Elk River and substantially limits management options for the Wild and Scenic River corridor. In addition, the President's Forest Plan directed that the Forest Service complete a "watershed analysis" for all Key Watersheds including the Elk. The watershed analysis for Elk River (Appendix E), completed in June 1994, provides a good description of the affected environment of the watershed. That analysis recommends projects, and guidelines for setting riparian reserve widths.

The previous effort to complete an EIS and watershed-wide management strategy has been superseded by the President's Forest Plan. The Elk River Management Plan will now focus on issues concerning river corridor management and issues not resolved by the President's Forest Plan. The scope of the previous planning effort has been greatly reduced, and the magnitude of the decision to be made is reduced.

## **ISSUES**

The National Environmental Policy Act defines issues as "...unresolved conflicts regarding alternative uses of available resources." Issues can also be defined as subjects of public interest relating to resource management. The river planning team identified the following issues for the upper Elk River through the scoping process and designed the Proposed Action to resolve these issues. They consulted with other agencies and interested groups and people from the public.

The following issues have been identified from the substantial public scoping and comment processes that have preceded this Environmental Assessment:

### **Fish Habitat Enhancement**

Fish habitat is highly influenced by activities such as timber harvest and road building that take place in upland areas. The President's Forest Plan recognized the value of the Elk River, classified it as a Tier I watershed and prescribed a variety of measures designed to protect and restore the upland areas.

In the river corridor, fish habitat enhancement is limited to placement of instream structures and restoration of riparian areas. Restoration activities that have the potential to affect the free flowing condition river will require intensive analysis under Section 7 of the Wild and Scenic Rivers Act and must evidence a compelling need for the action.

What fish habitat enhancements should be done in the River Corridor and how soon should they be implemented? In addition, should the River Corridor boundaries be adjusted to include the most productive fish habitat areas in the watershed?

## **Recreation Facilities**

Recreation facilities include campgrounds, viewpoints, pullouts, and river access points. Campgrounds at Butler Bar and Sunshine Bar are in need of maintenance or improvement. Toilets are primitive and in need of upgrading. River access points are few with roads in need of repair or maintenance. Should the Forest Service upgrade the campgrounds at Butler Bar and Sunshine Bar to provide 1) access to the disabled, 2) hardened sites, 3) year-round water supply at Sunshine Bar, and/or 4) harden dispersed recreation sites along Elk River Road?

## **Mining Impacts**

The Elk River has relatively low mineral values compared to other streams on the Siskiyou National Forest. However, several mineral claims do exist and a history of interactions between the Forest Service, the miners, and the public have been controversial.

Placer mining with dredges has affected the water quality during mining operations and may have adversely affected fish habitat. One of the beneficial uses of the Elk River is water supplied to the Oregon Department of Fish And Wildlife Elk River Fish Hatchery for its operations. Personnel at the hatchery have noticed effects on turbidity due to water muddied by dredging operations. This turbidity has adversely affected hatchery operations. The cumulative effect of a number of dredges operating over time has the potential for affecting the water quality and fish habitat to an unacceptable degree.

Any mining of lode deposits within the river corridor would potentially have unacceptable impacts due to increased sediment, turbidity, and structure simplification from roading, increased traffic, tailings, and vegetation changes.

Should the Forest Service recommend the withdrawal of mining in the River Corridor?

## **Enhancement of Scenery**

The dense vegetation along Forest Service Road 5325 (Elk River Road) blocks much of the view along the river. There are opportunities to enhance views of the river by clearing, thinning or pruning vegetation along the river. However this must be compatible with the Aquatic Conservation Strategy of the President's Plan.

Should the Forest Service maintain some existing views of the river from Elk River Road?

## **Maintaining Ecological and Botanical Integrity**

The protection of ecological/botanical values associated with the corridor is an issue for the management of Elk River. Non-native plants continue to invade the river corridor, potentially displacing native species and disrupting ecological processes.

Should the Forest Service schedule more aggressive activity to reduce gorse and tansy within the River Corridor?



## **Watershed Restoration Projects**

As part of the Aquatic Conservation Strategy contained in the President's Forest Plan and the Elk River Watershed Analysis, watershed restoration projects are suggested as a means of recovery for rivers and streams. Decommissioning or storm-proofing roads is one method of hastening the recovery of watersheds. Closing roads is often controversial.

Another means of watershed restoration is by riparian planting to re-establish conifers along stream-banks.

What activities should the Forest Service plan for watershed restoration within the River Corridor?

## **Private Land Use**

Potential effects on private land use is an issue. Private land use within the Elk River watershed and the Wild and Scenic River corridor could affect river-related values positively or negatively. Section 11B1 Technical assistance and conservation easements are one means of assuring protection for values such as fish and water quality. In addition, the designated segments of the State Scenic Waterway include land use controls for private lands. There are opportunities downstream from the National Forest boundary to enhance fish habitat.

How much private land should be included in the River Corridor? In what activities should the Forest Service participate with other land owners in the watershed?

## **CHAPTER II**

### **ALTERNATIVES, INCLUDING THE PROPOSED ACTION**

#### **INTRODUCTION**

This chapter describes the alternatives which resolve certain issues listed in Chapter I. Other issues, as listed in Chapter I, do not drive alternative development, but instead are resolved by the President's Plan and Siskiyou Forest Plan standards and guidelines. The alternatives analyzed in this Environmental Assessment resolve issues that were not resolved with the President's Forest Plan and the Siskiyou Forest Plan. From this Environmental Assessment, the selected alternative will be the final River Management Plan.

Specifically, the following elements of this analysis will become the basis of the River Management Plan:

1. The Desired Future Conditions
2. Specific Standards and Guidelines
3. Specific Projects
4. Monitoring Plan

This chapter describes the "No Action" Alternative and other alternatives that address relevant issues.

#### **DEVELOPMENT OF THE ALTERNATIVES**

The interdisciplinary team developed alternatives to explore alternative management scenarios of the River Corridor. The "No Action" alternative (Alternative 1) was developed to be no change from existing direction. With this alternative, the Elk Wild and Scenic River Plan would implement the standards and guidelines for Management Areas 2 and 10 in the Siskiyou Forest Plan, as amended by the additional standards and guidelines from the President's Forest Plan for key watersheds, riparian reserves, late-successional reserves, and matrix areas.

The "Proposed Action" alternative (Alternative 2) was developed by the interdisciplinary team to resolve the issues of fish habitat enhancement, recreation facilities, mining impacts, enhancement of scenery, maintaining ecological and botanical integrity, watershed restoration projects, and private land use, listed in Chapter I.

Control of mining impacts on water quality fish habitat continue to be an issue with the Proposed Action. Consequently, this issue resulted in Alternative 3 which responds differently than the "Proposed Action" alternative for mining.

Other alternatives considered, but not developed in detail for this analysis, are the DEIS alternatives for management of the Elk Wild and Scenic River Management Plan. The river corridor management in Alternative D of that analysis provides the basis for the Proposed Action of this analysis. The other alternatives are not considered in detail because they are either duplicated by an alternative in this analysis or cover issues that have been resolved by the President's Forest Plan.

## DESCRIPTION OF THE ALTERNATIVES

### Alternative 1

In many ways, the "No Action", Alternative 1 (figure 1), can be defined by what it would not do. This alternative would not amend the existing Siskiyou Forest Plan and the President's Forest Plan. No river specific desired future condition would be defined. No additional standards and guidelines would be implemented. The River Corridor would be defined as 1/4 mile on each side of the high water mark. No specific monitoring plan would be added to the Forest Plan.

#### The Desired Future Condition

The Desired Future Condition would stay the same as documented on pages IV-78 through 79 and IV-121 through 122 of the Siskiyou Forest Plan. In the President's Forest Plan, objectives for the Aquatic Conservation Strategy, found on page B-11 of the Record of Decision, also would apply.

#### Standards and Guidelines

Standards and Guidelines from the Siskiyou Forest Plan (pages IV-77 through 78 and IV-121 through 123) as amended by the President's Forest Plan (Appendix C of the Record of Decision) would remain unaltered by this alternative.

#### Specific Projects

Specific projects would remain as listed in the Siskiyou Forest Plan in Appendix B, where compatible with the Standards and Guidelines of the President's Forest Plan.

Fish habitat, highly influenced by upslope timber harvest and road building, would be protected by a variety of measures designed to protect and restore the upland areas. This effort would be tiered to the Siskiyou Forest Plan and the President's Forest Plan, which includes Riparian Reserves, Watershed Analysis, Key Watersheds, and Watershed Restoration. The management of Late Successional Reserves would also play an important part of the river ecology. In the river corridor, fish habitat enhancement would be limited to placement of instream structures and restoration of riparian areas. Restoration activities that have the potential to affect the free flowing condition river will require intensive analysis under Section 7 of the Wild and Scenic Rivers Act and must evidence a compelling need for the action.

Minimal improvement of the campgrounds at Butler Bar and Sunshine Bar would be done to prevent any resource damage. These improvements would include vehicle barriers where needed, drainage control to prevent erosion, and upgrades of toilets to ensure no effluent would pollute the Elk River. The Forest Service would construct hiking trails up the North Fork Elk River and Anvil Mountain.

Mining could occur within the river corridor and be regulated by existing law and the Standards and Guidelines of the President's Forest Plan (page C-34, MM-1 to MM-6). Hard rock mining could occur. Protection of the fish habitat and water quality would be by implementing mitigation measures through the mining Plan of Operation approval process. New claims could be located within the Recreation segment of the corridor.

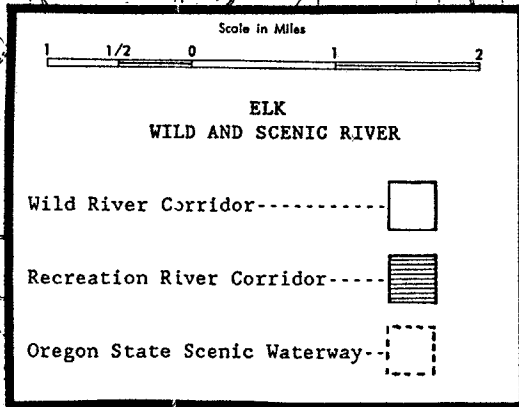
Viewpoints from the river road would not be maintained.

Ecological/botanical values associated with the corridor would be protected by implementing the Siskiyou Forest Plan. Gorse and tansy, two exotic plants, would be reduced by volunteer efforts and some financed activities, though not at a programmed level.

As part of the Aquatic Conservation Strategy contained in the President's Forest Plan and Elk River Watershed Analysis, watershed restoration projects, including road rehabilitation and riparian planting would be accomplished.

Figure 1  
Alternative 1

Grassy Knob Wilderness



NOTE: Interim river corridor is 1/4 mile on each side of the river

All - 3

Efforts would be programmed for providing technical assistance for improving fish habitat on private land within the corridor and on downstream lands, but at a low level.

### **Monitoring Plan**

The monitoring plan would remain as written on page V-9 and Appendix D of the Forest Plan.

## **Alternative 2**

The "Proposed Action" alternative (Alternative 2 - figure 2) resolves the issues by providing more specific desired future conditions, projects, standards, and guidelines than does the "No Action" alternative. This alternative would amend the Siskiyou Forest Plan. A new corridor boundary would be established to include the areas which are very productive fish habitat such as Panther Creek and tributaries to the North Fork Elk River. However, the Late Successional Reserve designation by the President's Forest Plan would take precedence over this enlarged Recreation River land allocation because it is more restrictive. Consequently, no change in the land allocation is visually evident.

### **The Desired Future Condition**

The **Desired Future Condition** of the River Corridor would be:

#### **Management Area 10 - Recreation River**

##### ***Scenery and Vegetation***

**Landscape View** - The overall character and appearance of the Recreation segment of the Elk River corridor will be dominated by late successional forest. The overall vegetative landscape will be natural with standing dead and down trees common. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.

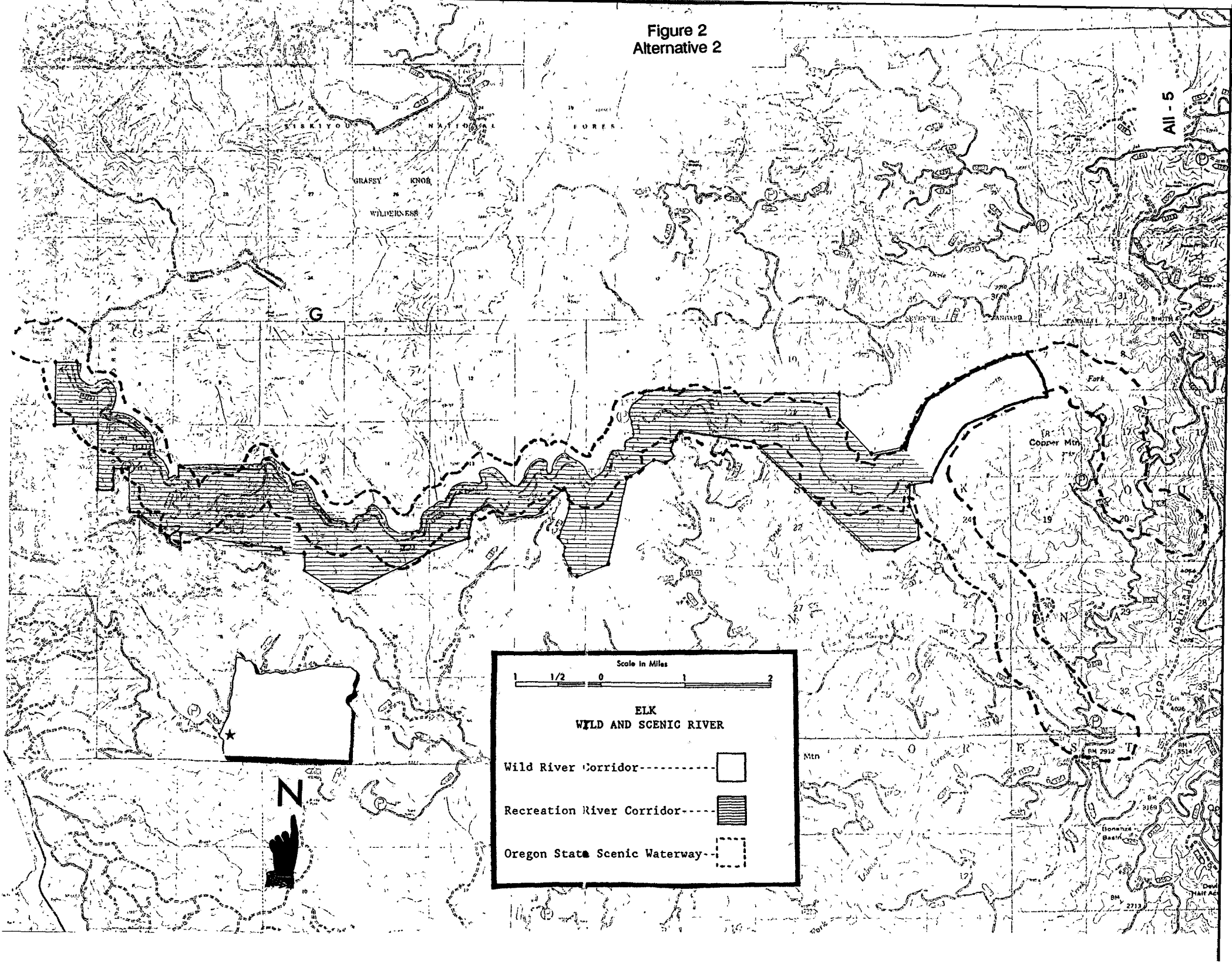
**Stand Level View** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. The visually sensitive travel corridors will be managed to maintain a natural or near natural setting. Openings in vegetation that provide views of the river from the road will be maintained or enhanced in a manner which maintains the natural character of the landscape. Routine activities such as road and campground maintenance will be conducted in a manner that maintains the late successional character of the forest.

##### ***Water Quality and Quantity***

The Elk River has high quality water. The water quality and quantity of the Elk River will provide for the Outstandingly Remarkable Values of the river, including its fisheries, recreational activities, and wildlife. Management will continue to provide for the high water quality that makes the river important, including low turbidity (except during high flow periods), low levels of contaminants and pollutants, and suitable cool temperatures for the fish using the river.

Riparian areas along the river will be improved where they have been degraded in the past and existing high quality areas will continue to be protected, maintained and where possible, improved. These important areas will better be able to improve water quality, reduce erosion and sedimentation, provide shade, and supply large wood to the stream.

Figure 2  
Alternative 2



Scale in Miles  
1 1/2 0 1 2

**ELK  
WILD AND SCENIC RIVER**

Wild River Corridor----- □

Recreation River Corridor----- ▨

Oregon State Scenic Waterway----- □

### **Botany/Ecology**

The different ecosystems in the river corridor will be perpetuated and where possible, enhanced. This will maintain native plant communities and their habitats, and provide protection to federal, state and Oregon Natural Heritage Program listed rare, sensitive, threatened and endangered species. No increase in noxious weed species will be evident. In many locations colonies of noxious weeds will be eliminated or reduced. Management activities and facility development will limit any adverse impacts to vegetation, and revegetation activities will be done with native species, where possible.

### **Wildlife**

Habitat quality for wildlife species will be maintained or improved throughout the river corridor with a focus on late-successional coniferous forest habitat.

### **Fisheries and Fish Habitat**

The future condition of the Elk River and its tributaries will be one in which abundant high quality habitat will be capable of supporting healthy wild anadromous and resident fish populations. Fishing management activities, (including regulations and enforcement) will provide for the protection of wild stocks and for continued high quality fishing experiences in the lower river.

Management for wild fish stocks will continue to be the priority of all partners in the watershed. The escapement numbers for wild fish will be compatible with the South Coast Basin Fish Management Plan by ODF&W. In the interim, the following escapement numbers for the different species of fish are the best estimates for seeding the available habitat and providing nutrients which benefit the stream ecosystem. Note: these numbers only apply to the habitat on the Siskiyou National Forest upstream from the fish hatchery.

Chinook:

2200 to 2900 female adult fish with normal age composition (mostly age 4 and age 5 fish).

Winter Steelhead:

690 to 750 female adult fish

Coho:

125 to 150 female adult fish

Sea-run and resident cutthroat trout:

1000 to 1200 female adult fish

These interim numbers will change as new information becomes available and the Oregon Department of Fish and Wildlife's south coast basin plan is completed. The actual numbers and spatial and temporal distribution will vary with environmental factors, ocean conditions, harvests, and local disturbances. These subjective numbers can help evaluate the health of the populations.

### **Recreation**

The high quality of Elk River recreational experiences will continue to attract a growing number of users. Actions will reduce resource problems for parking, camping and access points along the river. In some cases facilities will reduce sanitation problems. Overall, the use along the river will be very similar to what is currently taking place and be compatible with the Siskiyou Forest Plan, as amended by the President's Forest Plan (Page C-34, RM-1 to RM-3).

### **Facilities**

In order to accommodate current and anticipated use, some areas will have been upgraded and improved to provide better sanitation facilities and improved access to the river. All upgraded facilities will be designed to blend in with the natural setting. Special emphasis will be to provide opportunities

for barrier-free access to selected sites along the river. Rest room facilities will be provided in higher use locations so proper sanitation is maintained. Facilities will continue to provide a less developed type of experience than is found in state and private campgrounds typical of the Oregon Coast.

**Trails** - No trail will be built to access the North Fork Elk River. Proposals to reestablish existing trails or create new ones will be studied on a case by case basis. Where such proposals are consistent with management goals for the river and provide protection of Outstandingly Remarkable Values, they may be approved.

**Overnight Camping** - There will be a slight improvement in developed camping opportunities owing to improvements at Butler Bar Campground. Dispersed campsites will be improved as well at Sunshine Bar. Most other dispersed campsites along the river will remain open. However, some dispersed sites may be closed temporarily or permanently to protect vegetation and prevent degradation of the site.

**Off-Highway Vehicles** - Motorized vehicle use will be confined to roads and trails marked open for this use.

### ***Mining***

The Recreation segment will be formally recommended for withdrawal from mineral entry. Mining will be allowed within the recreation section on claims that predate the withdrawal where valid existing rights are determined through mineral examination. Operations will be subject to mitigation measures that fully protect Outstandingly Remarkable Values.

Recreational gold panning, basic "rockhounding", and personal use collection of common variety minerals such as soapstone will be allowed provided such activities are done in a manner compatible with the management goals for the river.

### ***Cultural Resources***

Prehistoric and historic cultural resources in the corridor will be documented and evaluated as to their significance and eligibility to the National Historic Register. Those resources found to be significant will be protected, maintained or enhanced. Any project or activity that will affect known or have potential to affect unknown cultural resources will assess their effects on cultural resources and any adverse effects will be mitigated.

### ***Private Property***

Private Property rights will be recognized and protected. Information will be provided to landowners to assist them in the management of their lands to better protect the river's values.

### ***Relationships***

Cooperation between the Forest Service, State Agencies and Curry County will continue to be emphasized, resulting in efficient, consistent management of the Elk Wild and Scenic River Corridor. The public will be given a meaningful opportunity to participate in decision making that affects the management of the river.

## **Management Area 2 - Wild River**

### ***Scenery and Vegetation***

**Landscape View** - The overall character and appearance of the Wild segment of the Elk River corridor will be dominated by late successional forest. The landscape will have many standing dead and down trees. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.



## *Alternatives, Including the Proposed Action*

**Stand Level View** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. There will be very little evidence of human intrusion.

### ***Water Quality and Quantity***

Same as Recreation segment.

### ***Botany/Ecology***

The Wild segment will develop late-successional forest characteristics.

### ***Wildlife***

The Wild segment will continue to provide habitat for wildlife, especially species inhabiting riparian and late-successional forest habitat.

### ***Fisheries and Fish Habitat***

The high quality habitat for resident and anadromous fish will continue to be maintained. The Wild River segment will provide a refuge for anadromous fish for reproduction and rearing.

### ***Recreation***

Recreational use of the Wild Segment will be discouraged. No signs, trails or facilities will be provided. Motorized vehicle use will be prohibited. For those people willing and able to explore the area on foot, the Wild segment will provide an opportunity for peace and solitude.

### ***Mining***

The Wild segment is withdrawn from mineral entry. Mining may occur on claims that predate the withdrawal where valid existing rights exist and mitigation measures that will fully protect Outstandingly Remarkable Values are done.

### ***Cultural Resources***

Same as Recreation Segment.

### **Monitoring**

Same as Recreation Segment.

### **Management Area 1 - Wilderness Within Corridor**

Desired Future Conditions for Wilderness within the corridor are the same as those found for Management Area 1 - Wilderness, as stated in the Siskiyou Forest Plan.

### **Standards and Guidelines**

**The Standards and Guidelines** for the "Proposed Action" alternative would also have the Siskiyou Forest Plan, as amended by the President's Forest Plan, Standards and Guidelines. In addition, the following highlighted items would be added:

## MANAGEMENT AREA 10 - SCENIC/RECREATION RIVER

### Timber

- MA10-1E** Timber harvest should not occur in the "recreational" segment (Management Area overlay 10) of the Mainstem Elk River below the designated Wild Section and mainstem Panther Creek except in circumstances of catastrophic occurrences (fire, flood, wind, etc.) where the fish habitat would benefit or to remove threats to human safety compatible with the Forest Plan, as amended by the President's Plan (page C-32, TM-1). In addition, timber harvest should not occur on unstable and potentially unstable lands (inventoried by the watershed sensitivity overlay and subject to field verification) in the Panther Creek drainage, the upper North Fork drainage (above the designated Wild segment), and several smaller tributaries on the mainstem above the confluence with Butler Creek.

Apply silvicultural practices to control stocking, reestablish and manage stands, and acquire vegetation characteristics needed to benefit the creation and maintenance of late-successional forest conditions. Such treatments should be focused on young stands and must conform to the Management Goals for the Elk River.

### Facilities

- MA10-2E** The Elk River Road should be maintained to accommodate recreational use and access to the River.

No new road construction is allowed in the Recreation segment of the Elk River except as needed to provide for valid existing mining and leasing rights.

All new dams, major water diversions, and hydroelectric power facilities shall be prohibited.

Construction of new utility and/or transmission lines (e.g. gas lines, geothermal and water pipelines, and electrical transmission lines) should not be allowed within the Recreation segment of the Elk River.

### Fire Management

- MA10-3E** All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. Direct attack using a modified range of suppression technology and equipment should be emphasized. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.

A moderate level of fire prevention activities should be provided. Contacts with the public should be encouraged along the river areas, in addition to a signing program at key area entrances. Hazard reduction activities around heavily-used camping and picnic areas should be conducted.

Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.

**Fire Suppression Activities.** In the Recreation segment of the Elk River use of tractors to construct firelines may be permitted only in emergency fire suppression situations. Fireline locations shall consider protection of river related resource values.

Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

**Minerals**

**MA10-5E** Locatable minerals shall be recommended for withdrawal from development under the mining law (1872 Mining Law) within the Recreation segment of the Elk River. Provision shall be made for valid existing mining rights.

Where valid existing rights are determined to exist the following standards will be applied to all Placer Mining with Suction Dredge operations:

1. Dredge size will be limited to 4 inches or less.
2. Only one dredge per claim will be allowed.
3. The operating period will be from July 15 to September 15.
4. Camp locations on National Forest System Lands (NFSL) will be a minimum of 100 feet from any stream or lake and must be approved in writing by the Forest Service.
5. Pit type toilets are not allowed unless authorized through a county sanitary permit. Placement and design of pit toilet facilities must meet state and county regulations and will be no closer than 300 feet if authorized in writing by the Forest Officer in charge.
6. A reclamation bond will be required if ground surface disturbance is proposed by the operation or if a camp site is used.
7. All structures, trailers and equipment will be removed from NFSL by October 15 of each year.
8. Cutting of vegetation requires written permission of the Forest Officer in charge.
9. New road construction or major reconstruction of existing roads is not authorized. Any road work will be approved as part of the operating plan.
10. Ten gallons of gasoline is the maximum that can be stored within the river corridor without special spill protection measures. Fifty-five gallons may be stored if a containment structure can be built to contain a spill of the entire 55 gallons and the location is approved in writing by the Forest Officer in charge.
11. Signing on the claim is prohibited unless authorized in writing by the Forest Officer in charge.
12. Turbidity increases will be limited to 10 percent above background levels. A mixing zone of 300 feet down stream from the dredge or sluice box will be the maximum allowed. If the turbidity at the end of the mixing zone can be seen, the operation is exceeding the allowable limit and will be required to shut down until corrective measures are taken or other arrangements are made.
13. Operations will be confined to the gravels and stream bed between the vegetation lines of both banks. Under cutting of vegetation or banks will not be allowed.
14. Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.

**Visual Resource**

**MA10-6E** The Visual Quality Objective (VQO) for the Recreation segment shall be Retention as seen from Elk River and Elk River road.

**Recreation**

- MA10-6E** Within the recreation segment of Elk River, motorized use shall be limited.
- 1. Motorized vehicles shall be permitted only on open roads.**
  - 2. Off-road vehicles (ORV) use should not be permitted.**

**Miscellaneous Product Gathering**

- MA10-7E** Commercial and private miscellaneous product gathering will be allowed in areas 200 feet from the edge of the river, stream or wetland. Each permit application will be reviewed by the District Ranger prior to approval. Special attention will be given to ensure that the desired visual character and ecological integrity are maintained.

**MANAGEMENT AREA 2 - WILD RIVER**

**Fire Management**

- MA2-1E** All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. A modified range of suppression technology and equipment emphasizing indirect attack should be used. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.

A high level of wildfire prevention activities with a low level of visibility should be maintained. Only limited field contacts should be made, with most of the contact effort handled through the media.

Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.

Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

**Facilities**

- MA2-2E** Future utility corridor siting shall be excluded from this Management Area.

**Timber**

- MA2-3E** Timber management activities are not applicable in this management area.
- Fuelwood gathering is prohibited except for on-site personal use.

**Miscellaneous Product Gathering**

- MA2-4E** Miscellaneous forest product gathering is prohibited except for on-site personal use.

**Recreation**

- MA2-5E** Prohibit motorized/mechanized (bicycles, etc.) use in the Wild segment of the Elk River.

**Construct no trails in the Wild Segment of the Elk River.**

**Visual Resource**

**MA2-6E Manage the area for a Preservation Visual Quality Objective as viewed from the river.**

**Minerals**

**MA2-7E Locatable minerals are withdrawn from development under the mining law (1872 Mining Law) within the Wild segment of the Elk River. Provision shall be made for valid existing mining rights. Standards for Placer Mining where a valid existing right exists are listed under MA10-5E.**

**Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.**

**Specific Projects**

**Specific projects** under this direction would be as follows:

This alternative would have the fish habitat protection measures listed under the "No Action" alternative. In addition, the following projects would be implemented:

1. Plant conifers in riparian areas where hardwoods have replaced conifers and are not tall enough to shade the channel.
2. Install structures of native material (rocks and logs) on point bars to aid establishment of conifers.
3. Encourage other landowners to improve instream habitat on the lower reaches of Elk River below the National Forest boundary with structures and/or other management actions and share technical expertise.
4. Examine the feasibility for improving instream habitat in Purple Mountain Creek and Bald Mountain Creek.

Recreation facilities at Butler Bar and Sunshine Bar campgrounds would have full accessibility, drinking water, vault toilets, and hardened campsites, compatible with the Aquatic Conservation Strategy. The numerous dispersed campsites adjacent to the river along Forest Service Road 5325 would be maintained or closed, depending on the individual site and resource damage. These dispersed campsites that remain open would be hardened to prevent erosion and damage to the Elk River.

The Forest Service would recommend a permanent mineral withdrawal on the Recreation segment of the River. The Wild River segment is already withdrawn from new mineral entry.

The Forest Service would maintain views of the river by selectively clearing, thinning or pruning vegetation along the river to maintain riparian values and provide visual enjoyment.

The protection of ecological/botanical values associated with the corridor would be accomplished by aggressively eradicating gorse and tansy within the River Corridor. A program to control these species would be financed and implemented.

This alternative would inventory all roads within the corridor and stabilize, rehabilitate, or close roads which are actively or potentially contributing sediment to the River. Examples of projects would include pullback of sidecast materials, restoring natural drainage, deep ripping, establishing native vegetation, and removing culverts.

This alternative would also provide for more exchange of ideas and resources with the private landowners within the watershed to enhance the fish habitat.

**Monitoring Plan**

The monitoring prescribed in this plan explicitly emphasizes the forest-wide monitoring already prescribed in the Siskiyou National Forest Land and Resource Management Plan (pages V-9 thru V-14 and Appendix D).

Values	Topics	Monitoring Projects
Scenery	Viewpoints from Road	Photo points of visual quality from viewpoints on main road
Public Use	Recreation	Number of visitors using recreation facilities
Environmental Quality and Ecology	Vegetation	Location and number of non-native plants eradicated; trends/location
Environmental Quality and Ecology	Landslides and Surface Erosion Large Wood in Streams  Stream Temperature  Channel Morphology Fish Habitat	Photo Inventory Riparian stocking surveys and large wood in channel Stream Shade - Solar Pathfinder and thermographs Photo points and channel cross sections Hankin and Reeves type survey, macroinvertebrate sampling, and photographic inventory of aquatic and riparian restoration projects.

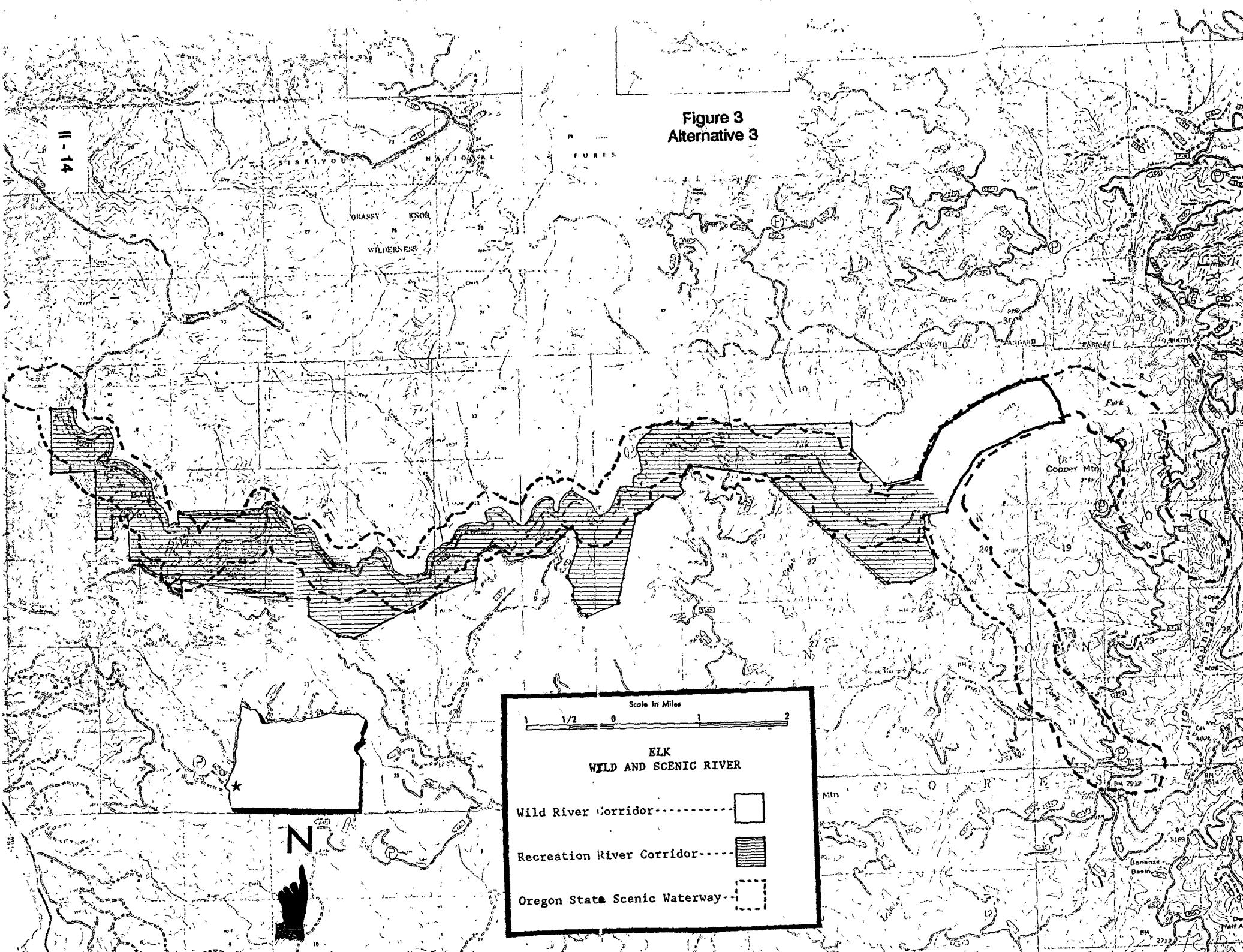
**Alternative 3**

Alternative 3 (Figure 3) is identical to the Proposed Action except that under projects, the Forest Service would not recommend a permanent mineral withdrawal on the Recreation part of the River. This alternative would amend the Siskiyou Forest Plan.

Alternative 3 resolves the issues by providing more specific desired future conditions, projects, standards, and guidelines than does the "No Action" alternative. A new corridor boundary would be established to include the areas which are very productive fish habitat such as Panther Creek and tributaries to the North Fork Elk River. However, the Late Successional Reserve designation by the President's Forest Plan would take precedence over this enlarged Recreation River land allocation because it is more restrictive. Consequently, no change in the land allocation is visually evident.

Figure 3  
Alternative 3

11-14



Scale in Miles  
1/2 0 1 2

**ELK  
WILD AND SCENIC RIVER**

Wild River Corridor	-----	□
Recreation River Corridor	-----	▨
Oregon State Scenic Waterway	-----	⋯

## **The Desired Future Condition**

The **Desired Future Condition** of the River Corridor would be:

### **Management Area 10 - Recreation River**

#### ***Scenery and Vegetation***

**Landscape View** - The overall character and appearance of the Recreation segment of the Elk River corridor will be dominated by late successional forest. The overall vegetative landscape will be natural with standing dead and down trees common. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.

**Stand Level View** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. The visually sensitive travel corridors will be managed to maintain a natural or near natural setting. Openings in vegetation that provide views of the river from the road will be maintained or enhanced in a manner which maintains the natural character of the landscape. Routine activities such as road and campground maintenance will be conducted in a manner that maintains the late successional character of the forest.

#### ***Water Quality and Quantity***

The Elk River has high quality water. The water quality and quantity of the Elk River will provide for the Outstandingly Remarkable Values of the river, including its fisheries, recreational activities, and wildlife. Management will continue to provide for the high water quality that makes the river important, including low turbidity (except during high flow periods), low levels of contaminants and pollutants, and suitable cool temperatures for the fish using the river.

Riparian areas along the river will be improved where they have been degraded in the past and existing high quality areas will continue to be protected, maintained and where possible, improved. These important areas will better be able to improve water quality, reduce erosion and sedimentation, provide shade, and supply large wood to the stream.

#### ***Botany/Ecology***

The different ecosystems in the river corridor will be perpetuated and where possibly enhanced. This will maintain native plant communities and their habitats, and provide protection to federal, state and Oregon Natural Heritage Program listed rare, sensitive, threatened and endangered species. No increase in noxious weed species will be evident. In many locations colonies of noxious weeds will be eliminated or reduced. Management activities and facility development will limit any adverse impacts to vegetation, and revegetation activities will be done with native species, where possible.

#### ***Wildlife***

Habitat quality for wildlife species will be maintained or improved throughout the river corridor with a focus on late-successional coniferous forest habitat.

#### ***Fisheries and Fish Habitat***

The future condition of the Elk River and its tributaries will be one in which abundant high quality habitat will be capable of supporting healthy wild anadromous and resident fish populations. Fishing management activities, (including regulations and enforcement) will provide for the protection of wild stocks and for continued high quality fishing experiences in the lower river.

Management for wild fish stocks will continue to be the priority of all partners in the watershed. The escapement numbers for wild fish will be compatible with the South Coast Basin Fish Management Plan by ODF&W. In the interim, the following escapement numbers for the different species of fish are the



## *Alternatives, Including the Proposed Action*

best estimates for seeding the available habitat and providing nutrients which benefit the stream ecosystem. Note: these numbers only apply to the habitat on the Siskiyou National Forest upstream from the fish hatchery.

### Chinook:

2200 to 2900 female adult fish with normal age composition (mostly age 4 and age 5 fish).

### Winter Steelhead:

690 to 750 female adult fish

### Coho:

125 to 150 female adult fish

### Sea-run and resident cutthroat trout:

1000 to 1200 female adult fish

These interim numbers will change as new information becomes available and the Oregon Department of Fish and Wildlife's south coast basin plan is completed. The actual numbers and spatial and temporal distribution will vary with environmental factors, ocean conditions, harvests, and local disturbances. These subjective numbers can help evaluate the health of the populations.

## **Recreation**

The high quality of Elk River recreational experiences will continue to attract a growing number of users. Actions will reduce resource problems for parking, camping and access points along the river. In some cases facilities will reduce sanitation problems. Overall, the use along the river will be very similar to what is currently taking place and be compatible with the Siskiyou Forest Plan, as amended by the President's Forest Plan (Page C-34, RM-1 to RM-3).

## **Facilities**

In order to accommodate current and anticipated use, some areas will have been upgraded and improved to provide better sanitation facilities and improved access to the river. All upgraded facilities will be designed to blend in with the natural setting. Special emphasis will be to provide opportunities for barrier-free access to selected sites along the river. Rest room facilities will be provided in higher use locations so proper sanitation is maintained. Facilities will continue to provide a less developed type of experience than is found in state and private campgrounds typical of the Oregon Coast.

**Trails** - No trail will be built to access the North Fork Elk River. Proposals to reestablish existing trails or create new ones will be studied on a case by case basis. Where such proposals are consistent with management goals for the river and provide protection of Outstandingly Remarkable Values, they may be approved.

**Overnight Camping** - There will be a slight improvement in developed camping opportunities owing to improvements at Butler Bar Campground. Dispersed campsites will be improved as well at Sunshine Bar. Most other dispersed campsites along the river will remain open. However, some dispersed sites may be closed temporarily or permanently to protect vegetation and prevent degradation of the site.

**Off-Highway Vehicles** - Motorized vehicle use will be confined to roads and trails marked open for this use.

## **Mining**

The Recreation segment will not be formally recommended for withdrawal from mineral entry. Mining will be allowed within the recreation section on existing or new claims. Operations will be subject to mitigation measures that fully protect Outstandingly Remarkable Values.

Recreational gold panning, basic "rockhounding", and personal use collection of common variety minerals such as soapstone will be allowed provided such activities are done in a manner compatible with the management goals for the river.

### ***Cultural Resources***

Prehistoric and historic cultural resources in the corridor will be documented and evaluated as to their significance and eligibility to the National Historic Register. Those resources found to be significant will be protected, maintained or enhanced. Any project or activity that will affect known or have potential to affect unknown cultural resources will assess their effects on cultural resources and any adverse effects will be mitigated.

### ***Private Property***

Private Property rights will be recognized and protected. Information will be provided to landowners to assist them in the management of their lands to better protect the river's values.

### ***Relationships***

Cooperation between the Forest Service, State Agencies and Curry County will continue to be emphasized, resulting in efficient, consistent management of the Elk Wild and Scenic River Corridor. The public will be given a meaningful opportunity to participate in decision making that affects the management of the river.

## **Management Area 2 - Wild River**

### ***Scenery and Vegetation***

**Landscape View** - The overall character and appearance of the Wild segment of the Elk River corridor will be dominated by late successional forest. The landscape will have many standing dead and down trees. Evidence of disturbance will be infrequent and of natural origin, such as fire, windstorms or landslides.

**Stand Level View** - Large trees will dominate most stands within the corridor. Stands adjacent to the river will have a mixture of conifer and hardwood species and some of these trees will be quite large. There will be very little evidence of human intrusion.

### ***Water Quality and Quantity***

Same as Recreation segment.

### ***Botany/Ecology***

The Wild segment will develop late-successional forest characteristics.

### ***Wildlife***

The Wild segment will continue to provide habitat for wildlife, especially species inhabiting riparian and late-successional forest habitat.

### ***Fisheries and Fish Habitat***

The high quality habitat for resident and anadromous fish will continue to be maintained. The Wild River segment will provide a refuge for anadromous fish for reproduction and rearing.

### **Recreation**

Recreational use of the Wild Segment will be discouraged. No signs, trails or facilities will be provided. Motorized vehicle use will be prohibited. For those people willing and able to explore the area on foot, the Wild segment will provide an opportunity for peace and solitude.

### **Mining**

The Wild segment is withdrawn from mineral entry. Mining may occur on claims that predate the withdrawal where valid existing rights exist and mitigation measures that will fully protect Outstandingly Remarkable Values are done.

### **Cultural Resources**

Same as Recreation Segment.

### **Monitoring**

Same as Recreation Segment.

### **Management Area 1 - Wilderness Within Corridor**

Desired Future Conditions for Wilderness within the corridor are the same as those found for Management Area 1 - Wilderness, as stated in the Siskiyou Forest Plan.

### **Standards and Guidelines**

The **Standards and Guidelines** for the "Proposed Action" alternative would also have the Siskiyou Forest Plan, as amended by the President's Forest Plan, Standards and Guidelines. In addition, the following highlighted items would be added:

### **MANAGEMENT AREA 10 - SCENIC/RECREATION RIVER**

#### **Timber**

**MA10-1E** Timber harvest should not occur in the "recreational" segment (Management Area overlay 10) of the Mainstem Elk River below the designated Wild Section and mainstem Panther Creek except in circumstances of catastrophic occurrences (fire, flood, wind, etc.) where the fish habitat would benefit or to remove threats to human safety compatible with the Forest Plan, as amended by the President's Plan (page C-32, TM-1). In addition, timber harvest should not occur on unstable and potentially unstable lands (inventoried by the watershed sensitivity overlay and subject to field verification) in the Panther Creek drainage, the upper North Fork drainage (above the designated Wild segment), and several smaller tributaries on the mainstem above the confluence with Butler Creek.

Apply silvicultural practices to control stocking, reestablish and manage stands, and acquire vegetation characteristics needed to benefit the creation and maintenance of late-successional forest conditions. Such treatments should be focused on young stands and must conform to the Management Goals for the Elk River.

#### **Facilities**

**MA10-2E** The Elk River Road should be maintained to accommodate recreational use and access to the River.

No new road construction is allowed in the Recreation segment of the Elk River except as needed to provide for valid existing mining and leasing rights.

**All new dams, major water diversions, and hydroelectric power facilities shall be prohibited.**

**Construction of new utility and/or transmission lines (e.g. gas lines, geothermal and water pipelines, and electrical transmission lines) should not be allowed within the Recreation segment of the Elk River.**

### **Fire Management**

**MA10-3E** All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. Direct attack using a modified range of suppression technology and equipment should be emphasized. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.

A moderate level of fire prevention activities should be provided. Contacts with the public should be encouraged along the river areas, in addition to a signing program at key area entrances. Hazard reduction activities around heavily-used camping and picnic areas should be conducted.

Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.

**Fire Suppression Activities.** In the Recreation segment of the Elk River use of tractors to construct firelines may be permitted only in emergency fire suppression situations. Fireline locations shall consider protection of river related resource values.

Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.

### **Minerals**

**MA10-5E** Where valid existing rights are determined to exist the following standards will be applied to all Placer Mining with Suction Dredge operations:

1. Dredge size will be limited to 4 inches or less.
2. Only one dredge per claim will be allowed.
3. The operating period will be from July 15 to September 15.
4. Camp locations on National Forest System Lands (NFSL) will be a minimum of 100 feet from any stream or lake and must be approved in writing by the Forest Service.
5. Pit type toilets are not allowed unless authorized through a county sanitary permit. Placement and design of pit toilet facilities must meet state and county regulations and will be no closer than 300 feet if authorized in writing by the Forest Officer in charge.
6. A reclamation bond will be required if ground surface disturbance is proposed by the operation or if a camp site is used.
7. All structures, trailers and equipment will be removed from NFSL by October 15 of each year.
8. Cutting of vegetation requires written permission of the Forest Officer in charge.
9. New road construction or major reconstruction of existing roads is not authorized. Any road work will be approved as part of the operating plan.
10. Ten gallons of gasoline is the maximum that can be stored within the river corridor without special spill protection measures. Fifty-five gallons may be stored if a containment structure can be built to contain a spill of the entire 55 gallons and the location is approved in writing by the Forest Officer in charge.

11. **Signing on the claim is prohibited unless authorized in writing by the Forest Officer in charge.**
12. **Turbidity increases will be limited to 10 percent above background levels. A mixing zone of 300 feet down stream from the dredge or sluice box will be the maximum allowed. If the turbidity at the end of the mixing zone can be seen, the operation is exceeding the allowable limit and will be required to shut down until corrective measures are taken or other arrangements are made.**
13. **Operations will be confined to the gravels and stream bed between the vegetation lines of both banks. Under cutting of vegetation or banks will not be allowed.**
14. **Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.**

#### Visual Resource

**MA10-6E The Visual Quality Objective (VQO) for the Recreation segment shall be Retention as seen from Elk River and Elk River road.**

#### Recreation

**MA10-6E Within the recreation segment of Elk River, motorized use shall be limited.**

1. **Motorized vehicles shall be permitted only on open roads.**
2. **Off-road vehicles (ORV) use should not be permitted.**

#### Miscellaneous Product Gathering

**MA10-7E Commercial and private miscellaneous product gathering will be allowed in areas 200 feet from the edge of the river, stream or wetland. Each permit application will be reviewed by the District Ranger prior to approval. Special attention will be given to ensure that the desired visual character and ecological integrity are maintained.**

### **MANAGEMENT AREA 2 - WILD RIVER**

#### Fire Management

**MA2-1E All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less 90 percent of the time. A modified range of suppression technology and equipment emphasizing indirect attack should be used. Wildfires occurring at FIL 1 shall be handled as outlined in the basic fire management direction for the Forest.**

**A high level of wildfire prevention activities with a low level of visibility should be maintained. Only limited field contacts should be made, with most of the contact effort handled through the media.**

**Both direct and indirect methods should be emphasized in the treatment of activity fuels. Direct treatment should be used where visuals or management risks carry a high priority. Indirect treatment is encouraged outside visually-sensitive areas or high-risk areas. Direct treatment of natural fuels is encouraged.**

**Fire retardant "drops" should be directed to minimize entry of chemicals into water courses and to protect river values.**

#### Facilities

**MA2-2E Future utility corridor siting shall be excluded from this Management Area.**

#### Timber

- MA2-3E Timber management activities are not applicable in this management area.**  
**Fuelwood gathering is prohibited except for on-site personal use.**  
**Miscellaneous Product Gathering**
- MA2-4E Miscellaneous forest product gathering is prohibited except for on-site personal use.**  
**Recreation**
- MA2-5E Prohibit motorized/mechanized (bicycles, etc.) use in the Wild segment of the Elk River.**  
**Construct no trails in the Wild Segment of the Elk River.**  
**Visual Resource**
- MA2-6E Manage the area for a Preservation Visual Quality Objective as viewed from the river.**  
**Minerals**
- MA2-7E Locatable minerals are withdrawn from development under the mining law (1872 Mining Law) within the Wild segment of the Elk River. Provision shall be made for valid existing mining rights. Standards for Placer Mining where a valid existing right exists are listed under MA10-5E.**  
**Leasable mineral permits shall include a "No Surface Occupancy" stipulation for that portion of the permit potentially affecting river resource values.**

### **Specific Projects**

**Specific projects** under this direction would be as follows:

This alternative would have the fish habitat protection measures listed under the "No Action" alternative. In addition, the following projects would be implemented:

1. Plant conifers in riparian areas where hardwoods have replaced conifers and are not tall enough to shade the channel.
2. Install structures of native material (rocks and logs) on point bars to aid establishment of conifers.
3. Encourage other landowners to improve instream habitat on the lower reaches of Elk River below the Forest boundary with structures and other management actions.
4. Examine the feasibility for improving instream habitat in Purple Mountain Creek and Bald Mountain Creek.

Recreation facilities at Butler Bar and Sunshine Bar campgrounds would have full accessibility, drinking water, vault toilets, and hardened campsites, compatible with the Aquatic Conservation Strategy. The numerous dispersed campsites adjacent to the river along Forest Service Road 5325 would be maintained or closed, depending on the individual site and resource damage. These dispersed campsites that remain open would be hardened to prevent erosion and damage to the Elk River.

The Forest Service would not recommend a permanent mineral withdrawal on the Recreation segment of the River. The Wild River segment is already withdrawn from new mineral entry.

*Alternatives, Including the Proposed Action*

The Forest Service would maintain views of the river by selectively clearing, thinning or pruning vegetation along the river to maintain riparian values and provide visual enjoyment.

The protection of ecological/botanical values associated with the corridor would be accomplished by aggressively eradicating gorse and tansy within the River Corridor. A program to control these species would be financed and implemented.

This alternative would inventory all roads within the corridor and stabilize, rehabilitate, or close roads which are actively or potentially contributing sediment to the River. Examples of projects would include pullback of sidecast materials, restoring natural drainage, deep ripping, establishing native vegetation, and removing culverts.

This alternative would also provide for more exchange of ideas and resources with the private landowners within the watershed to enhance the fish habitat.

**Monitoring Plan**

The monitoring prescribed in this plan explicitly emphasizes the forest-wide monitoring already prescribed in the Siskiyou National Forest Land and Resource Management Plan (pages V-9 thru V-14 and Appendix D).

<b>Values</b>	<b>Topics</b>	<b>Monitoring Projects</b>
Scenery	Viewpoints from Road	Photo points of visual quality from viewpoints on main road
Public Use	Recreation	Number of visitors using recreation facilities
Environmental Quality and Ecology	Vegetation	Location and number of non-native plants eradicated; trends/location
Environmental Quality and Ecology	Landslides and Surface Erosion Large Wood in Streams Stream Temperature Channel Morphology Fish Habitat	Photo Inventory Riparian stocking surveys and large wood in channel Stream Shade - Solar Pathfinder and thermographs Photo points and channel cross sections Hankin and Reeves type survey, macroinvertebrate sampling, and photographic inventory of aquatic and riparian restoration projects.

## COMPARISON OF THE ALTERNATIVES

The following chart is a comparison of the alternatives and environmental effects for each issue:

Comparison of Alternatives

Issue	Alternative 1	Alternative 2	Alternative 3
Mining Management	Regulate new mining within the Recreation segment by requiring plan of operations.	Recommend withdrawal of the Recreation segment from future mineral entry.	Do not recommend withdrawal of the Recreation Section from future mineral entry, but do add some guidelines for mining. Continue to regulate mining with existing policy.
Environmental Effect	Cumulative effect may adversely affect fish habitat and operations at the State Fish Hatchery.	Would limit any potential for cumulative adverse impact for fish habitat and operations at the State Fish Hatchery.	Cumulative effect may adversely affect fish habitat and operations at the State Fish Hatchery. Additional guidelines would limit some potential impacts.
Fish Habitat Enhancement	Place instream structures to diversify habitat and plant Riparian Areas where shade is needed.	Same as "No Action" alternative for planting riparian areas, plus the following measures. Plant conifers to supplement alder shade. Plant conifers on point bars and protect with natural materials. Encourage private landowners to improve instream habitat on Lower River below Forest boundary.	Same as "No Action" alternative for planting riparian areas, plus the following measures. Plant conifers to supplement alder shade. Plant conifers on point bars and protect with natural materials. Encourage private landowners to improve instream habitat on Lower River below Forest boundary.
Environmental Effect	Would reduce stream temperatures and increase long term supply of large wood. Structures may not add to fish habitat diversity.	Would reduce stream temperatures faster than "No Action". Would also supply large wood (both alive and dead) to stream ecosystem faster.	Would reduce stream temperatures faster than "No Action". Would also supply large wood (both alive and dead) to stream ecosystem faster.





Comparison of Alternatives (continued)

Issue	Alternative 1	Alternative 2	Alternative 3
Private Land Use	Continue to cooperate with Private Land Owners if they ask.	Ask private landowners if they are interested in providing better fish habitat and provide technical assistance, if needed.	Ask private landowners if they are interested in providing better fish habitat and provide technical assistance, if needed.
Environmental Effect	Some improvement of downstream fish habitat conditions would occur along with some sense of community responsibility. 75 acres of private land would be within the River Corridor.	Downstream habitat may improve tremendously. A strong sense of community may evolve. 102 acres of private land would be within the River Corridor.	Downstream habitat may improve tremendously. A strong sense of community may evolve. 102 acres of private land would be within the River Corridor.

## **CHAPTER III**

### **ENVIRONMENTAL CONSEQUENCES**

#### **INTRODUCTION**

This chapter is the basis for comparison of alternatives. It shows, by issue, what the direct, indirect, and cumulative effects are for implementing each of the alternatives for that issue. This section is designed to focus the issues across the alternatives.

Other resource values, such as geology, climate, fisheries protection, water quality, socioeconomic values, wildlife, and cultural resources, which may or may not be affected by implementation of the River Management Plan are not discussed in this document. Information on these topics can be found in the Draft Environmental Impact Statement for the Elk Wild and Scenic River Management Plan (1992) and the Watershed Analysis, Elk River Watershed (1994). Because this proposal is thought to not have a significant effect on the human environment, only the effects of the alternatives for the one issue with the Proposed Action are discussed. In addition, the effects on the issues which helped form the proposed action are also discussed. This Environmental Assessment tiers to the Siskiyou Forest Plan, as amended by the President's Forest Plan. It assumes that the existing Standards and Guidelines from these two decisions are sufficient to protect all river resource values.

#### **COMPARISON OF ALTERNATIVES BY ISSUE WITH THE "PROPOSED ACTION"**

The only significant issue with the action proposed in Chapter II is mining and its effects on water quality and fish habitat. The effects of each alternative and how it resolves that issue is listed here.

##### **Alternative 1**

This Alternative would allow the Recreational segment of the Wild and Scenic River to remain open to new mineral entry. Mining operations would still be subject to all mining laws and approved Plan of Operations would be required where significant surface disturbance is likely.

Many experts disagree on the effects of mining and particularly dredging on fish habitat and fish. The reader and decision maker needs to recognize that disagreement when reading these effects of implementation.

The Elk River supports one of the most important and valuable wild runs of anadromous fish in Oregon. While a single dredge operation in the Elk River may have minimal effects, the cumulative effects of a large number of such operations along the River could result in substantial negative effects on stream channels, since a large area of the stream bed is subsequently disturbed. Type, size and number of operations will determine the effect that mining will have on the channel and the fish habitat.

Other experts have stated substantial negative effects could not occur, even with a large number of operations along the River.

There are two possible effects of placer mining on salmonids. These effects are categorized into (1) increased input of fine sediment into the water, observable as turbidity and (2) movement of coarse sediment (gravel, cobble and other larger-sized sediment particles found in the stream bed) during dredging.

Dredge mining operations in stream channels have the potential to affect water quality, channel morphology, and salmonid fishes and their habitat. Dredges and /or washing of placer deposits impact water quality and affects water clarity due to discharged fine sediments increasing turbidity levels. Mining dislodges fine sediment into the water column which settles out downstream, "silting out" downstream algal and macroinvertebrate communities. Silting out causes algae, grazers, scrapers, and filter feeders, and other sediment-sensitive macroinvertebrates to die out and be replaced by other functional groups. Again, other experts dispute these effects.

Post-emergent juvenile fish can also be affected by increases in turbidity. These fish are sight-dependent feeders and prolonged periods of cloudy water inhibit feeding ability and growth. Water-borne silt also enters gills and can potentially damage these tissues and also affect growth and mortality. Some experts in the field have said turbidity is not a major issue for fish health.

In the Elk River, the State of Oregon salmon hatchery located at the National Forest boundary is particularly sensitive to such impacts. Water for this facility is taken directly from Elk River and in the past dredge mining operations have created significant amounts of turbid water which has affected hatchery operations.

The stream bed morphology represents a dynamic equilibrium with bankfull flow conditions. Mining produces an artificial "pocket and pile" bedform. Thus, early spawners that arrive before the larger peak flows are more likely to encounter bed movements that wash out their redds, as the bed adjusts back to equilibrium. Species likely to be affected by this bed movement include the fall spawners, coho and chinook salmon, both on the sensitive list. Steelhead and trout are less affected since they spawn later in the season.

Finally, by churning over the gravel in the summer time, mining changes the channel disturbance regime from one of a single disturbance season to one of two disturbance seasons. This affects the long-lived macroinvertebrates. Two to three year life-cycle nymphs would be affected proportionately to the area disturbed. Disruption of a large area could cause them to decrease in number. All experts do not agree these effects are real.

Placer mining with dredges has affected the water quality during mining operations. One of the beneficial uses of the Elk River is water supplied to the Oregon Department of Fish And Wildlife Elk River Fish Hatchery for its operations. Personnel at the hatchery have noticed increases in turbidity due to water muddied by dredging operations. This turbidity has adversely affected hatchery operations. The cumulative effect of a number of dredges operating over time has the potential for affecting the water quality and beneficial uses to an unacceptable degree.

Any mining of lode deposits within the river corridor would potentially have unacceptable impacts due to increased sediment, turbidity, and structure simplification from roading, increased traffic, tailings, and vegetation changes. Hard rock mining could raise water temperatures by removal of riparian vegetation.

## **Alternative 2**

Under Alternative 2, the Recreation segment of the Elk Wild and Scenic River Corridor would be recommended for withdrawal from new mineral entry. The effect of a withdrawal is that it would invalidate new claims and require a determination of valid existing rights before a Plan of Operation could be approved on a claim that predated the withdrawal.

Alternative 2 would control any possible cumulative effects of mining on fisheries and water quality by immediately preventing the filing of new claims in the Recreation segment of the Elk River. The requirement of validity exams in response to any Plan of Operations would likely reduce the number of claims being held over time. There is no disagreement among the scientific community on the effects of this alternative.

### **Alternative 3**

This Alternative would allow the Recreational segment of the Wild and Scenic River to remain open to new mineral entry. Mining operations would still be subject to all mining laws and approved Plan of Operations would be required where significant surface disturbance is likely.

Many experts disagree on the effects of mining and particularly dredging on fish habitat and fish. The reader and decision maker needs to recognize that disagreement when reading these effects of implementation.

The Elk River supports one of the most important and valuable wild runs of anadromous fish in Oregon. While a single dredge operation in the Elk River may have minimal effects, the cumulative effects of a large number of such operations along the River could result in substantial negative effects on stream channels, since a large area of the stream is subsequently disturbed. Type, size and number of operations will determine the effect that mining will have on the channel and the fish habitat.

Other experts have stated substantial negative effects could not occur, even with a large number of operations along the River.

There are two specific effects of placer mining on salmonids. These effects are categorized into (1) increased input of fine sediment into the water, observable as turbidity and (2) movement of coarse sediment (gravel, cobble and other larger-sized sediment particles found in the stream bed) during dredging.

Dredge mining operations in stream channels have the potential to affect water quality, channel morphology, and salmonid fishes and their habitat. Dredges and /or washing of placer deposits impact water quality and affects water clarity due to discharged fine sediments increasing turbidity levels. Mining dislodges fine sediment into the water column which settles out downstream, "silt out" downstream algal and macroinvertebrate communities. Silt out causes algae, grazers, scrapers, and filter feeders, and other sediment-sensitive macroinvertebrates to die out and be replaced by other functional groups. Again, other experts dispute these effects.

Post-emergent juvenile fish can also be affected by increases in turbidity. These fish are sight-dependent feeders and prolonged periods of cloudy water inhibit feeding ability and growth. Water-borne silt also enters gills and can potentially damage these tissues and also affect growth and mortality. Some experts in the field have said turbidity is not a major issue for fish health.

In the Elk River, the State of Oregon salmon hatchery located at the National Forest boundary is particularly sensitive to such impacts. Water for this facility is taken directly from Elk River and in the past dredge mining operations have created significant amounts of turbid water which has affected hatchery operations.

The stream bed morphology represents a dynamic equilibrium with bankfull flow conditions. Mining produces an artificial "pocket and pile" bedform. Thus, early spawners that arrive before the larger peak flows are more likely to encounter bed movements that wash out their redds, as the bed adjusts back to equilibrium. Species likely to be affected by this bed movement include the fall spawners, coho and chinook salmon, both on the sensitive list. Steelhead and trout are less affected since they spawn later in the season.

Finally, by churning over the gravel in the summer time, mining changes the channel disturbance regime from one of a single disturbance season to one of two disturbance seasons. This affects the long-lived macroinvertebrates. Two to three year life-cycle nymphs would be affected proportionately to the area disturbed. Disruption of a large area could cause them to decrease in number. All experts do not agree these effects are real.

## *Environmental Consequences*

Placer mining with dredges has affected the water quality during mining operations. One of the beneficial uses of the Elk River is water supplied to the Oregon Department of Fish And Wildlife Elk River Fish Hatchery for its operations. Personnel at the hatchery have noticed increases in turbidity due to water muddied by dredging operations. This turbidity has adversely affected hatchery operations. The cumulative effect of a number of dredges operating over time has the potential for affecting the water quality and beneficial uses to an unacceptable degree.

Any mining of lode deposits within the river corridor would potentially have unacceptable impacts due to increased sediment, turbidity, and structure simplification from roading, increased traffic, tailings, and vegetation changes. Hard rock mining could raise water temperatures by removal of riparian vegetation.

## **COMPARISON OF ALTERNATIVES BY ISSUES USED TO DEVELOP THE PROPOSED ACTION**

### **Fish Habitat Enhancement**

#### **Alternative 1**

This alternative would place instream structures to diversify habitat and plant riparian areas where shade is needed. The instream structures would help diversify fish habitat by increasing the amount of pools and cover. However, Elk River, in many places, already has the habitat diversity. Consequently, the increase in habitat diversity and fish production in the upper river would not be very large. In many places, it would be a waste of time and money. The planting of riparian areas would eventually decrease water temperatures, provide large woody material in the future for stream habitat diversity, and promote stable streambanks.

#### **Alternative 2**

Alternative 2 would 1) plant riparian areas where shade is needed, 2) plant conifers to supplement alder shade, 3) plant conifers on point bars and protect with natural materials, 4) encourage placement of instream structures on the lower river below the Forest boundary, and recommend escapement goals for management of the chinook and coho salmon. The tree planting would help lower stream temperatures at a faster rate than the Alternative 1 and would also provide more large woody material in a timely manner. The trees planted on the point bars would restore a component of the stream environment that has historically provided wildlife habitat, stream shade, habitat diversity, and large wood recruitment. Recommendations for restoring habitat complexity off-Forest for Coho salmon could increase fish productivity and increase obstacles and hazards for the fishermen who drift the River.

#### **Alternative 3**

Alternative 3 would 1) plant riparian areas where shade is needed, 2) plant conifers to supplement alder shade, 3) plant conifers on point bars and protect with natural materials, 4) encourage placement of instream structures on the lower river below the Forest boundary, and recommend escapement goals for management of the chinook and coho salmon. The tree planting would help lower stream temperatures at a faster rate than the Alternative 1 and would also provide more large woody material in a timely manner. The trees planted on the point bars would restore a component of the stream environment that has historically provided wildlife habitat, stream shade, habitat diversity, and large wood recruitment. Recommendations for restoring habitat complexity off-Forest for Coho salmon could increase fish productivity and increase obstacles and hazards for the fishermen who drift the River.

### **Recreation Development**

#### **Alternative 1**

This alternative would minimally improve Butler Bar and Sunshine Creek Campgrounds to stop resource damage from human waste and erosion. It would also construct hiking trails along the North Fork Elk River and up Anvil Mountain. This action would reduce degradation of the water quality and fish habitat from campground use. The campgrounds would not have facilities for persons with disabilities. The trail construction up the North Fork may encourage fishermen which could impact smolt survival and escapement goals.

## **Alternative 2**

This alternative would upgrade both Butler Bar and Sunshine Creek Campgrounds to be accessible for everyone. It would also provide drinking water and modern vault toilets at both facilities. The Forest Service would inventory, improve, and rehabilitate dispersed campsites along Forest Service Road No. 5325. No trail would be constructed up the North Fork Elk River or Anvil Mountain.

More use would occur in the campgrounds because they would be accessible for everyone. The drinking water and modern toilets at both recreation sites would also encourage more use without impacting the aquatic environment. In addition, any resource degradation associated with the dispersed campsites would be removed. Smolt production on the North Fork Elk would not be affected by easy access for fishing.

## **Alternative 3**

This alternative would upgrade both Butler Bar and Sunshine Creek Campgrounds to be accessible for everyone. It would also provide drinking water and modern vault toilets at both facilities. The Forest Service would inventory, improve, and rehabilitate dispersed campsites along the river road FS No. 5325. No trail would be constructed up the North Fork Elk River or Anvil Mountain.

More use would occur in the campgrounds because they would be accessible for everyone. The drinking water and modern toilets at both recreation sites would also encourage more use without impacting the aquatic environment. In addition, any resource degradation associated with the dispersed campsites would be removed. Smolt production on the North Fork Elk would not be affected by easy access for fishing.

## **Scenery**

### **Alternative 1**

This alternative would maintain the existing vegetation along road FS No. 5325. Public safety would be assured by maintaining proper site distance along the roads. As the roadside vegetation grows and becomes more dense, people will see less and less of the river. The road will appear as a "tunnel travelway" between a wall of vegetation and the roadcut/hillside.

### **Alternative 2**

This alternative would provide views of the river by selectively clearing, thinning, or pruning vegetation along the river. Public safety would still be assured by maintaining proper site distance. In addition, some scenic views of the river would be maintained.

### **Alternative 3**

This alternative would provide views of the river by selectively clearing, thinning, or pruning vegetation along the river. Public safety would still be assured by maintaining proper site distance. In addition, some scenic views of the river would be maintained.



## **Ecological and Biological Integrity**

### **Alternative 1**

Alternative 1 would limit populations of gorse and tansy within the River Corridor by periodic removals of these plants. Gorse and tansy populations would not expand.

### **Alternative 2**

Alternative 2 would reduce populations of gorse and tansy within the River Corridor, by more aggressively removing existing plants. Though the plants could not be eliminated (there are tremendous numbers of seed sources adjacent to the Forest boundary), the threat to wildlife and wildfire from gorse and tansy would be greatly reduced.

### **Alternative 3**

Alternative 3 would also reduce populations of gorse and tansy within the River Corridor, by more aggressively removing existing plants. Though the plants could not be eliminated (there are tremendous numbers of seed sources adjacent to the Forest boundary), the threat to wildlife and wildfire from gorse and tansy would be greatly reduced.

## **Watershed Restoration**

### **Alternative 1**

This alternative would maintain existing roads to reduce sediment loads to Elk River. As part of the watershed restoration and fish habitat improvement, some unshaded riparian areas would be planted.

### **Alternative 2**

In addition to maintaining the existing roads, Alternative 2 would inventory all roads within the corridor and stabilize, rehabilitate, or close them, as necessary for reducing impacts on the river.

### **Alternative 3**

In addition to maintaining the existing roads, Alternative 3 would also inventory all roads within the corridor and stabilize, rehabilitate, or close them, as necessary for reducing impacts on the river.

## **Private Land Use**

### **Alternative 1**

Alternative 1 would have a more passive approach to working with private landowners for watershed improvements. A common understanding of watershed problems and a sense of community would occur, but might take a long time. Less sharing of technical assistance would occur. Seventy five acres of private land would be located within the River Corridor.

### **Alternative 2**

Alternative 2 would have a more active approach for working with private landowners. The Forest Service would work with the existing watershed council group to expedite a common understanding of the

watershed and develop a sense of community responsibility. More sharing of technical assistance would occur. One hundred and two acres of private land would be located within the River Corridor.

### **Alternative 3**

Alternative 3 also would have a more active approach for working with private landowners. The Forest Service would work with the existing watershed council group to expedite a common understanding of the watershed and develop a sense of community responsibility. More sharing of technical assistance would occur. One hundred and two acres of private land would be located within the River Corridor.

## **COMMON EFFECTS FOR ALL ALTERNATIVES**

There will be no negative effects to wetlands, floodplains, prime farmlands, rangelands, or forest lands; and no civil rights of minority groups, women, or consumers will be adversely affected.

There are no anticipated impacts on cultural/heritage resources or on Port Orford-cedar populations that cannot be mitigated at the project level.

None of the alternatives are expected to cause any significant adverse impacts to any threatened, endangered, or sensitive plant or animal species.

## **CHAPTER IV**

### **AGENCIES, ORGANIZATIONS AND PEOPLE CONSULTED**

#### **INTRODUCTION**

The planning team consulted with a number of individuals inside the Forest Service. The team also received input and assistance from other agencies, groups, and individuals. We thank the following agencies, groups, and individuals who cared enough to provide valuable input and assistance to the development of this Environmental Assessment, previous planning efforts on the Elk River, and the Final River Management Plan for the Elk Wild and Scenic River.

#### **FOREST SERVICE PERSONNEL**

Mike Cooley	Lands and Recreation Staff Officer, Siskiyou National Forest
Jackie Dietrich	Wild and Scenic River Specialist - Region 6, U.S. Forest Service
Robert Ettner	Planning and Natural Resources Staff Officer, Siskiyou National Forest
Dick Carkin	Planning - Region 6, U.S. Forest Service
Tom Dew	River Planner, Rogue River National Forest
Glen Chen	Fish Biologist - U.S. Forest Service, Intermountain Experiment Station
Tom Atzet	Area Ecologist, Southwestern Oregon (Area 5)
Sue Livingston	Wildlife Biologist, U.S. Fish and Wildlife Service
Diane Chung	GIS Management, Bureau of Land Management
Craig Snider	NEPA Coordinator, Siuslaw National Forest

#### **STATE OF OREGON**

Gary Susac	Oregon Department of Fish and Wildlife - Elk River Hatchery
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#### **ORGANIZATIONS AND INDIVIDUALS**

The organizations and individuals listed on pages LA1 through LA4 of the DEIS for the Elk Wild and Scenic River Management Plan were consulted and provided feedback via comments on the DEIS.

## **LIST OF PREPARERS**

### **INTERDISCIPLINARY CORE TEAM**

Cindy Enstrom	District Ranger - Powers Ranger District Hydrologist - 16 years of experience with the Forest Service MS - Forest Resources, BS - Forest and Watershed Management
Joel King	Forest Planner, Siskiyou National Forest Soil Scientist - 17 years experience with the Forest Service MS - Soil Science, BS - Forest Management

### **INTERDISCIPLINARY TEAM**

Randy Frick	Forest Fish Biologist
Cindy Ricks	Forest Resource Geologist
Chris Park	Siskiyou Westside Zone Hydrologist

### **TECHNICAL REVIEW TEAM FOR DEIS FOR THE WILD AND SCENIC ELK RIVER**

Dr. Gordon Grant	Geomorphologist, USFS, Pacific Northwest Experiment Station
Dr. Gordon Reeves	Fisheries Biologist, USFS, Pacific Northwest Experiment Station
Dr. Fred Swanson	Ecologist, USFS, Pacific Northwest Experiment Station

## **APPENDIX B**

### **BOUNDARY DESCRIPTION**

## ELK SCENIC & WILD RIVER

### BOUNDARY DESCRIPTION

Note: All Latitudes and Longitudes are referenced to the North American Datum 1927 and were derived from digitized positions. It is the intent of this description that any call to a monument control over coordinates and coordinates control over any metes and bounds calls.

Beginning at the N.E. corner of the S.W. 1/4 of the N.E. 1/4 of Section 7, T.33S., R.14 W., W.M.;

Thence Westerly to the NW corner of the S.W. 1/4 of the N.E. 1/4 of said Section 7;

Thence Southerly to the South 1/4 of Said Section 7;

Thence Easterly to the S.E. corner of Said Section 7;

Then Southerly along the West boundary of Section 17, T.33S., R.14 W., W.M. to the N.W. corner of the S.W. 1/4 of the S.W. 1/4;

Thence Easterly to the N.W. corner of the S.W. 1/4 of the S.W. 1/4 of Said Section 17;

Thence Easterly to the S.W. corner of the East 1/2 of the N.W. 1/4 of the S.W. 1/4 of Section 17;

Thence Northerly to the N.W. corner of the East 1/2 of the N.W. 1/4 of the S.W. 1/4 of Section 17;

Thence Easterly to the N.E. corner of the West 1/2 of the N.E. 1/4 of the S.W. 1/4 of Section 17;

Thence Southerly to the S.E. corner of the West 1/2 of the S.E. 1/4 of the S.W. 1/4 of Section 17;

Thence Easterly along the South boundary of Section 17 to the S. 1/4 of said section;

Thence Southerly along the North-South centerline of Section 20, T.33S., R.14W., W.M., to the Northeasterly Right of Way of F.S. Road as described in Curry County Book of Records 1, Pages 308 and 429;

Thence Easterly along said Northeasterly Right of Way line to the East boundary of Section 20, T.33S., R 14 W., W.M., except that portion of land in the Northeast 1/4 and Northeast of the road as described in deed to Maude S. Kohl, et al, Recorded June 20, 1969 in Book 11 page 313 of Curry County;

Thence Northerly to the N.E. corner of the S.E. 1/4 of the N.E. 1/4 of Section 20;

Thence Southeasterly to the Summit of Pearce Peak;

Thence Easterly along the ridge to the Summit of Purple Mountain;

Thence Southeasterly along the ridge to the east-west centerline of Section 22, T.33S., R.14W., W.M.;

Thence Easterly along said centerline to the N.E. corner of the S.W. 1/4 of Section 22;

Thence Southerly along the North-South Centerline of Said Section 22 to the divide between Bald Mountain Creek and Elk River;

Thence Southeasterly along said divide to the Northerly most point of Father Mtn;

Thence Northeasterly to the East 1/4 corner of Section 23, T.33 S., R 14 W., W.M.

Thence Northeasterly to a point in an unnamed tributary to Elk River;

Thence Northeasterly to a point in a borrow pit and 50 foot offset from Forest Service Road No. 5325 180;

Thence Easterly and parallel to said Forest Service Road at a 50 ft Northerly offset to a point;

Thence Northeasterly to a point at the end of F.S. Road No. 5325 182;

Thence Northeasterly to a point on the divide between Panther Creek and Elk River;

Thence Southerly as depicted on the RMPCM to the Jct. of the West Fork and Main Fork of Panther Creek;

Thence Southeasterly along the thread of Said Main Fork, to the Jct. of the East Fork of Panther Creek;

Thence Northeasterly to the West 1/16 of Sections 20 and 29, T. 33 S., R.13W., W.M.;

Thence Northeasterly to the N 1/4 of Said Section 20;

Thence Northeasterly to a point at the end of a logging spur on prominent ridge;

Thence following said ridge and logging spur, Southeasterly to a point at a 50 feet northerly offset from F.S. Road No. 5544;

Thence parallel to Said Road at 50 foot Northerly offset to a point on ridge where road turns Southerly;

Thence Southeasterly to a point at the end of F.S. Road 5544 040;

Thence Southeasterly to the S 1/4 of Section 15, T. 33 S., R. 13 W., W.M.;

Thence southeasterly to a point in Blackberry Creek;

Thence southeasterly following spur ridge to divide between McCurdy Creek and Blackberry Creek;

Thence easterly and northerly along ridge to a 50 foot southerly offset from F.S. Road No. 5325;

Thence Northeasterly to a point in the south fork of Elk River;

Thence Northeasterly through section 13, T. 33S., R. 13W., and Section 18, T. 33S., R. 12W., W.M. to an unnamed creek;

Thence along the thread of said creek northerly to the North Fork of Elk River;

Thence Northwesterly to a point at approximately 1/4 mile northerly offset from the North Fork of the Elk River;

Thence Southwesterly approximately 1/4 northerly of the North Fork of Elk River to a point on a spur ridge which divides said North Fork and the Main Fork of the Elk River;

Thence Northwesterly along said ridge to a prominent point;

Thence Southwesterly along Said Ridge to a point;

Thence Northwesterly to the intersection of a tributary to Bungalow Creek and the West Boundary of Section 14, T. 33 S., R. 13 W., W.M.;

Thence Northerly along said Section line to the N.W. Corner of Said Section 14;

Thence Westerly along the South boundary of Sections 10, 9 and 8 of T. 33 S., to a point on a 350 foot Northerly perpendicular offset with the Grassy Knob Wilderness Boundary;

Thence parallel to the Grassy Knob Wilderness Boundary line on said offset line to a point on the east-west centerline of the NE 1/4 of Section 7, T.33 S, R.14 W, W.M.;

Thence along said east-west centerline to the point of beginning.



## **APPENDIX C**

# **STATE SCENIC WATERWAY GENERAL ADMINISTRATIVE RULES**

**OREGON ADMINISTRATIVE RULES**  
**CHAPTER 736, DIVISION 40 — STATE PARKS AND RECREATION DEPARTMENT**

**DIVISION 40**

**OREGON SCENIC WATERWAYS**

**Rules for Conducting Hearings on Scenic Waterways Regulations**

**736-40-005** The Commission hereby adopts and promulgates rules and procedures governing hearings on regulations for the management of related adjacent land within scenic waterways as provided in ORS 390.845(2):

(1) The Parks and Recreation Commission hereby delegates to the State Parks and Recreation Director, or his designated representative, the duty of arranging and conducting auditive public hearings, if such is requested, under the provisions of ORS 390.845(2).

(2) Any public hearing held pursuant to ORS 183.330 shall be fully recorded and transcribed by the Secretary of the Commission, and the Secretary will receive and properly mark all exhibits, documents or other statements introduced or received by the hearing officer at the hearing. Exhibits, documents or other statements received by the Commission within ten days after any hearing will be made part of the record of the hearing.

(3) Following the transcribing of the hearing, the Commission's Secretary shall file in the Commission's records a full copy of the transcript of the hearing as well as a copy of all exhibits, documents or other statements received at the hearing. The transcript, including exhibits, documents or other statements, will be considered in preparing Scenic Waterways rules and regulations by the Commission.

(4) The procedure under which any hearing will be conducted is as follows:

(a) The comments and exhibits to be received at this hearing will be limited to whether the rules and regulations proposed by the State Parks and Recreation Department are reasonable;

(b) The limits and intent of the proposed rules and regulations will be explained by representatives of the State Parks and Recreation Department;

(c) Except for questions that may be asked by the hearing officer there will be no direct questions to or cross-examination of any individual who is making a statement or introducing exhibits;

(d) Following the opening statements by the representatives of the State Parks and Recreation Department the hearing will be open to anyone in attendance who wishes to make a statement or introduce exhibits, either for or against the proposed rules and regulations. The hearing officer will recognize anyone in attendance for this purpose;

(e) The hearing will be continued with such recesses as are necessary, as determined by the hearing officer, until all persons wishing to make a statement or introduce exhibits have had an opportunity to do so.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925  
Hist.: HC 1252, f. 5-13-71, ef. 5-12-71; PR 15-1992, f. & cert. ef. 11-12-92

**Designated Scenic Waterways**

**736-40-010** These rules apply to those river segments and lakes designated as Oregon Scenic Waterways in ORS 390.826.

Stat. Auth.: ORS 183.545, 183.550, Ch. 184 & 390.805 - 390.925

Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72; 10TC 6, f. 11-1-73; 10TC 14, f. 12-5-73; PR 7-1985, f. & ef. 10-24-85; PR 6-1986, f. & ef. 5-28-86; PR 7-1986, f. & ef. 5-28-86; PR 2-1988, f. & cert. ef. 3-25-88; PR 15-1992, f. & cert. ef. 11-12-92

**Definition of Terms**

**736-40-015** As used in these rules and regulations, unless the context requires otherwise:

(1) "The Act" means the Scenic Waterways Act (ORS 390.805 to 390.925).

(2) "Commission" means the Oregon Parks and Recreation Commission.

(3) "Existing Use" means the use to which related adjacent land was being put on December 3, 1970; or on the date a river segment or lake was designated as a scenic waterway; or any subsequent change in use authorized under the Act or these rules.

(4) "Improvement" means the placing on related adjacent land of any building or structure or modification of existing buildings or structures or the clearing, leveling, filling or excavating of related adjacent land.

(5) "Related Adjacent Land" means all land within one-fourth of one mile (measured horizontally or level, as in usual surveying practice) of the bank on each side of a river within a scenic waterway, except land that, in the Commission's judgment, does not affect the view from the waters within a scenic waterway.

(6) "River Bank". The banks of a river are the boundaries which confine the water to its channel throughout its entire width when the stream is carrying high water at the elevation to which it ordinarily rises annually in season. Generally this will be the line at which the land becomes dominantly influenced by the river and takes on the characteristics of a riverbed and is thereby set apart from the uplands. An evulsion or sudden channel change will not change the boundaries of related adjacent lands.

(7) "Road" means all roads, public and private.

(8) "Scenic Easement" means the acquired right to control the use of related adjacent land, including airspace above such land, for the purpose of protecting the scenic view from waters within a scenic waterway.

(9) "Scenic Waterway" means a river, lake or segment thereof, including related adjacent land and the airspace above, that has been so designated by or in accordance with the Act.

(10) "Seen from the Waters" and "Visible from the River" mean not entirely concealed from view from the river within a scenic waterway by topography. Land beyond the boundaries of "related adjacent land", whether or not visible from the river, is not within the jurisdiction of this Act.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925  
Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72; PR 15-1992, f. & cert. ef. 11-12-92

**Responsibility and Authority of the Oregon Parks and Recreation Commission**

**736-40-020** (1) The Act shall be administered by the Commission in such a manner as to protect and enhance the values which caused a scenic waterway to be included in the system. Primary

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**CHAPTER 736, DIVISION 40 — STATE PARKS AND RECREATION DEPARTMENT**

emphasis shall be given to protecting the scenic beauty, fish and wildlife, scientific and recreation features, based on the special attributes of each area.

(2) The Commission has adopted these regulations governing the management of related adjacent lands, including state highway construction, after due consideration of the responsibilities outlined above and consultation with the Oregon State Department of Forestry, the Department of Agriculture, and other such federal, state, and local agencies as may be involved; and with the concurrence of the State Water Resources Board.

(3) Agreements entered into and approvals given by the Commission in no way relieve persons or entities affected thereby of requirements established by other governmental agencies, local, state or federal.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925  
Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72; PR 15-1992,  
f. & cert. ef. 11-12-92

### Public Use of Scenic Waterways

**736-40-025** (1) These rules apply to all scenic waterways unless more specific rules have been adopted for a particular scenic waterway. All persons using scenic waterways for recreation shall comply with the provisions of the Act and with the rules and regulations adopted by the Commission under the Act:

(a) **Private Property:** Nothing in the Act or in these rules and regulations affords to any person any right to trespass upon the property of another or in any way alters the rights of private landholders in regard to trespass. The Commission admonishes all persons to respect the rights and sensibilities of those who make their homes and livelihoods within the scenic waterways;

(b) **Litter and Pollution:** Refuse, scrap, trash and garbage which is not placed in receptacles provided for that purpose at maintained recreation sites shall not be buried or abandoned, but shall be taken out of the scenic waterways for proper disposal. All persons shall avoid pollution of the waters, lands and air within scenic waterways in any manner whatsoever;

(c) **Fires:** Fires shall be made only in compliance with state law and only when and where there is no possibility of their causing damage. Conditions of wind and weather, proximity of vegetation or flammable materials and other factors as prudence dictates shall be most carefully considered. No open fire shall be made unless a shovel, axe and bucket of water are nearby. No open fire shall be left unattended and all fires shall be completely extinguished with water after use. Permissible fires shall be of the smallest practicable size;

(d) **Tree Cutting:** Living or standing trees or plants shall not be cut for burning or for any other purpose by persons using the scenic waterways for recreation;

(e) **Collecting Souvenirs and Relics:** Except as provided by law, antiquities, relics, artifacts, fossils and souvenirs shall not be removed from the site of their discovery or otherwise harmed. Archeological sites and fossil beds shall not be disturbed without proper authority under law;

(f) **Livestock:** Persons using the scenic water-

ways for recreation shall not harass or in any way interfere with livestock or domestic animals, whether on private or public land, or damage fences lawfully placed on such lands for their management.

(2) Natural springs shall not be damaged or in any way rendered unusable by persons or animals.

(3) The Commission asks all persons to leave in passing no mark upon the land that might diminish its value to another, for the unspoiled beauty of these waterways, of value to the human spirit, is the common heritage of all.

Stat. Auth.: ORS Ch. 390  
Hist.: HC 1285, f. 6-27-72; PR 3-1982, f. & ef. 3-26-82

### Land Management

#### Improvements and Changes in Use of Related Adjacent Lands

**736-40-030** (1) Except as provided in section (5) of this rule, OAR 736-40-035 and 736-40-045 through 736-40-075, no person shall make any improvement or change in the existing use of related adjacent land without first giving written notification to the Commission of the intent to make an improvement or change in land use. The proposed improvement or change in land use shall not be made or work started sooner than one year after such notice unless the Commission has given its written approval of the proposal. (See notification procedures in OAR 736-40-080.)

(2) Upon receipt of such notice, the Commission shall determine if the proposal would impair the natural beauty of the scenic waterway substantially.

(3) If the proposed improvement or change of land use would not impair the natural beauty substantially, the Commission shall give written notice to the owner of the related adjacent land that he may proceed immediately with the proposal as described in his notification to the Commission.

(4) Should the Commission determine that the proposal, if carried out, would impair the natural beauty of the scenic waterway substantially, or otherwise violate the provisions of the Act or these rules and regulations, it will so notify the owner of the related adjacent land in writing. No steps shall be taken by the applicant to carry out such proposal until at least one year after the original notice to the Commission unless agreement with the Commission is sooner reached. (See OAR 736-40-080.)

(5) In connection with existing use of related adjacent land, farmers, ranchers and residents may modify existing structures or construct or place such subsidiary and lesser structures adjacent thereto, except residences or guest houses, as are usual and necessary to their existing use without prior notice to the Commission, provided that such modification or construction will not violate OAR 736-40-035(7)(a) and (b) and will be in harmony with the natural beauty of the scenic waterway.

(6) Repair and maintenance of existing facilities and structures in a manner compatible with these rules and regulations do not require notification to the Commission.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72; IOTC 6, f. 11-1-73

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**Rules of Land Management**

**736-40-035** These rules and regulations governing the use of related adjacent lands and improvements made on or to these lands apply to all designated scenic waterways. Land management on scenic waterways includes, but is not limited to, the following examples:

(1) **Timber Harvest:** The forest cover on related adjacent land is a part of the scenic beauty of the scenic waterway and notification of planned timber harvest operations must be given to the Commission one year prior to commencement. The notification must include a plan specifying timber to be cut, road locations, logging methods, slash cleanup, soil stabilization, revegetation measures and any other details as the Commission may require.

(2) **Tree Cutting:** No person shall cut any living tree within a scenic waterway without prior written notice except as provided in these rules.

(3) **Grazing and Farming:** Existing use in the form of grazing or farming of the related adjacent land is a part of the scenic beauty of the waterway. Notification is not required for:

(a) Construction of fences;  
(b) Maintenance of farm buildings, fences or appurtenances necessary to existing use;

(c) Laying of irrigation lines;  
(d) Pumphouse construction, if not in violation of OAR 736-40-030(5);

(e) Additions to farm buildings, if not in violation of OAR 736-40-030(5);  
(f) Crop rotation;

(g) Variations in grazing land management;  
(h) Placing of grazing land under cultivation, except within classified natural river areas named in OAR 736-40-045 through 736-40-075;

(i) Construction of silos and grain storage facilities, and other structures or buildings as are needed in connection with the existing use of the related adjacent land, if not in violation of OAR 736-40-030(5), except within classified natural river areas named in OAR 736-40-045 through 736-40-075;

(j) Cutting of danger trees. Notification is required for construction of new roads or improvement of existing roads.

(4) **Suburban Housing:** Notification is not required for:

(a) Maintenance of existing homes in a manner compatible with these rules and regulations;

(b) Modifications to existing single family dwellings, if not in violation of OAR 736-40-030(5);

(c) Construction of garages necessary to the use of existing homes, if not in violation of OAR 736-40-030(5);

(d) Changes in or additions to homesite landscaping which do not impair vegetation screening structures from view from the river;

(e) Construction of protective fences necessary to use of the home;

(f) Cutting of firewood for occupant's dwelling;

(g) Cutting of danger trees. Notification is required for construction of new roads or improvement of existing roads.

(5) **Prospecting, Mining, Dredging, and Quarrying:**

(a) All prospecting, mining, dredging, and quarrying operations, including removal or movement of gravel, rocks and sand within related

adjacent lands, require notification to the Commission as prescribed herein;

(b) Such notification shall include plans to insure that debris, silt, chemicals or other materials, shall not be discharged into or allowed to reach the waters within a scenic waterway and that the natural beauty of the scenic waterway shall not be impaired substantially.

(6) **Transportation Facilities and Utilities:**

(a) No roads, railroads or other facilities for transportation or utilities shall be constructed or improved within a scenic waterway without notification to the Commission as prescribed by the Act and herein;

(b) The Commission, whenever practicable, will require the sharing of land and airspace by such facilities and utilities. All permissible transportation facilities and utilities shall be so located as to minimize impairment of the natural beauty of the scenic waterway. For example, it will be desirable to place electrical and telephone lines underground wherever reasonably practicable.

(7) **Structures, Buildings, and Other Improvements:** Except as provided in OAR 736-40-030(5), sections (3) and (4) of this rule and OAR 736-40-045 through 736-40-075, no structures, buildings, or other improvements shall be made, erected or placed on related adjacent lands without notification to the Commission as prescribed by the Act and herein. Permitted new structures, buildings, or other improvements on related adjacent lands which can be seen from the waters within a scenic waterway shall:

(a) Be of such design and be constructed of such materials as to be unobtrusive and compatible with the scenic qualities of the area. For example, the following shall apply:

(A) All structures shall be finished in muted tones appropriate to their natural surroundings;

(B) No large areas, including roofs, shall be finished with white or bright colors or reflective materials;

(C) Except for large farm buildings such as barns, metal siding or roofing shall not be used;

(D) No structures shall exceed 30 feet in height from natural grade on a side facing the river;

(E) All structures shall be so designed and constructed that little or no soil is left exposed when construction is completed.

(b) Be located in such a way that topography and natural vegetation make them as inconspicuous as reasonably practicable, and in no case obtruding on the view from the river. The Commission may require that additional vegetative screening be established and maintained. In such event, it shall be evergreen, wherever practicable, and compatible with natural growth in the area.

(8) **Mobile homes, modular residential structures, house trailers, campers and similar structures and vehicles.** Mobile homes, modular residential structures, house trailers, campers, motor homes and the like shall not be established as dwellings, either permanent, (or) seasonal or temporary, within related adjacent lands unless they are entirely concealed from view from the waters within a scenic waterway by topography, except, that those mobile homes, modular residential structures and house trailers that are at least 20 feet wide, with exterior dimensions, less hitch, of 800 square feet, may be permitted under

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these rules subject to the same requirements and standards set forth in the previous section relating to criteria for review for structures and improvements that are visible from the waters within a scenic waterway. Additionally, except when a mobile home, modular residential structure, house trailer or the like is not set on a ground-level foundation, full skirting shall be installed which in design, color and texture appears to be an integral part of the exterior of the structure:

(a) For purposes of these rules, a structure is a mobile home, modular residential structure, house trailer, camper or motor home if it is used, designed or intended to house persons, and is transported to the site in a state of substantial prefabrication. Once a structure fulfills this test, it shall remain subject to the rule regardless of whether the wheels or other temporary assembly have been removed or detached, and regardless of whether the structure is subsequently relocated;

(b) Within public recreation sites and transient public trailer parks where travel trailers, campers, motor homes and similar vehicles are permitted by the public agency, firm or individual maintaining the facility, their transient, short-term use by travelers is allowed, but they shall not be left on the site during their user's absence of more than three day's duration.

(9) **Maintenance of Structures and Improvements:** Owners and users of existing structures and other improvements shall maintain them and their surroundings in a manner and condition in harmony with the environment, compatible with the objectives set forth in these rules and regulations for the classified river area in which they lie, and without impairing substantially the natural beauty of the scenic waterway. The existing color of such structures may be maintained.

(10) **Replacement of Existing Structures and Improvements:** Replacement of existing structures and improvements, including those lost by fire, flood or other casualty, will be permitted, provided the new structure or improvement is in compliance with provisions of the Act and these rules and regulations. Notification procedures set forth in OAR 736-40-040 and Commission approval are required.

(11) **Advertising:** No signs or other forms of outdoor advertising that are visible from waters within a scenic waterway shall be constructed or maintained. Property protection signs (No Hunting, No Trespassing, etc.) are exempted.

(12) **Erosion Protection:** The Commission recognizes that erosion protection work and maintenance may be necessary on riverbanks and related adjacent lands along the scenic waterways. Notification, which shall include plans to protect the natural beauty of the scenic waterway, and Commission approval are required.

(13) **Submerged and Submersible Lands:**

(a) No dam or reservoir or other water impoundment facility shall be constructed or placer mining permitted on waters within scenic waterways. No water diversion facility shall be constructed or used except by right previously established or as permitted by the State Engineer;

(b) No bank protection works or dredging facility shall be constructed or used on such waters, except as permitted by the Director of the Division of State Lands and approved by the State Land Board.

(14) **Emergencies:**

(a) The owner or his authorized agent may act in emergencies without prior notice when necessary in the interest of public safety, or safety of his own property, except that notice of any action taken shall be filed with the Commission not later than seven days following the commencement of the emergency procedures;

(b) The owner or his authorized agent must show that the emergency situation required immediate action to prevent immediate danger or damage. Such emergency procedures shall not be extended beyond the minimum necessary to accomplish the needed protection safely and shall be conducted throughout in such manner as to minimize impairment of the natural beauty of the scenic waterway. For example, car bodies and similar scrap or trash shall not be used as riprap.

(15) **Solid Waste, Pollution and Sanitation:** Owners, occupants and users of related adjacent land shall comply with the rules and regulations of the Department of Environmental Quality relating to solid waste control, water, air and noise pollution control and sewage disposal.

Stat. Auth.: ORS Ch.

Hist.: HC 1285, f. 6-27-72; 10TC 6, f. 11-1-73; 10TC 28, f. 6-15-74; PR 12-1981, f. & ef. 7-29-81

**Classification of Scenic Waterways and Segments Thereof**

**736-40-040** (1) OAR 736-40-040 through 736-40-075 supplement, but in no way alter, other provisions of these rules and regulations. Notification procedures set forth in OAR 736-40-030, 736-40-035 and 736-40-080, relating to Land Management, are applicable to these rules. In order to establish varying intensities of protection or development based on special attributes of each area within the scenic waterways, the following classifications are established:

(a) **Natural River Areas:**

(A) Those designated scenic waterways or segments thereof that are generally inaccessible except by trail or the river, with related adjacent lands and shorelines essentially primitive. These represent vestiges of primitive America;

(B) Natural River Areas may include an occasional lightly traveled road, airstrip, habitation or other kind of improvement already established, provided the effects are limited to the immediate vicinity;

(C) Natural River Areas will be administered to preserve their natural, wild and primitive condition, essentially unaltered by the effects of man, while allowing compatible recreational uses, other compatible existing uses and protection of fish and wildlife habitat.

(b) **Scenic River Areas:**

(A) Those designated scenic waterways or segments thereof with related adjacent lands and shorelines still largely primitive and largely undeveloped, except for agriculture and grazing, but accessible in places by roads. Scenic River Areas may not include long stretches of conspicuous or well-traveled roads paralleling the river in close proximity, but may include extensive areas in agricultural use;

(B) Scenic Areas will be administered to maintain or enhance their high scenic quality,

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recreational value, fishery and wildlife habitat, while preserving their largely undeveloped character and allowing continuing agricultural uses.

**(c) Recreational River Areas:**

(A) Those designated scenic waterways or segments thereof that are readily accessible by road or railroad, that may have some development along their shorelines and related adjacent lands, and that may have undergone some impoundment or diversion in the past;

(B) Recreational River Areas will be administered to allow continuance of compatible existing uses, while allowing a wide range of compatible river-oriented public outdoor recreation opportunities, to the extent that these do not impair substantially the natural beauty of the scenic waterway or diminish its esthetic, fish and wildlife, scientific and recreational values.

**(d) Natural Scenic View Areas:**

(A) Those designated shorelines and related adjacent lands, lying along only one bank of a river within a scenic waterway, which possess the qualities of a Natural or Scenic River Area except that the opposite shoreline and related adjacent land, by reason of accessibility, or development, qualifies only for a less restrictive classification;

(B) Natural Scenic View Areas will be administered to preserve or enhance their essentially primitive scenic character, while allowing compatible public outdoor recreational use.

**(e) Accessible Natural River Areas:**

(A) Those designated scenic waterways or segments thereof that are readily accessible by road or railroad but otherwise possess the qualities of a Natural or Scenic River Area;

(B) Accessible Natural River Areas will be administered to protect or enhance their essentially primitive scenic character, while allowing compatible public outdoor recreation use.

**(f) River Community Areas** — Those designated areas of a scenic waterway, perhaps on only one bank of the river, where density of structures or other developments, already existing or provided for precludes application of a more restrictive classification.

**(2)(a)** Within the general framework of these classifications, the Commission will further consider the nature and extent of existing land uses and developments, the scenic qualities and the esthetic, fish and wildlife, scientific and recreational values of each classified area within the scenic waterways in determining whether, in its judgment, proposals for changes of land use or improvements are compatible with the Act;

(b) Because of the individual character of each scenic waterway, administrative criteria within each of the six classifications may vary from one scenic waterway to another.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72

**Nestucca River Scenic Waterway**

**736-40-041 (1) Recreational River Areas:**

(a) That segment of the Nestucca River Scenic Waterway extending from the downstream end of the reservoir tailrace below McGuire Dam to its confluence with Ginger Creek (approximately RM 45.5);

(b) This Recreational Area will be administered consistent with the purposes of OAR 736-40-040(1)(c)(B). Within this area, mining operations, timber harvesting, other landscape alteration activities, new structures and improvements shall be permitted by State Parks only when substantially screened from view from the river and from the boundary of Old Meadow Lake Wetland. The boundary of the Old Meadow Lake Wetland extends to the transition area at the edge of the wetland where hydric soils no longer occur. All landscape alteration activities (i.e., timber management) shall be carried out in this river segment in such a manner as to protect hydrological and biological functions of Old Meadow Lake wetlands. Timber harvest shall be conducted as prescribed by the Oregon Forest Practices Act and associated administrative rules. For other landscape alteration proposals, the project applicant shall provide methods by which hydrological and biological functions will be protected. Developments necessary for public outdoor recreation, as provided by public agencies, and resource protection or enhancement may be visible from the river but must blend into the natural scene;

(c) For purposes relating to notification of intent within the Nestucca River Scenic Waterway, any maintenance, repair or expansion of McGuire Dam and its appurtenances (including pipes and pumping facilities) is exempt from notification review so long as said activity does not extend westerly of the north/south centerline of Section 15, Township 3 South, Range 6 West, Willamette Meridian, Yamhill County;

(d) That segment of the Nestucca River Scenic Waterway extending from the lower end of the Alder Glen Campground to its confluence with Moon Creek (approximately RM 24.5 in Blaine);

(e) This Recreation Area will be administered consistent with the purposes of OAR 736-40-040(1)(c)(B). Within this area, mining operations, timber harvesting and other landscape alteration activities shall be permitted by State Parks only when substantially screened from view from the river by topography or vegetation. If inadequate topographic or vegetative screening exists on a site, landscape alterations may be permitted if vegetation is established which will provide substantial screening of the affected area in a reasonable time (for example 4 - 5 years). The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of, the landscape alteration;

(f) New structures and improvements shall be permitted when partially screened from view from the river by topography or vegetation. If inadequate, topography or vegetative screening exist on a site, the structure or improvement may be permitted if vegetation is established to provide partial screening of the proposed structure or improvement in a reasonable time (for example 4 - 5 years);

(g) The condition of "partial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure (at least one-half of the viewed improvement or structure), or allow a moderately filtered view (at least 50 percent filtering) of, the proposed structure or improvement;

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(h) Developments necessary for public outdoor recreation, as provided by public agencies, and resource protection or enhancement may be visible from the river but must blend into the natural scene.

**(2) Scenic River Area:**

(a) That segment of the Nestucca River Scenic Waterway extending from the river's confluence with Ginger Creek (approximately RM 45.5) downstream to the lower end of Alder Glen Campground;

(b) This Scenic Area will be administered consistent with the purposes of OAR 736-40-040(1)(b)(B). Within this area, new structures and improvements, mining operations and timber harvesting activities shall be permitted by State Parks only when substantially screened from view from the river by topography or existing vegetation. If proposed structures, improvements, or landscape alterations are not adequately screened by topography or existing vegetation on a site, the project may be permitted if vegetation is established which will substantially screen the project in a reasonable time (for example, 4 - 5 years). The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure or allow only a highly filtered view of the proposed structures or improvements. Developments necessary for public outdoor recreation, as provided by public agencies, and resource protection or enhancement may be visible from the river but must blend into the natural scene.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 3-1992, f. & cert. ef. 7-29-92

**Walker Creek Scenic Waterway**

**736-40-042 Recreational River Area:**

(1) Walker Creek from its source downstream to its confluence with the Nestucca River.

(2) This Recreational Area will be administered consistent with the purposes of OAR 736-40-040(1)(c)(B). Within this area, mining operations, timber harvesting, other landscape alteration activities, new structures and improvements shall be permitted by State Parks only when substantially screened from view from the creek and from the boundary of the Walker Creek Wetland/Meadow area. The boundary of the Walker Creek Wetland/Meadow extends to the transition area at the edge of the wetlands where hydric soils no longer occur. All landscape alterations (i.e., timber management) shall be carried out in such a manner as to protect hydrological and biological functions of the Walker Creek Wetland/Meadow. Timber harvest shall be conducted as prescribed by the Oregon Forest Practices Act and administrative rules. For other landscape alteration proposals, the project applicant shall provide methods by which hydrological and biological functions will be protected. Developments necessary for public outdoor recreation, as provided by public agencies, and resource protection or enhancement may be visible from the river but must blend into the natural scene.

(3) For the purposes relating to notification of intent within the Walker Creek Scenic Waterway, any maintenance, repair or expansion of McGuire Dam and its appurtenances (including pipes and

pumping facilities) is exempt from notification review so long as said activity does not extend westerly of the north/south centerline of Section 15, Township 3 South, Range 6 West, Willamette Meridian, Yamhill County.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 3-1992, f. & cert. ef. 7-29-92

**Upper McKenzie River Scenic Waterway**

**736-40-043 (1) Recreational River Areas:**

(a) The following river segments from Clear Lake to Deer Creek are classified Recreational River Areas:

(A) Adjacent lands east of the river from Clear Lake to Carmen Reservoir;

(B) Adjacent lands east of the river from Tamolitch Falls to Trail Bridge Reservoir;

(C) Adjacent lands east of the river from Trail Bridge Dam to the confluence of Deer Creek with the McKenzie River.

(b) These Recreational River Areas will be administered consistent with standards set by OAR 736-40-035. In addition to the above standards, new mining operations, road construction, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography or native vegetation. If inadequate topographic or vegetative screening exists on a site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area. The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of, the landscape affected by the improvement. New structures and associated improvements shall be permitted when partially screened from view from the river by topography or vegetation. If inadequate topographic or vegetative screening exists on a site, the structure or improvements may be permitted if vegetation is established to provide partial screening of the proposed structure or improvement within a reasonable time (for example 4 - 5 years). The condition of "partial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure view (at least one-half) of the proposed structure or improvement, or to allow a moderately filtered view (at least 50 percent filtering) of the proposed structure or improvement. Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape;

(c) Land adjacent to both sides of the river from the confluence of Deer Creek to the lower end of Paradise Campground (western boundary of Section 9, Township 16 south, Range 6, East);

(d) This Recreation River Area will be administered consistent with standards set by OAR 736-40-035 and the Lane County Land Development Code. In addition to the above standards, timber harvesting and thinning (except for those lands in Willamette National Forest) new mining operations, road construction, and similar improvements shall be permitted only when substantially screened from view from the river by topography or vegetation. If inadequate topographic or native

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vegetative screening exists on or near the site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area within a reasonable period of time (for example 4 - 5 years);

(e) The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of the improvement. Tree harvesting, thinning and other forest management activities on Willamette National Forest lands are subject to review by the State Parks Department for conformance with the Willamette National Forest Plan's visual quality objectives associated with the area where the activity is proposed;

(f) New structures and associated improvements shall be permitted when partially screened from view from the river by topography or vegetation. If inadequate, topographic or vegetative screening exist on a site, the structure or improvement may be permitted if vegetation is established to provide partial screening of the affected area within a reasonable period of time (for example 4 - 5 years). The condition of "partial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure (at least one-half) the viewed structure or improvement, or allow a moderately filtered view (at least 50 percent filtering) of the proposed structure or improvement. Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape;

(g) Wherever the standards of OAR 736-40-035 and the above rules are more restrictive than the Lane County Land Development Code, the above Oregon Administrative Rules shall apply.

**(2) Scenic River Areas:**

(a) The following river segments from Clear Lake to Deer Creek are classified as Scenic River Areas:

(A) Adjacent lands west of the river from Clear Lake to Carmen Reservoir;

(B) Adjacent lands west of the river from Tamolitch Falls to Trail Bridge Reservoir;

(C) Adjacent lands west of the river from Trail Bridge Dam to the confluence of Deer Creek with the McKenzie.

(b) These Scenic River Areas will be administered consistent with standards set by OAR 736-40-035. In addition to the above standards, new mining operations, road construction, and similar improvements shall be permitted only when they are substantially screened from view from the river by topography or native vegetation. If inadequate topographic or vegetative screening exists on a site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area. The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure or allow only a highly filtered view of the landscape affected by the improvement;

(c) New structures and associated improvements shall be permitted when substantially screened from view from the river by topography or vegetation. If inadequate topographic or vegetative

screening exists on a site, the structure or improvements may be permitted if vegetation is established to provide substantial screening of the proposed structure or improvement within a reasonable period of time (for example 4 - 5 years). The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure the structure or improvement, or allow a highly filtered view of the proposed structure or improvement. Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 4-1992, f. & cert. ef. 7-29-92

**Interim Classification of State Scenic Waterways**

**736-40-044** Those segments of rivers under the scenic waterways program without a management plan will be assigned an interim river classification until such time a river management plan has been adopted by the State Parks and Recreation Commission with the concurrence of the Water Resources Board. Only one interim river classification will be assigned to each scenic waterway as indicated in the following list:

<u>River</u>	<u>Classification</u>
(1) Clackamas River:	
(a) North Fork of the Clackamas River, that segment from the source to North Fork Reservoir (12 miles);	Scenic
(b) South Fork of the Clackamas River, that segment from river mile 4 to mainstem;	Scenic
(c) Mainstem, that segment from Ollalie Lake Scenic Area boundary to North Fork Reservoir (54 miles).	Recreational
(2) Deschutes River:	
(a) Upper, that segment from Little Lava Lake to Crane Prairie Reservoir (8 miles);	Recreational
(b) Bend, that segment from Urban Growth Boundary to Central Oregon Irrigation diversion;	Scenic
(c) Upper, that segment from Sawyer Park to Tumalo State Park (5 miles);	Scenic
(d) Upper, that segment from Deschutes Market Road to Twin Bridges, excluding Cline Falls hydroelectric facility (17 miles).	Scenic
(3) Elk River:	
(a) North Fork, that segment from the source to South Fork (5 miles);	Scenic
(b) South Fork, that segment from the source to North Fork (5 miles);	Scenic
(c) Mainstem, that segment from North-South Forks confluence to Elk River Fish Hatchery (11 miles).	Scenic
(4) Grande Ronde: From the confluence with Wallowa River to Washington border (42 miles).	Recreational
(5) Wallowa River: From the confluence with Minam to confluence with Grande Ronde (10 miles).	Recreational
(6) John Day River:	
(a) North Fork, that segment from the North Fork John Day Wilderness boundary	Recreational



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to River Mile 20.2 (Willamette Meridian) above Monument (56 miles);	
(b) South Fork, that segment from Post-Paulina Road crossing to north boundary of Murderer's Creek Wildlife Area (29 miles);	Recreational
(c) Middle Fork, that segment from Crawford Bridge crossing to confluence with North Fork (71 miles);	Recreational
(d) Mainstem, that segment from Parrish Creek to Service Creek (13 miles).	Recreational
(7) Klamath River: From the John Boyle Dam powerhouse to California Border (11 miles).	Accessible Natural
(8) McKenzie River:	
(a) South Fork, that segment from the Three Sisters Wilderness boundary to Cougar Reservoir (16.5 miles);	Scenic
(b) South Fork, that segment from Cougar Dam to mainstem (4.5 miles);	Recreational
(c) Mainstem, that segment from Clear Lake to Carmen Reservoir (2 miles);	Scenic
(d) Mainstem, that segment from Tamolitch Falls to Trail Bridge Reservoir (2 miles);	Scenic
(e) Mainstem, that segment from Trail Bridge to Paradise (USFS) campground (12 miles).	Recreational
(9) Metolius River: Mainstem, that segment from Metolius Lodge Springs to Candle Creek (14 miles).	Recreational
(10) Rogue River: Upper, that segment from Crater Lake National Park to the east boundary of Rogue River National Forest (42 miles).	Scenic
(11) North Santiam River: Little North Fork, that segment from Battle Ax Creek to Willamette National Forest boundary (7 miles).	Scenic
(12) North Umpqua River: From Mt. Thielsen Wilderness boundary to Lemolo Reservoir (6 miles).	Scenic

Stat. Auth.: ORS 390.845(2)

Hist.: PR 11-1991, f. & cert. ef. 6-18-91

**Classifications by River  
and Segment, with General  
Administrative Criteria for Each**

**Rogue River Scenic Waterway**

**736-40-045** Within the Rogue River Scenic Waterway, already designated as a component of the National Wild and Scenic Rivers System by Public Law 90-542, the Commission will, insofar as its responsibility and authority under the Act permit, give consideration to the management objectives and directives stated in the Rogue River Plan prepared jointly by the United States Forest Service and the Bureau of Land Management.

**(1) Natural River Area:**

(a) That segment of the scenic waterway extending from Grave Creek downstream approximately 33 miles to Watson Creek is classified as a Natural River Area;

(b) In order to preserve the river and related adjacent lands in an essentially primitive condition, no new structures or other improvements, except those needed for public outdoor recreation or for resource protection, and no new lodges or commercial public service facilities which are visible from the river will be permitted. Additional boat

docks, moorings or "salmon boards" will not be permitted.

**(2) Scenic River Area:**

(a) That segment of the scenic waterway extending from Blue Jay Creek in Section 11, Township 35 South, Range 12 West, of the Willamette Meridian, (T 35S, R 12W, W.M.), Curry County, downstream approximately 7-1/2 miles to the unnamed creek in Section 36, Township 35 South, Range 13 West, of the Willamette Meridian, (T 35S, R 12W, W.M.), Curry County, is classified as a Scenic River Area;

(b) Commercial public service facilities which are visible from the river will not be permitted in this area;

(c) Permissible structures within this area are single-family dwellings which meet the requirements stated in these rules and regulations. Including those already existing, such structures which are visible from the river will be limited to a total of two on each side of the river within any one mile of river frontage as shown on the plan and profile maps of the Rogue River prepared by the U.S. Geological Survey from survey made in 1923.

**(3) Recreational River Areas:**

(a) Three segments of the scenic waterway are designated as Recreational River Areas. These are:

(A) Hellgate, extending from the mouth of the Applegate River downstream approximately 26 miles to Grave Creek Bridge, but excluding the Natural River View Area and the River Community Areas therein contained;

(B) Agness, extending from Watson Creek downstream approximately ten miles to Blue Jay Creek, but excluding the River Community Area therein contained;

(C) Skookumhouse, extending from the unnamed creek in Section 36, Township 35 South, Range 13 West, of the Willamette Meridian (T 35S, R 13W, W.M.), Curry County, downstream approximately seven miles to the Lobster Creek Bridge.

(b) Within these areas, permitted uses and structures may include agriculture, single-family dwellings, lodges, resorts and other necessary commercial public service facilities. Including those already existing, structures and improvements which are visible from the river will be limited to a total of four on each side of the river within any one mile of river frontage as shown on the plan and profile maps of the Rogue River prepared by the U.S. Geological Survey from survey made in 1923.

**(4) Natural Scenic View Area:**

(a) The shoreline and related adjacent land lying along the right bank of the river (as seen when facing downstream) between Hellgate Bridge as located in Section 4, Township 35 South, Range 7 West, of the Willamette Meridian (T 35S, R 7W, W.M.), Josephine County, and the Grave Creek Bridge as located in Section 1, Township 34 South, Range 8 West, of the Willamette Meridian (T 34S, R 8W, W.M.), Josephine County, is classified as a Natural Scenic View Area;

(b) Within this area no new structures or improvements which are visible from the river, except those needed for public outdoor recreation or for resource protection, will be permitted. Roads shall not be extended, or improved substantially.

**(5) River Community Areas:**

(a) Within the Hellgate Recreational River Area:

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(A) Related adjacent lands lying within the boundaries of the following subdivision plats as recorded in the Clerk's office of Josephine County, Oregon;

(B) Galice — Plat of Galice Subdivision, Volume 5, pages 4, 5. (Within the W 1/2 Section 36, T 34S, R 8W, W.M.);

(C) Rogue Riffles — Plat of Rogue Riffles Subdivision, Volume 4, page 49. (Within the SW 1/4 of the NW 1/4, Section 25, T 35S, R 7W, W.M., and SE 1/4 of the NE 1/4, Section 26, T 35S, R 7W, W.M.);

(D) Burnette — Plat of Burnette Estates Subdivision, Volume 7, page 8. (Within the NE 1/4 of the SW 1/4, Section 35, T 35S, R 7W, W.M.);

(E) Ferry Park — plat of Ferry Park Estates, Volume 7, pages 19, 20. (Within the SE 1/4 of the NE 1/4 and NE 1/4 of the SE 1/4, Section 2, T 36S, R 7W, W.M.);

(F) Peaceful Valley — Plat of Peaceful Valley Acres Subdivision, Volume 3, page 54. (Within the SE 1/4 of the NW 1/4, and SW 1/4 of the NE 1/4, Section 11, T 36S, R 7W, W.M.).

(b) Also:

(A) Cathcart — Those related adjacent lands that are included in a plat of tracts surveyed for Tom Cathcart, which are situated in Sections 23 and 24, Township 35 South, Range 7 West, of the Willamette Meridian (T 35S, R 7W, W.M.), Josephine County, and are filed by Survey No. 111-68 and Survey No. 106-71 in the County Surveyor's Office in Josephine County;

(B) Greentree — Those related adjacent lands included in a Notice of Intention filed with the Real Estate Division, Department of Commerce, on 29 September 1970 by Trenor and Helen Scott and identified by reference number PNI 2798, which are situated in Section 14, Township 35 South, Range 7 West, of the Willamette Meridian (T 35S, R 7W, W.M.), Josephine County;

(C) Within these areas, structures, improvements and uses that are consistent with Josephine County Zoning Ordinances and OAR 736-40-030 and 736-40-035 may be permitted.

(c) Within the Agness Recreational River Area:

(A) Agness — A parcel of land that comprises the Southwest Quarter (SW 1/4); West Half of the Southeast Quarter (W 1/4 SE 1/4), Section 7; and the Northwest Quarter (NW 1/4); West Half of the Northeast Quarter (W 1/2 NE 1/4), Section 18; all in Township 35 South, Range 11 West, of the Willamette Meridian (T 35S, R 11W, W.M.), Curry County;

(B) Also a parcel of land that comprises the East Half of the Southeast Quarter (E 1/2 SE 1/4), Section 12; and the East Half of the Northeast Quarter (E 1/2 NE 1/4), Section 13; all in Township 35 South, Range 12 West, of the Willamette Meridian (T 35S, R 12W, W.M.), Curry County;

(C) The Commission recognizes that further development of the Agness area may be necessary in order to provide services for both local residents and the public;

(D) Within the Agness River Community Area, when consistent with Curry County zoning ordinances, permitted uses, structures and improvements may include agriculture, single and multiple family dwellings, churches, lodges, resorts, motels, transient public trailer parks and other necessary commercial public service facilities.

Permitted densities of improvements and structures which are visible from the river may be established by the Commission after consultation with the U.S. Forest Service, the Curry County Planning Commission, the Agness Community Council, and such other persons and agencies as the Commission may select.

Stat. Auth.: ORS Ch.

Hist.: HC 1285, f. 6-27-72

**North Umpqua River Scenic Waterway**

**736-40-046 (1) Recreation River Areas:**

(a) That segment of the North Umpqua River that includes shoreline and related adjacent land on both banks of the River from its intersection with a line forming the East half of the East half of Section 18, Township 26 South, Range 3 East, Willamette Meridian, Douglas County (a line forming E 1/2, E 1/2, Section 18, T26S, R3E, W.M., Douglas County; approximately just below the Soda Springs Powerhouse) downstream to the North Umpqua River Highway 138 bridge in Section 22, Township 26 South, Range 2 East, Willamette Meridian (Section 22, T26S, R2E, W.M., Douglas County);

(b) This "Recreation River Area" will be administered consistent with standards set by OAR 736-40-035 and 736-40-040(1)(c)(B). In addition to the above standards, new mining operations, road construction, and similar improvements shall be permitted only when substantially screened from view from the river by topography or native vegetation. If inadequate topographic or vegetative screening exists on a site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of the landscape affected by the improvement. New structures and associated improvements shall be permitted when partially screened from view from the river by topography or vegetation. If inadequate topographic or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation is established to provide partial screening of the proposed structure or improvement within a reasonable period of time (for example 4-5 years). The condition of "partial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure (at least one-half) the viewed improvement or structure, or allow a moderately filtered view (at least 50 percent filtering) of the proposed structure or improvement. Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape;

(c) That segment of the North Umpqua River that includes the shoreline and adjacent lands north of the river channel from the North Umpqua River Highway 138 bridge (Marsters Bridge) located in Section 22, Township 26, Range 2E, W.M. and the point at which Rock Creek converges with the North Umpqua River excluding any area classified "River Community Area";

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(d) This "Recreation River Area" will be administered consistent with standards set by OAR 736-40-035, 736-40-040(1)(c)(B) and the Douglas County Land Use and Development Ordinance. In addition to the above standards, new mining operations, road construction, commercial tree harvesting, and similar improvements shall be permitted only when substantially screened from view from the river by topography or native vegetation. If inadequate topographic or vegetative screening exists on a site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of, the landscape affected by the improvement:

(A) New structures and associated improvements shall be permitted when partially screened from view from the river by topography or vegetation. If inadequate topographic or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation is established to provide partial screening of the proposed structure or improvement within a reasonable period of time (for example 4-5 years). The condition of "partial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to partially obscure (at least one-half) the viewed improvement or structure, or allow a moderately filtered view (at least 50 percent filtering) of the proposed structure or improvement;

(B) Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape;

(C) Wherever the standards of OAR 736-40-035 and the above rule are more restrictive than the Douglas County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

(2) Scenic River Area:

(a) That segment of the North Umpqua Scenic Waterway that includes the shoreline and adjacent lands south of the river channel from the North Umpqua River Highway 138 bridge (Marsters Bridge) located in Section 22, Township 26, Range 2E, W.M., and the point at which Rock Creek converges with the North Umpqua River excluding any area classified "River Community Area";

(b) This "Scenic River Area" will be administered consistent with standards set by OAR 736-40-035, 736-40-040(1)(b)(B) and the Douglas County Land Use and Development Ordinance;

(c) In addition to the above standards, new mining operations, road construction, commercial tree harvesting and similar improvements shall be permitted only when substantially screened from view from the river by topography or vegetation. If inadequate topographic or native vegetative screening exists on or near the site, activities mentioned above may be permitted if vegetation is established which will provide substantial screening of the affected area within a reasonable period of time (for example 4 - 5 years). The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen

and deciduous vegetation to totally obscure, or allow only a highly filtered view of the improvement;

(d) New structures and associated improvements shall be permitted when substantially screened from view from the river by topography or vegetation. If inadequate, topographic or vegetative screening exist on a site, the structure or improvement may be permitted if vegetation is established to provide substantial screening of the affected area in a reasonable time (for example 4-5 years). The condition of "substantial screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure, or allow only a highly filtered view of the proposed structure or improvement;

(e) Improvements needed for public recreation use or resource protection may be visible from the river, but must be designed to blend with the natural character of the landscape;

(f) Wherever the standards of OAR 736-40-035 and the above rule are more restrictive than the Douglas County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

(3) River Community Areas:

(a) Five areas are designated as River Community Areas:

(A) Rock Creek — All the shoreline and related land east of Rock Creek along the right bank (as seen when facing downstream) within the SW 1/4 of Section 1, T26S, R3W, W.M., which includes tax lots 600, 700, 800, and 900;

(B) Frontier Village — The North Umpqua Village Subdivision (Vol. 7, page 60, approved in March 1948); the plat of North Umpqua Village first addition as recorded in Volume 10, page 52; Tract 37 of Section 16, Township 26S, Range 2W, W.M., Douglas County, Oregon as filed June 25, 1954. In addition to these plats, tax lots 300 and 400 of the SW 1/4 of T26, R2W, Sec 16 (Sec 16C); tax lots 500, 600, 700, 701, and 800, in SE 1/4 of T26S, R2W, Section 17;

(C) Susan Creek Village — The shoreline and related adjacent lands lying along the right bank of the North Umpqua River (as seen facing downstream) and described as follows: The Northwest one-quarter of Section 23, Township 26 South, Range 2 West, Willamette Meridian, Douglas County (NW 1/2, Section 23, T26S, R2W, W.M.);

(D) Steamboat — All shoreline and related adjacent lands lying within the west half of Section 32, Township 25-1/2 South, Range 1 East, Willamette Meridian (W 1/2, Section 32, T25-1/2S, R1E, W.M.); the northwest one-quarter of Section 5, Township 26 South, Range 1 East, Willamette Meridian (NW 1/4, NW 1/4, Section 4, T26S, R1E, W.M.); the East half of Section 31, Township 25-1/2 South, Range 1 East, Willamette Meridian (E 1/2, Section 31, T25-1/2 S, R1E, W.M.); and the north half of the northeast one-quarter of Section 6, Township 26 South, Range 1 East, Willamette Meridian (N1/2, NE1/4, Section 6, T26S, R1E, W.M.) Douglas County;

(E) Dry Creek — All shoreline and related adjacent lands lying along the right bank (as seen when facing downstream) within the east half of the northwest quarter and the west half of the northeast quarter of Section 20, Township 26 South, Range One East, Willamette Meridian (E1/2,

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NW 1/4, and W1/2, NE 1/4, Section 20, T26S, R1E, W.M.), Douglas County.

(b) Within these River Community areas described in OAR 736-40-041(3)(a)(A) - (E) new commercial facilities such as resorts, motels, and private recreational vehicle parks shall not be permitted unless their plans are consistent with requirements of the Douglas County Land Use and Development Ordinance; and they are not visible from any vantage point on the banks of, or from within, the river;

(c) Any other land uses that may be permitted in the river community areas by the county, such as single family dwellings, will be allowed if their plans are consistent with Douglas County Land Use and Development Ordinance requirements and Scenic Waterway standards OAR 736-40-035;

(d) Wherever the standards of OAR 736-40-035 and the above rule are more restrictive than the Douglas County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 6-1992, f. & cert. ef. 10-30-92

**Grande Ronde River Scenic Waterway**

**736-40-047 (1) Scenic River Area:**

(a) That segment of the Grande Ronde River from Rondowa at the confluence of the Wallowa River with the Grande Ronde River to the Umatilla National Forest boundary;

(b) This Scenic River Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(b)(B). In addition to these standards, all new development in resource zones (i.e., farm and forest related dwellings) shall comply with Wallowa and Union County land use regulations:

(A) New structures and associated improvements (except as provided under OAR 736-40-030(5)) shall be moderately screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation (preferably native) is established to provide moderate screening of the proposed structure or improvement within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation to moderately obscure (at least 50 percent) the viewed improvement or structure, or allow a moderately filtered view (at least 50 percent filtering) of the proposed structure or improvement;

(B) Visible tree harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(C) New mining operations and similar

improvements shall be permitted only when they are substantially screened from view from the river by topography and/or native vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site at all stages of its development;

(D) New roads may be permitted only when fully screened from the river by topography or existing vegetation;

(E) Existing roads may be upgraded when those roads are moderately screened from view from the river by topography or existing vegetation. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, the road upgrade may be permitted if vegetation (preferably native) is established to provide moderate screening of the road within a reasonable time (4 - 5 years). The condition of "moderate screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow a moderately filtered view (at least 50 percent filtering) of the road;

(F) Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance should be kept to a minimum;

(G) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape;

(H) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

**(2) Natural River Area:**

(a) That segment of the Grande Ronde River from the Umatilla National Forest boundary to Wildcat creek;

(b) This Natural River Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(a)(C). In addition to these standards, all new development in resource zones (i.e., farm and forest related dwellings) shall comply with Wallowa and Union County land use regulations:

(A) New structures and associated improvements shall be totally obscured from view from the river except as provided under OAR 736-40-030(5) and except those minimal facilities needed for public outdoor recreation or resource protection;

(B) Visible tree harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of

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the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(C) New roads will be permitted only when fully screened from the river by topography and/or existing vegetation;

(D) Any existing roads, visible from the river, shall not be extended, realigned, or improved substantially. When a road is regraded, no side cast which would be visible from the river is permitted. Excess material must be hauled to locations out of sight from the river;

(E) New mining operations and similar improvements shall be permitted only when they are substantially screened from the river by topography or existing vegetation. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site at all stages of its development;

(F) Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum;

(G) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape;

(H) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

**(3) Recreational River Area:**

(a) That segment of the Grande Ronde River from Wildcat Creek to the Oregon State line, except for the community of Troy;

(b) This Recreational River Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(c)(B). In addition to these standards, all new development in resource zones (i.e., farm and forest related dwellings) shall comply with Wallowa and Union County land use regulations:

(A) New structures and associated improvements (except as provided under OAR 736-40-030(5)) shall be partially screened with existing vegetation and/or topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation (preferably native) is established to provide partial screening of the proposed structure or improvement within a reasonable time (4 - 5 years). The condition of "partial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation to partially obscure (at least 30 percent) the viewed improvement or structure, or allow a partially filtered view (at least 30 percent filtering) of the proposed structure or improvement;

(B) Visible tree harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5 - 10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing

stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(C) New roads constructed for timber harvest, mining or any other purpose shall be moderately screened, with vegetation and/or topography. If inadequate topography or vegetative screening exists, the road may be permitted if vegetation (preferably native) is established to provide moderate screening of the road within a reasonable time (4 - 5 years). The condition of "moderate screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow moderately filtered view (at least 50 percent filtering) of the road;

(D) New mining operations and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area;

(E) The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site at all stages of its development;

(F) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape;

(G) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

**(4) Troy River Community Area:**

(a) That segment of the Grand Ronde River that includes the area zoned Rural Service by Wallowa County at Troy;

(b) This River Community Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(f). In addition to these standards, all new development shall comply with Wallowa and Union County land use regulations:

(A) New mining operations and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation (preferably native) is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site;

(B) If land is to remain in forest use, visible timber harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5 - 10 years).

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For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(C) New roads constructed for timber harvest, mining or any other purpose shall be partially screened with vegetation and/or topography. If inadequate topography or vegetative screening exists, the road may be permitted if vegetation (preferably native) is established to provide partial screening of the road within a reasonable time (4-5 years);

(D) The condition of "partial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow a partially filtered view (at least 30 percent filtering) of the road;

(E) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape;

(F) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 10-1993, f. & cert. ef. 6-24-93

#### **Wallowa River Scenic Waterway**

**736-40-048 (1) Minam River Community Area:**

(a) That segment of the Wallowa River zoned Rural Service by Wallowa County at Minam;

(b) This River Community Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(f). In addition to these standards, all new development shall comply with Wallowa County land use regulations:

(A) New mining operations and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site;

(B) If land is to remain in forest use, visible timber harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(C) New roads constructed for timber harvest, mining or any other purpose shall be partially

screened, either with vegetation or topography. If inadequate topography or vegetative screening exists, the road may be permitted if vegetation (preferably native) is established to provide partial screening of the road within a reasonable time (4 - 5 years). The condition of "partial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow a partially filtered view (at least 30 percent filtering) of the road;

(D) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape;

(E) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

(2) Recreational River Area:

(a) That segment of the Wallowa River from the north boundary of the River Community Area to the north boundary of Minam State Park;

(B) This Recreational River Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(c)(B). In addition to these standards, all new development in resource zones (i.e., farm and forest related dwellings) shall comply with Wallowa and Union County land use regulations:

(A) New structures and associated improvements (except as provided under OAR 736-40-030(5)) shall be partially screened with native vegetation and/or existing topography. If inadequate topography or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation (preferably native) is established to provide partial screening of the proposed structure or improvement within a reasonable time (4 - 5 years);

(B) The condition of "partial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation to partially obscure (at least 30 percent) the viewed improvement or structure, or allow a partially filtered view (at least 30 percent filtering) of the proposed structure or improvement;

(C) New mining operations and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site;

(D) Visible tree harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5-10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing

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stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(E) New roads constructed for timber harvest, mining or any other purpose shall be moderately screened with vegetation and/or topography. If inadequate topography or vegetative screening exists, the road may be permitted if vegetation (preferably native) is established to provide moderate screening of the road within a reasonable time (4 - 5 years);

(F) The condition of "moderate screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow moderately filtered view (at least 50 percent filtering) of the road;

(G) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be designed to blend with the natural character of the landscape;

(H) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Oregon Administrative Rules shall apply.

**(3) Accessible Natural River Area:**

(a) That segment of the Willowa River from the north boundary of the Recreational River Area to the Willowa's confluence with the Grande Ronde;

(b) This Accessible Natural River Area shall be administered consistent with the standards set by OAR 736-40-035 and 736-40-040(1)(e)(B). In addition to these standards, all new development in resource zones (i.e., farm and forest related dwellings) shall comply with Willowa and Union County land use regulations:

(A) New structures and associated improvements shall be totally obscured from view from the river by existing vegetation and/or topography except as provided under OAR 736-40-030(5) and except minimal facilities needed for public outdoor recreation or resource protection;

(B) New mining operations and similar improvements shall be permitted only when they are substantially screened from view from the river by topography and/or existing vegetation. If inadequate topographic or vegetative screening exists on a site, mining and similar forms of development may be permitted if vegetation is established which would provide substantial screening of the affected area. The condition of "substantial screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to totally obscure the altered improvement site at all stages of its development;

(C) Visible tree harvest may be allowed provided that:

(i) The operation complies with the relevant Forest Practices Act rules;

(ii) Harvest methods with low visual impact are used; and

(iii) The effect of the harvest enhances the scenic view within a reasonable time (5 - 10 years). For the purposes of this rule, "enhance" means to improve timber stand health, including reducing stand density, by emulating the mosaic character of the natural forest landscape (pre-forest management tree density patterns — Prior to 1920).

(D) New roads may be permitted only when

fully screened from the river by topography or existing vegetation;

(E) Existing visible roads may be upgraded when those roads are moderately screened or moderate screening is established. No side cast which would be visible from the river is permitted. Excess material shall be hauled to locations out of sight from the river. If inadequate screening exists, upgrading the road may be permitted if native vegetation is established to provide moderate screening of the road within a reasonable time (4-5 years). The condition of "moderate screening" shall consist of an ample density and mixture of evergreen and deciduous vegetation (preferably native) to allow a moderately filtered view (at least 50 percent filtering) of the road;

(F) Proposed utility facilities shall share existing utility corridors, and any vegetation disturbance shall be kept to a minimum;

(G) Improvements needed for public recreation use or resource protection may be visible from the river, but shall be primitive in character and designed to blend with the natural character of the landscape;

(H) Whenever the standards of OAR 736-40-035 and the above rule are more restrictive than the applicable County Land Use and Development Ordinance, the above Administrative Rules shall apply.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 11-1993, f. & cert. ef. 6-24-93

**Upper Clackamas River Scenic Waterway**

**736-40-049 (1) Recreation River Areas:**

(a) That segment of the Upper Clackamas River from the Forest Service Road 4690 Bridge, to the junction of Forest Service Road 4690 with Forest Service Road 46 at approximately river mile 75.66;

(b) That segment of the Upper Clackamas River from June Creek Bridge to the confluence of Tar Creek with the River;

(c) That segment of the Upper Clackamas River immediately upstream (south of) Indian Henry Campground at approximately river mile 49.33 to North Fork Reservoir at approximately river mile 34;

(d) Any form of improvement, new development, new structure, change in existing land use and improvement associated with an existing structure shall comply with provisions of OAR 736-40-035, 736-40-040(1)(c)(B), and the Clackamas County land use regulations with regard to those lands within the Upper Clackamas Scenic Waterway as described in subsections (1)(a), (b), and (c) of this rule.

**(2) Scenic River Areas:**

(a) That segment of the Upper Clackamas River from the boundary of the Olallie Lake Scenic Area, as constituted on December 8, 1988, at approximately river mile 82 to the Forest Service Road 4690 Bridge;

(b) That segment of the Upper Clackamas River from the junction of Forest Service Road 4690 with Forest Service Road 46 to the June Creek Bridge;

(c) That segment of the Upper Clackamas River from the confluence of Tar Creek with the river to immediately upstream from (south of) Indian Henry Campgrounds at approximately river mile 49.33;

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(d) Any form of improvement, new development, new structures, change in existing land use and improvements associated with existing structures shall comply with provisions of OAR 736-40-035, 736-40-040(1)(b)(B) and the Clackamas County land use regulations with regard to those lands within the Upper Clackamas Scenic Waterway as described in subsections (2)(a), (b), and (c) of this rule.

Stat. Auth.: ORS 390.845(2)  
Hist.: PR 5-1993, f. & cert. ef. 3-15-93

**Illinois River Scenic Waterway**

**736-40-050 (1) Accessible Natural River Area:**

(a) The segment of the scenic waterway extending from Deer Creek downstream approximately 14 miles to Briggs Creek is classified as an Accessible Natural River Area;

(b) In order to preserve the river and related adjacent lands in an essentially primitive condition, no new structures or improvements which are visible from the river other than those erected or made in connection with a compatible existing use, or those needed for public recreation or for resource protection, will be permitted. Additional dwellings and commercial public service facilities, including resorts and motels, lodges and trailer parks which can be seen from the river, will not be permitted, except for a youth camp constructed and operated by the Boy Scouts of America, after proper notification and Commission approval, on their deeded property, amounting to 105.98 acres, within Township 37 South, Range 9 West, Section 32, Tax Lot 200, Josephine County.

**(2) Natural River Area:**

(a) The segment of the scenic waterway extending from Briggs Creek downstream approximately 27-1/2 miles to the intersection with the North Boundary Line of Section 32, Township 35 South, Range 11 West, of the Willamette Meridian (T 35S, R 11W, W.M.), Curry County, near Lawson Creek, is classified as a Natural River Area;

(b) In order to preserve the river and related adjacent lands in an essentially primitive condition, no new structures or improvements which are visible from the river other than those erected or made in connection with a compatible existing use, or those needed for public recreation or for resource protection, will be permitted. Additional dwellings and commercial public service facilities, including resorts and motels, lodges and trailer parks which can be seen from the river, will not be permitted.

**(3) Recreational River Area:**

(a) The segment of the scenic waterway beginning at the intersection with the North Boundary Line of Section 32, Township 35 South, Range 11 West, of the Willamette Meridian (T 35S, R 11W, W.M.), Curry County, near Lawson Creek, downstream approximately 3-1/2 miles to the boundary of the Agness River Community Area, is classified as a Recreational River Area;

(b) Within this area, permitted uses and structures may include agriculture, single-family dwellings, lodges, resorts and other necessary commercial public service facilities. Including those already existing, structures and improvements which are visible from the river will be limited to a total of four on each side of the river within any one mile of river frontage as shown on the plan and

profile maps of the Illinois River prepared by the U.S. Geological Survey from survey made in 1923.

(4) River Community Area: The segment of the scenic waterway extending from the boundary of the Agness River Community Area to the Rogue River is classified as part of that area.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72

**Owyhee River Scenic Waterway**

**736-40-055 Natural River Area:**

(1) The entire Owyhee River Scenic Waterway, in its two segments, is classified as a Natural River Area.

(2) In order to preserve the river and related adjacent lands in an essentially primitive condition, no new structures or improvements which are visible from the river, other than those erected or made in connection with the existing agricultural uses, or those needed for public outdoor recreation or for resource protection will be permitted. Commercial public service facilities, including resorts and motels, lodges and trailer parks, and additional dwellings which are visible from the river will not be permitted.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72

**Minam River Scenic Waterway**

**736-40-060 (1) Natural River Area:**

(a) The segment of the scenic waterway extending from Minam Lake downstream approximately 37 miles to the river's intersection with the Willamette Base Line, which is also the north boundary of Section 4, Township 1 South, Range 41 East, of the Willamette Meridian (T 1S, R 41E, W.M.), Union County, is classified as a Natural River Area;

(b) In order to preserve the river and related adjacent lands in an essentially primitive condition, no new structures or improvements, other than those erected or made, after notification and Commission approval, in connection with existing uses by Red's Horse Ranch and Minam River Lodge, or those needed for public recreation or for resource protection, will be permitted.

**(2) Accessible Natural River Area:**

(a) The segment of the scenic waterway extending from the river's intersection with the Willamette Base Line which is also the north boundary of Section 4, Township 1 South, Range 41 East, of the Willamette Meridian, (T 1S, R 41E, W.M.), Union County, downstream approximately eight miles to the Wallowa River, is classified as an Accessible Natural River Area;

(b) Additional dwellings and commercial public service facilities, including resorts, motels, lodges and trailer parks which are visible from the river will not be permitted. Roads within the area shall not be extended or improved substantially.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72

**John Day River Scenic Waterway**

**736-40-065 (1) Natural River Area:**

(a) The segment of the scenic waterway beginning at the intersection of West to East



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Centerline of Section 5, Township 5 South, Range 19 East, of the Willamette Meridian), (T 5S, R 19E, W.M.), Sherman County, extended easterly from the center of said section to its intersection with the John Day River, near the mouth of Thirty Mile Creek; thence downstream approximately 31 miles to the North Boundary of the Southwest Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) of Section 24, Township 2 South, Range 18 East, of the Willamette Meridian, (T 2S, R 18E, W.M.), Sherman and Gilliam Counties, near East Ferry Canyon, is classified as a Natural River Area;

(b) Within this area, no new structures or improvements which are visible from the river, other than those erected or made in connection with agricultural uses, or those needed for public recreation or resource protection will be permitted. Additional dwellings and commercial public service facilities, including resorts and motels, lodges and trailer parks which are visible from the river will not be permitted.

**(2) Scenic River Areas:**

(a) The segments of the scenic waterway upstream and downstream from the designated Wild River Area are classified as Scenic River Areas;

(b) Within these areas, no new structures or improvements which are visible from the river, other than those erected or made in connection with agricultural uses, or those needed for public recreation or resource protection will be permitted. Additional dwellings, other than those necessary to existing agricultural uses, and commercial public service facilities, including resorts and motels, lodges and trailer parks which are visible from the river, will not be permitted.

Stat. Auth.: ORS Ch.  
Hist.: HC 1285, f. 6-27-72

**Deschutes River Scenic Waterway**

**736-40-070 (1) Recreational River Area:**

(a) The segment of the scenic waterway extending from the Deschutes River intersection with the northerly extension of the common section line of Section 29 and Section 30, Township 9 South, Range 13 East, of the Willamette Meridian, (T 9S, R 13E, W.M.), Jefferson County, downstream approximately 96 miles to the Columbia River, but excluding the right bank shoreline (as seen when facing downstream) and adjacent lands opposite the City of Maupin, as its boundaries were established on December 3, 1970, is classified as a Recreational River Area;

(b) Within this area, no new structures or improvements which are visible from the river, other than those erected or made in connection with compatible existing uses, or those needed for public outdoor recreation or resource protection will be permitted;

(c) Additional dwellings, other than those necessary to existing agricultural uses, and commercial public service facilities, including resorts and motels and lodges which are visible from the river, will not be permitted.

**(2) River Community Areas:**

(a) The segment of the scenic waterway extending from Pelton Re-Regulating Dam downstream approximately four miles to the Deschutes River intersection with the northerly extension of the common section line of Section 29 and Section

30, Township 9 South, Range 13 East, of the Willamette Meridian (T 9S, R 13E, W.M.), Jefferson County, is classified as a River Community Area. The shoreline and related adjacent lands opposite the City of Maupin, as its boundaries were established on December 3, 1970, is likewise classified as a River Community Area;

(b) Within these areas, when consistent with Jefferson County and Wasco County zoning ordinances, permitted uses and structures may include agriculture, single-family and multiple-family dwellings, churches, lodges, resorts, motels, transient public trailer parks, and necessary public service facilities. Permitted densities of improvements and structures which are visible from the river may be established by the Commission after consultation with the appropriate county planning commission, the State Fish and Wildlife Commission, the U.S. Bureau of Land Management, the City of Maupin or the Warm Springs Confederated Tribes and such other persons and agencies as the Commission may select.

**(3) Public use of the Deschutes River Scenic Waterway:**

(a) Policy: The Oregon Parks and Recreation Commission finds that in order to protect and enhance the Deschutes River Scenic Waterway's unique aesthetic, scenic, fish and wildlife, scientific and recreational features, and because these outstanding and unique features caused this river segment to be designated by the people of Oregon as a scenic waterway, it is necessary to adopt rules for public recreation use of the lands and waters within this scenic waterway area. These rules have as their basis the need to protect and preserve the waterway's outstanding scenic beauty and natural features while maintaining the river's wide range of recreational opportunities. Therefore, in accordance with the management requirements of ORS 390.845, the following rules shall be adhered to by persons using the Deschutes River Scenic Waterway for recreation purposes. These rules are in addition to other rules of the Commission promulgated for the management of all scenic waterways. Where more restrictive or specific than the general rules, these rules will prevail over the general rules except in the instance of private property owners where only OAR 736-40-035 (Rules for Land Management) or this rule shall apply;

**(b) Restricted Areas:**

(A) All persons using the Deschutes River Scenic Waterway shall be advised that the Confederated Tribes of the Warm Springs Reservation of Oregon have closed all Reservation lands to public use except by permit. This closure, enacted by the Confederated Tribes, also affects all islands west of the middle of the river between the Pelton re-regulating dam and the north boundary of the Reservation near Two Springs Ranch at the power boat deadline;

(B) Nothing in these rules give to any person any right to trespass on the private property of others or in any way alters the rights of private property owners in regards to trespass.

**(c) Camping:**

(A) No camping is permitted on river islands;

(B) No person shall camp or allow their equipment to occupy a campsite on public land for more than four consecutive days in any one campsite. In addition, the campsite must be

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vacated at least three days prior to re-occupying the same campsite. This rule does not apply to the following areas within the Deschutes River Scenic Waterway: Public campgrounds at Trout Creek, South Junction and Deschutes River State Park, and all public lands between the locked gate above Maupin within Section 36, Township 5 South, Range 13 East, of the Willamette Meridian, and Mack's Canyon Campground. In order to comply with this rule an individual's tent, stove and all other associated camp equipment and personal property must be physically removed from the campsite area to an entirely new campsite area location at least one-quarter mile from the original campsite. The intent of this rule is to keep desirable campsite areas available for the short-term use of all river users;

(C) In order to minimize the impact of camping on the fragile river area, it is recommended that camping parties limit their size to 16 persons.

(d) Campfires, Fuel, Firepans:

(A) No person shall build, maintain or keep any fire which is fueled by other than charcoal, gas or petroleum products within the Deschutes River Scenic Waterway designated by ORS 390.825 from June 1 to October 1. Fire must be contained in a firepan or similar device of metal. A firepan is a metal container with at least 2-inch high sides to prevent ashes from spilling onto the ground;

(B) Every overnight camp, overnight hiking party or person using fire or operating a motor driven vehicle or boat within the Deschutes River Scenic Waterway designated by ORS 390.825, from June 1 to October 1, shall carry and keep reasonably accessible one bucket of at least one gallon capacity and one spade or shovel;

(C) No person shall leave a fire unattended;

(D) All fires shall be completely extinguished after use and the remains disposed of in a manner consistent with subsection (g) of this section relating to the disposal of litter;

(E) Within 48 hours after the declaration of an extreme fire danger condition as determined by the Bureau of Land Management, the following rules shall apply within the Deschutes River Scenic Waterway from Pelton Re-regulation Dam to the confluence of the Deschutes River with the Columbia River:

(i) No person shall build any fire, including but not limited to fires built in firepans, or using wood or charcoal briquets, except in enclosed structures (e.g., residence of recreational vehicles);

(ii) Commercially manufactured metal camp stoves and lanterns are permissible for outdoor use only when fueled with bottled liquified petroleum gas (e.g., propane) or white gas. Such stoves or lanterns shall be operated in a responsible manner at all times;

(iii) Smoking is prohibited except in enclosed buildings, enclosed motor vehicles, or in boats on the river.

(F) These rules shall remain in effect until the close of the normal fire season on October 1 or until suspended by action of the State Parks Director.

(e) Tree Cutting and Firewood Gathering: No dead, living, standing or down trees or brush, including driftwood, shall be cut, gathered, or damaged in any way by persons using the Deschutes River Scenic Waterway for recreational purposes;

(f) Firearms: The discharge of firearms for any

purpose other than protection of life and property, including livestock, is prohibited within the scenic waterway corridor from the third Saturday in May through August 31 of each year;

(g) Litter and Personal Sanitation:

(A) Persons using the Deschutes River Scenic Waterway for recreational purposes shall place refuse, scrap, trash and garbage in proper receptacles provided for that purpose at maintained recreation sites or litter collection stations. No such refuse, litter, garbage or similar materials shall be buried or abandoned. When no approved receptacle or container is available, the material shall be taken out of the scenic waterway area for disposal;

(B) All persons using the Deschutes River Scenic Waterway for recreational purposes shall use the developed toilet facilities provided at public recreation sites. Where toilets are not provided, persons shall bury all human waste and toilet paper at least six inches below the surface of the ground in natural soil and at least 50 feet from the edge of the river.

(h) No person shall use fireworks within the Deschutes River Scenic Waterway: Defined as any combustible or explosive composition or substance or any combination of any such compositions or substances or any other article which was prepared for the purpose of providing a visible or audible effect by combustion, explosion, deflagration or detonation, and includes blank cartridges or toy cannons in which explosives are used, balloons which require fire underneath to propel the same, firecrackers, torpedoes, skyrockets, roman candles, bombs, rockets, wheels, colored fires, fountains, mines, serpents, or any other article of like construction or any article containing any explosive or inflammable compound or any tablets or other device containing any explosive substance or inflammable compound;

(i) The rules set forth in this rule shall not be applicable to the Deschutes River State Recreation Area Campground, the use of which shall instead be governed by general park area rules and the authority and discretion of the park manager.

Stat. Auth.: ORS Ch. 390

Hist.: HC 1285, f. 6-27-72; PR 3-1982, f. & ef. 3-26-82; PR 4-1983, f. & ef. 3-30-83; PR 3-1985, f. & ef. 6-4-85; PR 5-1985(Temp), f. 7-15-85, ef. 11-1-85; Suspended by PR 6-1985(Temp), f. & ef. 10-1-85; PR 9-1986, f. & ef. 6-12-86; PR 5-1990, f. & cert. ef. 12-18-90

[ED. NOTE: The text of Temporary Rules is not printed in the Oregon Administrative Rules Compilation. Copies may be obtained from the adopting agency or the Secretary of State.]

**Deschutes River Scenic Waterway Boater Pass System Rules**

**736-40-071 (1) Policy:**

(a) The Oregon Parks and Recreation Commission finds that in order to carry out the intent of Chapter 798, Oregon Laws 1981, monies collected from the sale of the Deschutes River Scenic Waterway Boater Pass shall be used for the following purposes:

(A) For operation of the pass system;

(B) For providing river-user oriented law enforcement services;

(C) For providing river recreation information and education;

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(D) For developing and maintaining river oriented recreation facilities; and

(E) For any other purposes the Department considers appropriate for the maintenance, enhancement or protection of the natural and scenic beauty of the Deschutes River Scenic Waterway consistent with ORS 390.805 to 390.925.

(b) As provided by the statute, monies collected from this program shall be used exclusively within the Deschutes River Scenic Waterway;

(c) It shall further be the policy of the Commission that these monies shall be used first, to operate the pass system; and secondly, to provide as directly as possible, education, information and rule enforcement services to those river users who contribute directly to this fund. When in the judgment of the State Parks Director, these priority needs can be continually met, additional uses of these funds shall be allowed consistent with paragraphs (1)(a)(D) and (E) of this rule;

(d) In determining the future use of these funds for purposes other than those listed in paragraphs (1)(a)(A), (B), and (C) of this rule, the State Parks Director may consider input from the Scenic Waterways Advisory Committee, the various local, state, and federal agencies involved with managing resources within the Deschutes River Scenic Waterway, the Confederated Tribes of Warm Springs Reservation of Oregon, and the general public;

(e) The Oregon Parks and Recreation Commission, by adoption of this rule, delegates the administration of this Deschutes River Scenic Waterway Boater Pass program and the funds derived from it as authorized by Chapter 798, Oregon Laws 1981, to the State Parks Director or the Director's designed;

(f) The Commission encourages all local, state and federal agencies involved in resource management of the Deschutes River Scenic Waterway and the river users themselves, to give their full cooperation to this program;

(g) The Commission recognizes that the Deschutes River Scenic Waterway Boater Pass program is experimental in nature. It will endeavor to annually adjust the program as new information about visitation, river user needs and trends become apparent.

(2) Definitions: For purposes of this rule, the following definitions shall apply:

(a) "Deschutes River Scenic Waterway" — That portion of the Deschutes River designated in ORS 390.825 as a State Scenic Waterway. The designated river area covers approximately 100 miles from Pelton Re-regulating Dam to the Columbia River, excluding the city limits of Maupin as established on October 4, 1977. The Scenic Waterway area includes all water and lands within 1/4 mile of the bank on either side of the river;

(b) "Boat" — Every watercraft or device used as a means of transport on the water of the Deschutes River Scenic Waterway;

(c) "Deschutes River Scenic Waterway Boater Pass" — A receipt for a fee paid pursuant to Section 2, Chapter 798, Oregon Laws 1981;

(d) "In Possession" — Possessed in such a manner as to be readily available, nearby, or in close proximity to the passholder and able to be easily and quickly produced on the site in the event the passholder is requested to do so by an authorized agent or law enforcement officer, or State

Park employee authorized to issue citations pursuant to Section 2, Chapter 692, Oregon Laws 1981;

(e) "Day" — Any part of a 24-hour period running from 12:01 a.m. to the following midnight;

(f) "Group" — A boating party of 2 - 16 persons;

(g) "Group Leader" — A person who purchases a pass as the representative of a group;

(h) "Passholder" — Any individual person or person within a group for which the appropriate fee has been paid and that individual or a member of the group is in possession of a Deschutes River Scenic Waterway Boaters Pass;

(i) "Immediate Family" — The spouse and any natural or adopted children of a property owner or the property owner's spouse who reside with the owner of property which immediately abuts the Deschutes River Scenic Waterway.

(3) When Pass is Required:

(a) No person shall launch, operate or ride in any boat or engage in any camping, fishing or other activity in connection with being transported by a boat on those portions of the Deschutes River designated as scenic waterways under ORS 390.825, during the time period established in section (4) of this rule, without having first obtained a valid Deschutes River Scenic Waterway Boater Pass (hereinafter referred to as "pass") for the days during which these activities are conducted. A person will be issued, upon payment of the appropriate fee and completion of the pass form, either an individual pass, annual pass, a group pass, or a special pass as specified in section (10) of this rule;

(b) Every person landing, operating or riding in a boat or engaging in any camping, fishing or other activity in connection with being transported by a boat on the Deschutes River Scenic Waterway shall display his/her individual, annual, group or special pass upon the demand of any law enforcement officer or employee of the Parks and Recreation Department who is authorized to enforce these rules.

(4) Time Period of Pass: The time period for which a valid pass is required is year round.

(5) Requirements for Valid Pass:

(a) The pass will consist of the following information to be placed on a form provided by the Parks Department and completed at the time of purchase:

(A) Calendar date(s) pass will be used;

(B) Number of days pass will be valid;

(C) Total fee paid for issuance of the pass;

(D) Number of persons authorized by pass;

(E) Signature of passholder or group leader;

(F) A summary of appropriate river use rules;

(G) Driver's license number;

(H) Date of birth.

(b) In order for a pass to be valid in subsection (a) of this section, the recipient must:

(A) Provide all of the above information as requested;

(B) Have the completed pass in possession while boating within the Deschutes River Scenic Waterway;

(C) Be boating within the Deschutes River Scenic Waterway only on the calendar days authorized for on the recipient's completed pass; and

(D) Have paid the appropriate fee.

(c) A passholder may also be issued with the

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pass, informational and educational material designed to encourage an appreciation of the scenic waterway and promote minimum impact recreation use.

**(6) Cost of Pass:**

(a) The fee for issuance of a pass, either individual or group, shall be \$1.75 per person per day;

(b) The fee for issuance of an individual annual pass shall be \$12 per person per year. Each annual pass will be valid only for a single calendar year beginning on January 1 and ending on December 31 of each year a pass is required under section (4) of this rule.

**(7) Group Pass:**

(a) No group shall exceed the number of persons shown on the pass. In the event the number of persons in the group exceeds the number shown on the pass, the group leader shall be in violation of this rule;

(b) Group passes will be issued only in multiples of 16 persons or less;

(c) The pass shall be in the possession of the group leader at all times while within the Deschutes River Scenic Waterway.

**(8) Sale of Pass:**

(a) The pass will be available for purchase at selected state park offices, certain cooperating businesses and selected public agency locations throughout the state. Selection of vendors will be based on location, days and hours of operation, past performance in similar governmental sales and the ability to provide service to a large number of potential Deschutes River Scenic Waterway boaters;

(b) Private vendors and cooperating agencies must comply fully with the terms of the Department/Vendor agreement and the Department's policies for vending the Deschutes River Scenic Waterway Boater Pass. Private vendors and cooperating agencies may charge a \$.50 handling fee for dispensing each pass, raincheck or duplicate pass. Such fee will be in addition to any fee charged under section (6) of this rule;

(c) Passes will be available for purchase beginning in March, 1982. The State Parks Department will publish and make available to the public, at no cost, a listing of all vendors of the Deschutes River Scenic Waterway Boater Pass. The list will include location of vendors and days and hours the pass will be available for purchase.

**(9) Refunds, Cancellations, Replacements:**

(a) No cash refunds will be permitted in the event a pass is not used;

(b) A passholder who determines that the pass will not be used, may receive a raincheck for the value of the pass. The value of the raincheck may be applied to the purchase of a new pass at any time during the year in which it was issued;

(c) The passholder must make such a request for the raincheck in writing, or in person. The request must be made any time up to and including the earliest effective date of the original pass. The original pass must be surrendered prior to issuance of the raincheck;

(d) Rainchecks will be issued at any of the vendor locations where Deschutes River Scenic Waterway Boater Passes are sold;

(e) The passholder may get a duplicate pass to replace one that is lost or destroyed by applying for a duplicate from the same vendor from which he

purchased the original pass. A duplicate pass may only be issued prior to the effective date of the original pass. The passholder must provide to the vendor all information necessary to permit the vendor to confirm the original pass sale.

**(10) Special Exceptions:**

(a)(A) Pursuant to Oregon Laws 1981, Chapter 798, Section 2(3), the State Parks Director shall issue without charge annual passes to comply with the requirements of this rule to persons who own ranch, farm, or residential property immediately abutting those portions of the Deschutes River designated as a Scenic Waterway under ORS 390.825 and to members of the immediate family of such persons. This rule does not authorize the issuance without charge of passes to persons holding less than a majority interest in a firm, corporation or cooperative organization which owns land immediately abutting the Deschutes River designated as a scenic waterway under ORS 390.825;

(B) Free *annual passes* shall be issued by the State Parks and Recreation Department to persons who qualify under this section and have contacted the State Parks and Recreation Department. All passes issued under this section are non-transferable. They are for the sole use of the person(s) to whom they are issued;

(C) Persons who believe they qualify for a free annual pass must contact in person or by mail: River Programs, State Parks and Recreation Department, 525 Trade Street S.E., Suite 301, Salem, OR 97310 (Attn: Free Annual Pass), and present for the Department's review evidence that substantiate the applicant's claim to a free annual pass. Evidence may consist of property tax information, deeds, birth certificates or similar legal or real estate devices.

(b)(A) The State Parks Director may issue a \$5 *annual access pass* to persons who own, either wholly or in partnership, farm, ranch or residential land within the Deschutes River Scenic Waterway and whose sole or customary means of access to their farm, ranch or residential facilities is by boat. The purpose of this pass is to permit unrestricted access to private property not reasonably or traditionally accessible by any means other than by boat. Each annual access pass will be valid for up to four persons;

(B) Prior to the issuance of this pass, an individual must submit written request to the State Parks Director clearly stating the reasons, factors or circumstances requiring the issuance of the annual access pass.

(c) The State Parks Director may issue a \$5 *annual occupational pass* to persons or employees of farm, ranch or residential property owners and lessees of farm, ranch or residential property. The farm, ranch or residential property must be immediately abutting the Deschutes River Scenic Waterway. The annual occupational pass shall be for those persons engaged in boating in order to access, supervise, or maintain property immediately abutting the Deschutes River Scenic Waterway. This pass will not be valid for boating in connection with any recreational activity. The pass is transferable among employees and caretakers of a single property-owner or organization; the pass is also transferable among leaseholders of a particular parcel of property. Proof of employment

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or lease agreement will be required prior to the issuance of this pass;

(d) Pursuant to Oregon Laws 1981, Chapter 798, Section 3(2), no Deschutes River Scenic Waterway boater pass will be required of:

(A) Peace officers, members or employees of a governmental body or their agents while engaged in the discharge of official duties; or

(B) Any member of the Confederated Tribes of the Warm Springs Indian Reservation.

(11) Effective Date of Rule: Sections (3), (4) and (10) of this rule will be effective on May 15, 1982. All other sections shall take effect upon filing with the Secretary of State.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925  
Hist.: PR 2-1982, f. 2-3-82, ef. 5-15-82; PR 2-1983, f. & ef. 3-11-83; PR 15-1992, f. & cert. ef. 11-12-92

**Middle Deschutes River Scenic Waterway**

**736-40-072 (1) North Bend River Community Area:**

(a) From Sayer Park at approximately river mile 164 to the northern Urban Growth Boundary of the City of Bend at approximately river mile 161, the river is classified North Bend River Community Area;

(b) Within this area, all new structures, improvements and development shall be in compliance with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(f), and be consistent with applicable City of Bend and Deschutes County land use and development regulations. Improvements needed for public recreation use or resource protection shall be designed to blend with the natural character of the landscape.

**(2) Crooked River Ranch River Community Area 1:**

(a) From approximately river mile 129.9 to 131.5, the residential building lots #1 — 50 within Phase 5 of the Crooked River Ranch subdivision as specified on the Plat Map recorded November 1973, in book 2, Pages 253-258, in the Deschutes County Clerk's Office, the river is classified Crooked River Ranch Community Area 1;

(b) Within this area, all new structures, improvements and development shall be in compliance with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(f), and be consistent with applicable Deschutes County land use and development regulations. There will be no further partitioning of designated Community Areas for residential development. Improvements needed for public recreation use or resource protection shall be designed to blend with the natural character of the landscape.

**(3) Crooked River Ranch River Community Area 2:**

(a) From approximately river mile 124.3 to 125.25, the residential building lots #1 — 107 within Phase 12 of the Crooked River Ranch subdivision as specified on the Plat Map recorded June 1978, in book 12, Page 582, in the Jefferson County Clerk's Office; the river is classified Crooked River Ranch River Community Area 2;

(b) Within this area, all new structures, improvements and development shall be in compliance with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(f),

and be consistent with applicable Jefferson County land use and development regulations. There will be no further petitioning of designated Community Areas for residential development. Improvements needed for public recreation use or resource protection shall be designed to blend with the natural character of the landscape.

**(4) Recreational River Area:**

(a) From the northern Urban Growth Boundary of the City of Bend at approximately river mile 161 downstream to Tumalo State Park at approximately river mile 158, the river is classified Recreational River Area;

(b) Within this area, all new structures, improvements and development shall comply with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(c)(B), and be consistent with applicable Deschutes County land use and development regulations:

(A) New structures and improvements shall be set back a minimum of 100 feet from the ordinary high water line of the river. A set back of 20 feet or more is required from the edge of the rim rock (where this feature exists). The exact distance for the above setbacks shall be determined on a case-by-case basis and shall be dependent on existing terrain, existing vegetation, height of proposed structure, and applicable county setback requirements;

(B) New structures shall be finished in colors and tones that blend with the surrounding landscape. For the purpose of this rule, landscape includes indigenous vegetation, soils and rock material. Natural evergreen vegetation will be maintained between the structures and the river. The establishment of additional vegetative screening (preferably native vegetation) may be required to further mitigate the visual impact of the structure as seen from the river;

(C) Roads, mines and similar forms of development shall be set back from the river consistent with County zoning and land development requirements and be screened from view from the river by topography or by existing or established evergreen vegetation;

(D) Improvements needed for public recreation use or resource protection shall be designed to blend with the natural character of the landscape.

**(5) Scenic River Area:**

(a) From Deschutes Market Road at approximately river mile 157 downstream to the south boundary of the Wilderness Study Area at approximately river mile 131, excluding the Cline Falls Dam and powerhouse section between the State Highway 126 Bridge and river mile 144 and the Crooked River Ranch River Community Area, the river is classified Scenic River Area;

(b) Within this area all new structures, improvements and development will comply with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(b)(B) and be consistent with applicable Deschutes County land use and development regulations:

(A) New structures and improvements shall be set back a minimum of 100 feet from the ordinary high water line of the river. A set back of 20 feet or more is required from the edge of the rim rock (where this feature exists). The exact distance for the above setbacks will be determined on a case-by-case basis and will be dependent on existing

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terrain, existing vegetation, height of proposed structure, and applicable county setback requirements;

(B) New structures shall be finished in colors and tones that blend with the surrounding landscape. For the purposes of this rule, landscape includes indigenous vegetation, soils, and rock material. Natural evergreen vegetation shall be maintained between the improvements and the river. The establishment of additional vegetative screening (preferably native vegetation) may be required to further mitigate the visual impact of the structure as seen from the river;

(C) Roads, mines and similar forms of development shall be screened from view from the river by topography. Within this area no new roads or mines shall be allowed below the canyon rim;

(D) Improvements needed for public recreation use or resource protection shall be designed to blend with the natural character of the landscape.

**(6) Natural River Area:**

(a) From the south boundary of the Wilderness Study Area at approximately river mile 131 to the Lake Billy Chinook stream gauge at approximately river mile 120, excluding the Crooked River Ranch River Community Areas as described in the River Community section, the river is classified Natural River Area;

(b) Within this area all new structures, improvements and developments shall comply with the Land Management rules as described in OAR 736-40-035 and 736-40-040(1)(a)(C), and be consistent with applicable local land use and development regulations:

(A) No new structures and improvements shall be allowed within this area unless fully screened from view from the river by topography except those minimal facilities needed for resource protection or public outdoor recreation;

(B) Roads, mines and similar forms of development shall be permitted only when fully screened from view from the river by topography. Any existing roads shall not be extended, realigned or improved substantially unless fully screened by topography. All excess road construction materials (side cast) shall be removed to locations screened from view from the river and where they cannot be transported by gravity to the river;

(C) New structures, improvements and development needed for resource protection or public outdoor recreation use shall be primitive in character and designed to blend with the natural character of the landscape. These structures shall be finished in colors and tones that blend with the surrounding landscape. For purposes of this rule, landscape includes indigenous vegetation, soils and rock materials.

Stat. Auth.: ORS 390.845(2)

Hist.: PR 6-1993, f. & cert. ef. 3-15-93

**Sandy River Scenic Waterway**

**736-40-075** (1) Natural River Area: The segment of the scenic waterway extending from the east boundary line of Section 25 and Section 36, Township 1 South, Range 4 East, of Willamette Meridian, in Clackamas County at Dodge Park, downstream approximately 3.8 miles to the South line of the North Half of the Northeast Quarter of Section 23, Township 1 South, Range 4 East, of

Willamette Meridian, in Multnomah County near Indian John Island, is classified as a Natural River Area.

(2) Scenic River Area: The segment of the scenic waterway extending from the South line of the North Half of the Northeast Quarter of Section 23, Township 1 South, Range 4 East, of the Willamette Meridian, in Multnomah County near Indian John Island, downstream approximately 8.7 miles to the West line of the East Half of the Northeast Quarter of Section 6, Township 1 South, Range 4 East, of the Willamette Meridian, in Multnomah County at Dabney State Park, is classified as a Scenic River Area.

(3) In both the Natural River Area and the Scenic River Area of the Sandy River Scenic Waterway:

(a)(A) Within the area of greatest visual effect on the natural river scene, as indicated on the map of the Sandy River Scenic Waterway prepared by the State Parks and Recreation Department and dated September 13, 1972, new structures or other improvements which are visible from the river (see OAR 736-40-015(10), Definition of Terms), other than those erected or made in connection with compatible existing uses, or those needed for public outdoor recreation or resource protection will not be permitted unless they are so located that their visual effect is primarily on the upland scene (above the rims of the canyon, or "bluff line", usually readily discernible) rather than on the scene as viewed from the river;

(B) Outside that area of greatest visual effect on the natural river scene, uses which are consistent with applicable county zoning ordinances and OAR 736-40-030 and 736-40-035 may be permitted. Within the Natural River Area, such permitted uses shall be largely concealed from view from the river by topography or established evergreen vegetation which shall be maintained; within the Scenic River Area such permitted uses may be visible from the river, provided they are consistent with applicable county zoning regulations and OAR 736-40-030 and 736-40-035.

(b) Outside the area of greatest visual effect on the natural river scene, as indicated on the map of the Sandy River Scenic Waterway prepared by the State Parks and Recreation Department and dated 13 September 1972, notification is not required for changes of land use, construction of buildings or other improvements or other alterations or activities which:

(A) Are less than 21 feet in height above natural grade on a side facing the river;

(B) Are entirely concealed from view from the river by topography or established evergreen vegetation which shall be maintained;

(C) Do not involve reduction of existing vegetation which is visible from the river;

(D) Are finished in muted tones without large reflective surfaces; and

(E) Meet applicable requirements of other governmental agencies, including county zoning regulations.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925

Hist.: 10TC 6, f. 11-1-73; PR 15-1992, f. & cert. ef. 11-12-92

**Clackamas River Scenic Waterway**

**736-40-076** (1) Recreational River Area:

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(a) That segment of the Scenic Waterway extending from River Mill Dam downstream approximately 12 miles to Bakers Bridge at Carver is classified as a Recreational River Area;

(b) The Recreational River Area will be administered consistent with the purposes of OAR 736-40-040(1)(c)(B). Within this area, new structures and improvements, mining operations and timber harvesting activities shall be permitted only when substantially screened from view from the river by topography or vegetation. If no such topographic or vegetative screening exists on a site, the structure or improvement may be permitted if vegetation is established which will provide substantial screening to the proposal in a reasonable time (for example, 2 - 3 years). The condition of "substantial vegetative screening" shall consist of an ample density and mixture of native evergreen and deciduous vegetation to totally obscure or allow only a highly filtered view of the proposed structures or improvements. Developments necessary for public outdoor recreation, as provided by public agencies, and resource protection may be visible from the river but must blend into the natural scene as much as possible.

(2) All the Commission's rules for scenic waterway management, OAR 736-40-025 through 736-40-035, shall apply to the Clackamas River Scenic Waterway except where this section is more specific.

Stat. Auth.: ORS Ch. 390  
Hist.: PR 7-1985, f. & ef. 10-24-85

**Opal Lake and Opal Creek Scenic Waterway**  
**736-40-077** [PR 6-1986, f. & ef. 5-28-86;  
Repealed by PR 15-1992,  
f. & cert. ef. 11-12-92]

**Waldo Lake and the North Fork of the Middle Fork of the Willamette River**

**736-40-078** Natural Area: Waldo Lake, the lake shore and adjacent land within 1/4 mile, except for the area described in section (1) of this rule as North Waldo campground, Islet campground, the area between them, and the Shadow Bay campground:

(1) Scenic Area: The Waldo Lake shore and related adjacent land from a point approximately 200 feet northwesterly of the boat ramp at North Waldo campground in a southerly direction to a point approximately 200 feet south of southernmost development at Islet campground, and from a point approximately 200 feet north of the northernmost development at Shadow Bay campground south to a creek at the easternmost head of Shadow Bay.

(2) Natural River Area: The North Fork of the Middle Fork of the Willamette River, from its outlet of Waldo Lake downstream approximately 8-1/2 miles to its intersection with the south section line of Section 36, Township 19S, Range 5-1/2E, of the Willamette Meridian.

(3) Scenic River Area: That segment of the North Fork of the Middle Fork of the Willamette River, from its intersection with the south section line of Section 36, Township 19S, Range 5-1/2E, of the Willamette Meridian, downstream approximately 6-1/2 miles to its intersection with Forest Road 1944.

(4) Recreational River Area: That segment of the North Fork of the Middle Fork of the Willamette River, from its intersection with Forest Road 1944 downstream to the lower boundary of the scenic waterway, one mile upstream from the railroad bridge near Westfir.

Stat. Auth.: ORS Ch. 390  
Hist.: PR 7-1986, f. & ef. 5-28-86

**Upper Deschutes River Scenic Waterway**  
**736-40-079** (1) Scenic River Areas:

(a) Three river segments are designated as Scenic River Areas:

(A) The segment of the scenic waterway beginning at the Wickiup Dam stream gauge at about river mile 226.4 and extending downstream about 28 miles to the General Patch Bridge (Deschutes County Road — FAS 793) at about river mile 199 with the exception of the Pringle Falls (about river mile 217.5 to 216.5) and General Patch River (river mile 204-199) as Community Areas as described in paragraphs (2)(a)(A), (B), and (C) of this rule is classified as a Scenic River Area;

(B) The segment of the scenic waterway extending from the Deschutes National Forest boundary in Section 20, Township 19 South, Range 11 East, of the Willamette Meridian, (Section 20, T 19S, R 11E, W.M.) to the Bend Urban Growth Boundary at River Mile 172 is classified as a Scenic River Area;

(C) The segment of the scenic waterway beginning at a point known as Twin Bridges where the north section line of Section 20, Township 16, South, Range 12 East, of the Willamette Meridian (Section 20, T 16S, R 12E, W.M.), crosses the river at about river mile 154.5 and extending downstream approximately 20 miles, excluding the Cline Falls Dam and powerhouse between river mile 145 and 144, to the Deschutes County Road Bridge (FAS 395) at Lower Bridge at about river mile 126.5 is classified as a Scenic River Area.

(b) Within these areas no new improvements, roads or mines other than those screened by topography, set back a minimum of 100 feet from the river's edge, set back 20 feet from the edge of the rim rock (where this feature exists) or those needed for public outdoor recreation or natural resource protection will be permitted;

(c) In paragraph (1)(a)(A) and subsection (1)(b) of this rule, timber harvest activities, including thinning, shall not be visually evident after completion of the removal of trees as viewed from the river; from developed recreation sites; or from trails adjacent to the river. Stumps shall be cut low, slash cleaned up promptly, and the remaining trees and brush protected. Reforestation shall occur within one year of the project's completion. The provisions of the Oregon Department of Forestry forest practices rules shall be strictly followed.

(2) River Community Areas:

(a) Four areas are designated as River Community Areas:

(A) Those related adjacent lands made up of the residential tract of homes, cabins, and similar dwellings along the river extending downstream of the Wickiup Dam stream gauge at about river mile 226.4 approximately two miles to about river mile 224.5 is classified as the Wickiup River Community Area;

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(B) Those related adjacent lands made up of residential tracks along the river in approximately river mile 217 of Pringle Falls within the northeast quarter of Section 23, Township 21 South, Range 9 East, of the Willamette Meridian (NE 1/4 Section 23, T 21S, R 9E, W.M.), extending downstream approximately seven-tenths of a mile (0.7) from about river mile 217.5 to river mile 216.8 is classified as the Pringle Falls River Community Area;

(C) Those related adjacent lands within platted residential tracks known as Oregon Water Wonderland Unit 1, River Forest acres and Deschutes River Homesites, Units 8 Part 1 and Unit 6 situated along the river extending downstream approximately five miles from about river mile 204 to about river mile 199 or the General Patch Bridge (Deschutes County Road — FAS 793) is classified as the General Patch River Community Area;

(D) Those related adjacent lands containing approximately 108 platted lots within the Crooked River Ranch development at approximately river mile 130.5 and 131.7 in Jefferson County is classified as the Crooked River Ranch River Community Area.

(b) Within these areas new improvements must be consistent with the applicable Deschutes or Jefferson County's zoning ordinances. New structures visible from the river must to the greatest extent possible, comply with the following conditions:

(A) Be finished in muted tones appropriate to the natural surroundings;

(B) Not exceed 30 feet in height from natural grade on the side facing the river;

(C) Be located in such a way that natural vegetation makes the improvements as inconspicuous as reasonably practicable. Additional vegetative screening may be required to be established and maintained.

(c) In order to maintain a healthy forest and to protect scenic natural values of the scenic waterway, timber harvest activities, including thinning except those needed to remove dead, dying, or diseased trees, must adhere to the following conditions:

(A) Be screened by topography or vegetation when seen from:

(i) The river;

(ii) Developed recreation sites within scenic waterways;

(iii) Trails adjacent to the river.

(B) Riparian vegetation shall be protected;

(C) Stumps shall be kept low; and remaining trees and brush protected from damage during harvest;

(D) Reforestation shall occur within over year of completion of harvest;

(E) For operations involving the removal of dead, dying, or diseased trees section (1) of this rule shall not apply. All other conditions as stated above shall apply as well as any special conditions stipulating upon project approval.

(3) Recreational River Area:

(a) One river segment shall be designated as a Recreational River Area;

(b) The segment of the scenic waterway beginning at Harper Bridge (Deschutes County Road — FAS 900) at approximately river mile 190.6 and extending downstream approximately five miles to the point at which the river intersects the

Deschutes National Forest boundary in Section 20, Township 19 South, Range 11 East, of the Willamette Meridian, (Section 20, T 19S, R 11E, W.M.), at approximately river mile 184.8 is classified as a Recreational River Area;

(c) Within this area new improvements, including public outdoor recreation facilities and natural resource protection measures, may be visible from the river if the following conditions apply:

(A) Are of such design and be constructed of such materials as to be unobtrusive and compatible with the scenic qualities of the area;

(B) Are finished in muted tone appropriate to the natural surroundings;

(C) Do not exceed 30 feet in height from natural grade on the side facing the river;

(D) Are located in such a way that natural vegetation make the improvements as inconspicuous as reasonably practicable and in no case obtruding on the view from the river. Additional vegetative screening may be required to be established and maintained;

(E) Provide for minimal soil disturbance during construction. Allow for revegetation of disturbed areas.

(d) All other new land uses including roads and mines within this area must be screened from view from the river by evergreen vegetation or topography;

(e) In order to maintain a healthy forest and to protect scenic natural values of the scenic waterway, timber harvest activities, including thinning except those needed to remove dead, dying, or diseased trees, must adhere to the following conditions:

(A) Be screened by topography or vegetation when seen from:

(i) The river;

(ii) Developed recreation sites within scenic waterways;

(iii) Trails adjacent to the river.

(B) Riparian vegetation shall be protected;

(C) Stumps shall be kept low; and remaining trees and brush protected from damage during harvest;

(D) Reforestation shall occur within over year of completion of harvest;

(E) For operations involving the removal of dead, dying, or diseased trees section (1) of this rule above shall not apply. All other conditions as stated above shall apply as well as any special conditions stipulating upon project approval.

(4) Natural River Areas:

(a) One area is designated as a Natural River Area;

(b) The segment of the scenic waterway beginning at the Deschutes County Road Bridge (FAS 395) at Lower Bridge at approximately river mile 133.7 and extending downstream approximately 14.5 miles excluding the Crooked River Ranch River Community Areas as described in paragraph (2)(a)(D) of this rule, to the Lake Billy Chinook stream gauge at approximately river mile 120 is classified as a Natural River Area;

(c) In order to preserve the related adjacent land visible from the river in an essentially primitive condition, no new structures or improvements, except those needed for resource protection or public outdoor recreation, will be allowed unless screened from view by topography.



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**(5) Special Relief from Notification Requirements:**

(a) Within the areas described in sections (1), (2), and (3), of this rule notification to the State Parks and Recreation Department is not required for new improvements and land use changes (e.g., timber harvest) if any of the following apply;

(b) The project is screened from view from the river by topography;

(c) The project is situated 100 feet or more away from the riverbank or twenty feet away from the rim rock feature;

(d) The project does not involve the removal of vegetation visible from the river; and

(e) The project is permitted outright under the Deschutes or Jefferson County Comprehensive Land Use Plan and Zoning Ordinance. In order to be permitted outright, the project must not require any special local land use reviews or approvals (i.e., variances, conditional use permits, flood plain development permits, zone or comprehensive plan changes or the like). A building permit is not considered a special local land use approval for the purpose of this rule.

Stat. Auth.: ORS 183.545, 183.550, Ch. 184 & 390.805 - 390.925

Hist.: PR 2-1988, f. & cert. ef. 3-25-88; PR 15-1992, f. & cert. ef. 11-12-92

**Notification Procedures**

**736-40-080** (1)(a) Notification to the Commission of a proposal for change of existing use of related adjacent land, or improvement thereto, or any other activity for which the Act or these rules and regulations require notification, shall be written and shall contain a detailed description of the proposed change, improvement or activity, and such other information as the Commission may require;

(b) Notifications or request for information or assistance may be made to the nearest State Parks Region office or to the State Parks and Recreation Department in Salem;

(c) The proposed change of use or improvement or activity shall not be carried out or commenced sooner than one year after such notification unless the Commission has sooner given its written approval.

(2) Upon receipt of written notice provided in section (1) of this rule, the Commission shall:

(a) If the proposal will not impair substantially the natural beauty of the scenic waterway or be in violation of either the Act or these rules, give the landowner, or other applicant when that is appropriate, written notification that he/she may immediately proceed;

(b) Notify the owner or applicant in writing if the Commission determines the proposed use would impair the natural beauty of the scenic waterway or otherwise violate either the Act or these rules. The owner or applicant shall not proceed with the proposal until at least one year after the date of the original notice to the Commission unless the owner and the Commission sooner reach agreement on an alternate plan.

Stat. Auth.: ORS 183.545, 183.550 & 390.805 - 390.925

Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72; PR 15-1992, f. & cert. ef. 11-12-92

**Procedures in Event of Commission Denial**

**736-40-085** (1) During the period of one year following the original notice to the Commission:

(a) The Commission and the owner of the land involved may agree upon modifications or alterations of the proposal so that implementation thereof would not, in the judgment of the Commission, impair substantially the natural beauty of the scenic waterway or otherwise violate the provisions of the Act or these rules and regulations;

(b) The Commission may acquire by purchase, gift, or exchange, the land involved or interest therein, including scenic easements, for the purpose of preserving the natural beauty of the scenic waterway;

(c) The landowner may make a written request of the Commission to enter into further negotiations regarding use of the land as prescribed in section (2) of this rule.

(2) The Commission, upon receiving a written request from an owner of related adjacent land, shall enter into negotiations and endeavor to reach agreement with such owner establishing for the use of such land a plan that would not impair substantially the natural beauty of the scenic waterway. At the time of such request for negotiations, the owner may submit an alternate plan in writing setting forth in detail his proposed uses. Then:

(a) Three months after the owner makes such a request for negotiations, either the Commission or the owner may give written notice that the negotiations are terminated without agreement;

(b) Nine months after the notice of termination of negotiations, the owner may use his land in conformity with any specific written plan submitted by the owner prior to or during negotiations, in the event the Commission and the owner reach agreement establishing a plan for land use, such agreement is terminable upon at least one year's written notice by either the Commission or the owner;

(c) Twelve months after the original notice to the Commission, the owner may use his land in conformity with the specific written plan submitted as a part of that notice unless the Commission has sooner instituted proceedings to acquire the land involved.

Stat. Auth.: ORS Ch.

Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72

**Condemnation of Related Adjacent Land**

**736-40-090** With the concurrence of the State Water Resources Board, the Commission may institute condemnation proceedings to acquire related adjacent land for the purposes of the Act if:

(1) At any time subsequent to nine months after the receipt of an owner's proposal agreement cannot be reached by the Commission and the landowner; or

(2) At any time related adjacent land is used in a manner violating the Act or the rules and regulations promulgated by the Commission; or

(3) At any time related adjacent land is used in a manner which, in the judgment of the Commission, impairs substantially the natural beauty of a Scenic Waterway, if the Commission has not been given at least one year's advance written notice of such use and if there is not in effect Commission approval of such use.

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Stat. Auth.: ORS Ch.  
Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72

**Public Lands Within or Adjacent to a Scenic Waterway**

**736-40-095** (1) The Commission may enter into agreement with an Indian tribe, the United States, another state agency or local governmental agency for the administration of lands contained in a scenic waterway.

(2) With the consent of the governing body, any public land within or adjacent to a scenic waterway

may be transferred to the jurisdiction of the Commission with or without compensation and shall become state recreational land and be administered by the Commission as part of the scenic waterway.

(3) Any land within a scenic waterway not transferred to the jurisdiction of the Commission shall be administered by the public body having jurisdiction thereof in accordance with the provisions of the Act.

Stat. Auth.: ORS Ch.  
Hist.: HC 1258, f. 6-30-71; HC 1285, f. 6-27-72

## **APPENDIX D**

### **RESOURCE ASSESSMENT**

## ELK RIVER RESOURCE ASSESSMENT

### I. EXECUTIVE SUMMARY

As a result of the Omnibus Oregon Wild and Scenic Rivers Act of 1988, a segment of the Elk River was designated as a Wild and Scenic River (W&SR). Under this act the Forest Service is required to prepare a comprehensive management plan to provide protection of the river values associated with the Elk River. Sections of the Elk River were also designated State Scenic Waterway.

The purpose of this resource assessment is to determine the level of significance for all river values associated with designated sections.

#### **Federal**

Based upon this inventory of resources in the Elk River corridor, fisheries and water quality are found to be the "outstandingly remarkable" river-related values associated with federally designated sections of the Elk River. Scenery is found to be a "significant value" in the river corridor. While not found to be "outstandingly remarkable" or "significant" in themselves, geologic/hydrologic values are sited as contributing to the significant scenic values in the river corridor. Botanic/ecologic values are found to be "significant".

#### **State**

Scenic quality and water quality were found to be "special attributes" along State Scenic Waterway sections. The state supports fisheries as a "special attribute" in state scenic waterway sections except above the falls on the North Fork or on the South Fork.

While other significant issues may surface during development of the Wild and Scenic River Plan for the Elk, protection of "outstandingly remarkable" values is required by the Wild and Scenic River Act and will be coordinated with the Oregon State Scenic Waterways during the joint planning process. The public will continue to be invited to participate in this planning process. For further information, contact Craig Snider, Project Leader, Powers Ranger District, Powers, OR 97466.

## **II. INTRODUCTION**

In 1968, Congress enacted the National Wild and Scenic Rivers Act and, for the first time, established a system for preserving outstanding free-flowing rivers. The Elk River was added to this system in 1988 when it was designated as a Federal Wild and Scenic River by the Omnibus Oregon Wild and Scenic Rivers Act of 1988. As defined in the Act, a National Wild and Scenic River must be free-flowing and have at least one outstandingly remarkable value. The "outstandingly remarkable values" of the Elk River identified by Congress in the Congressional Record (October 7, 1988) are the anadromous fishery, water quality, and natural features. In addition, scenery was noted to be very complementary. In 1988, the state of Oregon also designated portions of the Elk for inclusion into the State Scenic Waterways System.

Under the Wild and Scenic Rivers Act, the Forest Service is required to prepare a comprehensive river plan to provide for the protection of the identified river values. This resource assessment is the start of that planning process. Planning steps will include identification of issues, concerns, and opportunities associated with activities along the river which will then be translated to management objectives. From this, a range of management alternatives are developed, evaluated, and the preferred alternative chosen. The preferred alternative becomes the more detailed river management plan and includes provisions to monitor the effectiveness of management in meeting the objectives of the plan. Through each phase of the planning process, public involvement will be invited, and will be essential for the success of a sound management plan.

### III. RESOURCE ASSESSMENT PROCESS

This resource assessment serves as the foundation of the river management planning process. The assessment documents the determination of which river-related values or features are truly "outstandingly remarkable" (as defined in the Wild and Scenic Rivers Act of 1968) or contribute substantially to the river setting or to the functioning of the river ecosystem. It will also document which values are determined to be "Special Attributes" as defined under ORS 390.845 relating to the designation of Oregon State Scenic Waterways.

The resource assessment process provides a standardized approach to evaluation of values of designated Wild and Scenic Rivers. This assessment will guide interim management, development of the management plan, and determination of the boundaries.

Although the determination of value significance is a matter of informed professional judgement and interpretation, this process includes the following steps or verification techniques:

- The use of an interdisciplinary team approach;
- Consideration of uniqueness and rarity at a regional and national level; 1/
- Values must be river related in that they owe their existence or contribute to the functioning of the river system and its immediate environs,
- The use of qualitative guidelines to help determine significance, and
- Verification by other experts in the subject area.

1/ Based partially on the eight geographic regions described in the 1989 Statewide Comprehensive Outdoor Recreation Plan for Oregon (SCORP).  
(see attached map).

The list of resource value categories that have been considered include:

- Scenic
- Recreation
- Fish and Wildlife
- Cultural (Historic and Pre-historic)
- Geologic/Hydrologic
- Botanic/Ecologic
- Water Quality

The State Scenic Waterway criteria and process for determining "special attributes" are essentially the same as those followed in this document for determination of "outstandingly remarkable values". State Parks staff have assisted in the resource assessment process and have reviewed the preliminary findings for resources found along segments of the river designated jointly as Wild and Scenic and State Scenic. Therefore, a determination of "outstandingly remarkable" value in this document constitutes a "special attribute" finding in the joint management planning process. Under each resource value category, State Parks also makes a determination on whether a resource is a "special attribute" for river segments that are exclusively state scenic waterway designated.

#### **IV. RIVER DESCRIPTION**

The Elk River flows west and northwest from its headwaters on Iron Mountain to its mouth, located several miles north of Port Orford on the southern Oregon coast. The 19-mile segment of the Elk River designated as a component of the National Wild and Scenic Rivers System in 1988 is located almost entirely on National Forest land and includes the following river segments:

- the 17-mile segment from the confluence of the North and South Forks of the Elk to Anvil Creek, classified as a recreational river
- the 2-mile segment of the North Fork Elk from the falls to its confluence with the South Fork, classified as a wild river.

Of the 19 miles designated, approximately 17 miles flow through Siskiyou National Forest land and 2 miles (418 acres, based on 1/4 mile corridor each side of river) are in private ownership. The interim boundary of the Federal designation is 1/4 mile from the high water mark on both sides of the river. Boundaries and resulting acreage of the Federal designation will be subject to change through development of the river management plan.

In 1988, the state of Oregon also designated portions of the Elk for inclusion in the State Scenic Waterways System. The entire North Fork, (6.14 miles) the entire South Fork (4.97 miles) and 17.11 miles of the mainstem from the confluence of the Forks to the Elk River Fish Hatchery were included in this designation. In the state designated sections, 7.06 miles were classified as Recreational and 28.22 are classified as Scenic. The boundary for the state designation is 1/4 mile from the high water mark on both sides of the river. By State regulation, the boundary of the State Scenic Waterway will remain at 1/4 mile.

The north bank of the Recreation section is the southern boundary of the 17,200-acre Grassy Knob Wilderness. Approximately 9.5 miles of the interim river corridor (totalling 1520 acres) is in the wilderness. There are no developments in the wilderness at this time, but potential exists for trail development. Forest Road 5105, on the western boundary of the wilderness, provides limited access and is well out of the river corridor.

## V. DISCUSSION OF VALUES

### Scenic

#### Criteria for "Outstandingly Remarkable" Rating

The landscape elements of landform, vegetation, water, color and related factors result in notable or exemplary visual features and/or attractions. When analyzing scenic values, additional factors such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed may be considered. Scenery and visual attractions may be highly diverse over the majority of the river or river segment.

#### EXISTING CONDITION

The scenic quality in the river corridor is a result of a combination of the geology, landforms, water, and vegetation features. The lower section of the river corridor flows through a steep canyon with exposed rock surfaces, forming an inner-gorge environment. Upstream, the gorge widens slightly, but the corridor remains very steep. The south fork of the Elk River is relatively undisturbed by logging activities but there have been a number of previous timber sales on the upper North Fork.

The river corridor of the North Fork above the falls and the South Fork are relatively narrow and steep. The North Fork and the South Fork are only accessible at two points by road. Visitors wishing to view the scenery must hike the rugged river beds or view them from ridge tops at a great distance where some of the variety and interest in the river bed and vegetation are not visible. There are no trails along these segments of the river and one must often walk in the riverbed or along steep brushed canyons and hillsides to access or view the scenery.

The narrowness of the main river canyon limits viewtime of any one point of negative intrusion. The stream banks are well vegetated and limit the viewscape. Note: the principle viewpoints are from a paved road that parallels the river for nearly the entire recreation section.

The combination of rock types in the basin contributes to the water color and clarity (see Geology/Hydrology). The Elk River flows with crystalline blue-green water and clears quickly after storms. The water course creates interesting patterns: plunge pools, rapids, short waterfalls, and whitewater. In winter, water cascades from steep tributaries and slopes along the river.

There is an abundance and variety of vegetation including conifers, swordfern, red alder, bigleaf maple, and numerous species typical of the marine-influenced western hemlock plant associations. The deciduous species add yellow, browns, and reds to the range of color in the fall.

#### FINDINGS

The combination of water color, exposed rock surfaces, dynamic flow, and relatively undisturbed environment creates an interesting and beautiful landscape throughout the year. There are a variety of plant associations found along the main stem and the North fork and South fork of the Elk River. The upper reaches of the North fork and the South fork border on the Copper Mountain Botanical area, a sight of high botanical diversity. **The scenic quality of the river corridor draws on the geology, landforms, water, and vegetative features to create a "significant value" along the federally designated sections.**

**The scenic value of the designated scenic waterways corridor along the main stem of the Elk River as well as the North fork and the South fork of the Elk River are considered by the State Parks Department to be a "special attribute" of the Elk River Scenic Waterway.**



## RECREATION

### Criteria for "Outstandingly Remarkable" Rating

Recreational opportunities are, or have the potential to be, unique enough to attract visitors from outside of the geographic region. Visitors would be willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, photography, hiking, fishing, hunting and boating.

Interpretive opportunities may be exceptional and attract or have the potential to attract visitors from outside the geographic region.

The river may provide or have the potential to provide settings for national or regional usage or competitive events.

### EXISTING CONDITION

The paralleling road entering the federally designated Recreation section (ROS setting is roaded natural) from US Highway 101 provides access to the many pools, swimming holes, campsites, and picnic areas located on the river. There is one existing developed campground and other potential developments will be evaluated during the planning process. The paralleling road receives recreation, administrative, and timber haul traffic and provides few opportunities for passing. The federally designated Wild section (ROS setting is semi-primitive non-motorized) is inaccessible by road or trail. A 9.5 mile stretch of the Recreation section forms the southern boundary of the adjacent 17,200-acre Grassy Knob Wilderness.

Recreation use in the designated corridor is low. Local citizens of Port Orford and other south coast communities use the river frequently in the summer months for swimming, picnicking, and sightseeing. Hunting, particularly within the tributary corridors, is popular due to the habitat created as a result of timber harvest. The river gets little whitewater use: the short, small drainage produces high winter flows, which are hazardous for all but the most experienced boaters, and low summer flows, which are too small to float a kayak. Local, skilled kayakers consider the Elk one of the more technically difficult runs in southern Oregon. It is considered a high quality experience but is not recommended for beginners or family rafting trips.

The Elk River attracts fishermen from all over the nation. However, the vast majority of sport fishing is done outside of the designated corridor. A short segment of the lower Recreation section (from Bald Mountain Creek to the Forest boundary) is open for salmon and steelhead fishing. Drift boating in this section is virtually impossible and foot access is difficult. The upper designated section is open for trout fishing and gets occasional use during the spring and summer. Estimated Recreation Visitor Days for fishing in the designated sections has averaged 1000 days for the last several years (1986-1989) and is predicted to increase slightly to 1122 by the year 2000.

Potential for increased recreation use is also relatively low. Although there is potential to improve campgrounds and construct trails, opportunities to develop new sites are limited due to the steep terrain. Turnouts along the road may be developed into small parking areas with access to the river (example: Red Cedar Creek turnout). There are two small abandoned campgrounds (Panther and Purple) which may be opened for camping or picnicking if compatible with river management plan objectives. There are few opportunities for interpretation.

Potential exists for creating a catch and release wild steelhead fishery from Bald Mountain Creek to Butler Bar. This would entail petitioning ODFW for a regulation change. Fisherman access trails could

be constructed as capital investment projects. If developed, this recreation opportunity could potentially become an outstandingly remarkable value of the river.

The North Fork is accessible by road for a short distance near its confluence with the main stem by hiking into a canyon about 1/4 mile to the stream and then walking/wading up the rugged stream bed. The road crosses the North Fork once more within a mile of the headwaters where one can again hike the stream bed.

The South Fork is roughly paralleled by a road that runs from 1/2 to 3/4 of a mile from the stream bed and requires climbing down steep canyons to access the river. This road crosses the South Fork near its headwaters. The South Fork is much steeper than the North Fork, which has many flat reaches.

## FINDINGS

Recreational use in the federally designated section is relatively low and opportunities to enhance the recreational value are limited by steep terrain. Although the river does provide some short duration, high quality kayaking opportunities in the spring months, these are not unique when compared to several other rivers in the region. If developed, the catch and release steelhead fishery could become an outstandingly remarkable recreation opportunity. Use may increase somewhat due to Wild and Scenic River designation, especially if the campgrounds are improved; however, there are limited attractions or potential attractions to draw people from outside the region. **The recreation value is important on a local level but not outstandingly remarkable** along the jointly designated segment of the Elk River.

Recreation use in the State Scenic Waterway corridor is very limited. There are no developed, maintained, or existing trails which access either the South or North Forks of the Elk River. The terrain is rugged and steep and precludes off-trail hiking except by the most adventurous. The potential for increased recreation use is low and trail development is severely limited due to steep, unstable terrain which would be costly to construct and maintain. **Oregon State Parks finds that recreation is not a "special attribute"** of the river segment that is exclusively designated scenic waterway.

## WILDLIFE

Wildlife values shall be judged on the relative merits of either wildlife populations or habitat or Native American cultural use - or a combination of these conditions.

### Criteria for "Outstandingly Remarkable" Rating

**Populations** - The river or area within the river corridor contains nationally or regionally important populations of indigenous wildlife species. Of particular significance are species considered to be unique or populations of federal or state listed or candidate threatened, endangered and sensitive species. Diversity of species is an important consideration and could in itself lead to a determination of outstandingly remarkable.

**Habitat** - The river or area within the river corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for federal or state listed or candidate threatened, endangered and sensitive species. Contiguous habitat conditions are such that the biological needs of the species are met. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

## EXISTING CONDITION

**Populations** - Three species on the Region 6 Sensitive Species list which are potentially found on the Powers Ranger District have documented occurrences within, or immediately adjacent to, the corridor:

Discussion of Values

Species	Listing	Comments
Bald Eagle	Federal: Threatened State: Threatened	Two adults sighted, 1977.
Spotted Owl	Federal: Threatened State: Threatened	One breeding pair/nesting activity identified.
Marbled Murrelet	Federal: Threatened State: (proposed)	Seven detections, 1989 twenty eight detections, 1990 sensitive-critical.

Researchers surveying the elk river for marbled murrelets have identified potential nesting areas, although nesting has not been verified. Other portions of the river corridor have been identified as important travel corridors.

An active spotted owl nest in the Grassy Knob wilderness has been continually occupied, and is the only known nesting pair in the Elk River corridor. Infrequent sightings of single owls occur elsewhere in the river basin, but greater concentrations exist in the surrounding river basins (S. Fork Coquille, Rogue)

Game and non-game species in the basin are similar to those found in other parts of the Forest. Deer and elk are present in the basin but not at significant population levels. Past attempts to import elk have failed as the animals migrated south into the Rogue basin.

**Habitat** - The riparian environment along the Elk and its two main tributaries is a conglomerate of seral stages and plant associations. Approximately half of the corridor acres support stands of large (21"+ diameter) Douglas fir which may be used by old-growth dependent species. A small amount (3%) is recently reforested, and the remaining is primarily a mixture of young and mature conifers. Rock bluffs, hardwood stands, and wet forested areas also are common and provide useable habitat for a variety of species.

Habitat exists for a number of federally listed threatened or endangered species. In addition, habitat exists for several Forest Service Region 6 sensitive species although no sightings have been documented (ie. white-footed vole, peregrine falcon, two species of caddis flies, and a beetle). The Elk River does provide unique habitat for the marbled murrelet due to the basin's close proximity to the ocean combined with its large amount of old growth forest. All of the basin is within 50 miles of the ocean, a band typically occupied by marbled murrelets. The river also provides a murrelet travel corridor to adjacent river basins, such as the S. Fork Coquille.

**FINDINGS**

Few northwest coastal rivers exhibit the quantity of old growth found in the Elk River basin. While such a large tract of old growth located adjacent to the ocean is rare, Murrelet populations in other coastal old growth habitat exceed that found along the Elk River.

The Elk River is not included in the list of key habitat areas in the Bald Eagle Recovery Plan (USDI FWS) as are the neighboring Sixes, Rogue, and Coquille Rivers, although there is some potential eagle territory on the Elk on private ground outside National Forest boundaries. The spotted owl activity occurs in the Grassy Knob Wilderness and is important to monitor but there is no indication of a significant population. None of the Elk River basin is included in the large habitat conservation areas (HCA's) recommended by the Interagency Scientific Committee to protect the northern spotted owl. The upper portions of the North and South Fork are located in Critical Habitat Areas proposed by the USFWS for the northern spotted owl. Other wildlife species occurring in the Elk River corridor are common in the Siskiyou National Forest.

**The wildlife populations and habitat within the corridors are not unique, or exemplary and are not considered "outstandingly remarkable" or "special attributes".**

## FISHERIES

Fish values may be judged on the relative merits of either fish populations or habitat or Native American cultural use - or a combination of these river-related conditions. Consideration shall be given for potential as well existing values.

### Criteria for "Outstandingly Remarkable" Rating

Determination of ORV qualification of fish values is based upon populations and habitat.

**Populations** - The river is internationally, nationally or regionally an important producer of resident and/or anadromous fish species. Of particular significance is the presence of wild stocks and/or federal or state listed threatened, endangered and sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

**Habitat** - The river provides or has the potential to provide exceptionally high quality habitat for fish species indigenous to the region. Of particular significance is habitat for wild stocks and/or federal or state listed or candidate threatened, endangered and sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

### Fish Populations and Habitat: Historical Context

Today, the major anadromous salmonid species found in Elk River are chinook salmon (*Onchorhynchus tshawytscha*), winter steelhead trout (*Onchorhynchus mykiss*), and sea-run cutthroat trout (*Onchorhynchus clarki*). However, it is interesting to note that, at the turn of the century, the primary species may have been coho salmon (*Onchorhynchus kisutch*).

The Elk River valley was one of the last areas to be settled along the Oregon Coast. Settlement was primarily in the lower river valley outside of the designated sections. From interviews with long-time residents, it appears that the major salmonid species in Elk River in the mid-1800's may have been coho salmon *Onchorhynchus kisutch* (G. Reeves personal communication, from interviews with S. McKenzie). A number of those interviewed stated that local residents preferred to fish the nearby Sixes River, instead of the Elk, because the Sixes had a large run of big chinook salmon (*Onchorhynchus tshawytscha*), whereas in the Elk, mostly coho salmon were caught. Many of these coho may have been produced in the lower river (downstream of the designated sections). From historical records, it appears that habitat in the lower valley was well-suited for coho salmon. Photos and anecdotal accounts indicate that the lower river was heavily wooded with spruce and hardwoods; multiple channels and slow, backwater pools existed; and the channel had numerous log jams. Such conditions provide optimal habitat for coho juveniles.

A commercial gill-net fishery existed in the river beginning in 1913 (records indicate that S. P. Pierce of Port Orford obtained a set-net license in 1913) until it was outlawed in 1935 by state legislation. Records of species caught, and poundage, however, cannot be found. It is also not clear where this fishery occurred.

Dramatic changes in habitat, particularly in the lower basin outside the designated sections, may have been the primary cause for the population shift towards chinook salmon. Examination of aerial photographs dating back to the 1930's show an increase in channel width in the lower valley. Land surrounding the river was cleared for pasture, and much of the riparian vegetation was removed. The lower river was also used as a means of log transport; in 1883, A. G. Walling wrote that "Elk Creek [mis-named Elk River] near Port Orford" was used to transport up to 10,000 board feet of white cedar daily. The log drives may have been an important factor in the alteration or destruction of the riparian zone, as well contributing to the removal of in-channel large wood and jams. (It was common practice during the river log-drives to remove jams and other impediments.) In more recent years, significant wood removal has continued to allow drift boat angler access. Additionally, large wood removal may have occurred in the designated (upriver) section in combination with salvage or selective logging of cedars.

Another factor contributing to habitat alteration in the lower river has been the input of coarse sediment (gravels and cobble-sized materials) to both the designated section and the lower river. Although the Elk River basin is naturally gravel-rich, it appears that there has been increased delivery of coarse sediment originating from roads and clearcuts in the upper watershed and tributaries along the lower river. The long, gravelled riffles and glides, and large, deep pools with ample current found today in both the designated section and the lower river are habitats favored by steelhead trout and chinook salmon juveniles.

Historical information on the Recreational and Wild River sections is extremely limited. A letter dated August 7, 1935, from Fred Ziesenhenné of the Oregon Fish and Game Commission discussed Elk River and several tributaries on the "Port Orford Ranger District" (Stream Improvement Data, Form 406, USDA Forest Service, Siskiyou National Forest 1935). Mr. Ziesenhenné gave no reports or descriptions of habitat, except suggestions that "No Improvements" were necessary for the upper Elk River, Panther Creek, and Blackberry Creek. He also indicated the presence of a rock chute fall and log jam in Bald Mountain Creek which still exist there today.

While logging in the lower river was conducted from the mid-1800's up until the 1950's, much of the roading and associated clearcutting in the upper basin, affecting the designated sections, did not begin until the late 1960's. A narrative report by the Oregon Game Commission (1960's) provides some of the first available information about habitat and salmonid fish populations in the upper basin. Their surveys of Bald Mountain Creek indicated that this stream once supported all anadromous species (coho salmon, cutthroat trout, chinook salmon, and steelhead trout). Subsequent to these surveys, Bald Mountain and two other basins (upper Butler Creek and Purple Mountain Creek) were roaded and clearcut in large blocks (primarily from 1955 - 1968; unpublished data from Siskiyou Total Resource Information (TRI) data base). Landslides from harvest units and roads, and extensive ravel from slopes clearcut and burned, input large amounts of coarse sediment into these streams and into the main Elk River. Extensive aggradation occurred (and still exists) in some areas, primarily affecting deep pool rearing habitat and spawning gravel stability. It is interesting to note that Bald Mountain Creek supports only steelhead trout and a few chinook salmon today.

Logging and roading continued into the '70's and '80s, conducted primarily in the uppermost reaches of the basin. Impacts to fish habitat occurred in these upstream areas, mainly affecting resident salmonid habitat. Important downstream areas used by anadromous fish (Panther Creek, Blackberry Creek, and lower North Fork, Wild River section) remained relatively unaffected, although other streams continued to experience moderate to severe impacts (South Fork Elk River, Bald Mountain, Purple Mountain, and Butler Creeks; Ricks and Chen, Elk River Cumulative Effects Progress Report, January 1990; data and personal communication from G. Reeves). With the exception of Bald Mountain Creek, these other streams appear to have been historically minor contributors to salmonid production in the upper basin. The main river (Recreation section) appeared to remain relatively unaffected except at localized sites (tributary confluences such as Butler and Purple Mountain Creeks). The approval of the Mt. Butler - Dry Creek EIS in 1976 and the designation of the Grassy Knob Wilderness in 1984 provided protection for important salmonid tributaries Red Cedar, Anvil, Slate, and Sunshine Creeks, sections of the mainstem within the Recreation segment, and western portions of Butler Creek. However, the eastern portion of Butler Creek still continues to be impacted by ravel from harvested and unvegetated slopes; the channel is still severely aggraded and continues to provide a bedload source to lower Butler Creek and to the mainstem.

During the 1980's decade, logging and roading activities were much reduced (total of 700 acres, in contrast to 4200 acres and 1390 acres during the '60s and '70's respectively). Thus, further habitat degradation was considerably less, and many streams or sections showed noticeable channel recovery phase from older activities, except for upper Bald Mountain, Purple Mountain, and upper Butler Creeks. Coarse sediment sources still exist above these sections (road gullies, ravel chutes or streamside slides) which appear to be continually supplying the channels with sediment and slowing their recovery.

### **Fish Populations and Distributions: Current Situation**

Fish productivity within the designated sections is not only a function of the habitat and population in those sections, but is strongly influenced by contributions from tributaries (fish, water, and sediment)

outside the Recreation/Wild segments. Because the watershed is not a closed system, but an open one connected by streams, management and protection of fisheries resources in the Recreation and Wild sections is intricately linked to the condition of (and impacts to) upstream tributaries (see section on *Threats and Risks to Salmonid Habitat*).

The Elk River supports one of the most important and valuable wild runs of anadromous fish (salmon and steelhead) in coastal Oregon. A joint study by the Forest Service's Pacific Northwest Experiment Station (PNW) and Oregon State University (OSU) shows that the Elk and many of its tributaries contain prime habitat in pristine condition. The fish production levels observed are directly related to the quality and quantity of available spawning and rearing habitat.

For a basin of its size, the Elk River is one of the highest producers of chinook salmon. The number of chinook produced from the designated section varies annually but is estimated at about 40% of the total system production (total production = wild fish in designated section + wild fish outside designated section + hatchery fish; Nicholas and Hankin 1988). For 1989, these estimates were considerably higher (59%).

When wild fish production only is considered, the role of the designated section and associated tributaries is more apparent. 1989 estimates indicated that more than 80% of the wild chinook in the basin were produced in the wild/recreation section (600,000 chinook juveniles). (1989 figures are estimates from data collected by G. Susac, ODFW Elk River Research Lab.) Fluctuations in production from the upriver sections are primarily due to variations in flow during the fall/winter months (low flow limits access to the upper basin and forces chinook to spawn in the mainstem below the hatchery), and sport/commercial fishery escapement (G. Reeves, COPE Report vol. 1, #3, 1988).

Chinook salmon utilize the entire upper mainstem within the Recreation segment (17 miles), plus the lower 2 miles of the North Fork (Wild River segment), 1.5 miles of Red Cedar Creek, 2 miles of Panther Creek, 0.5 miles of Anvil Creek, and approximately 1.5 miles of Butler Creek (these tributaries are outside of the designated sections). Contribution from non-designated tributaries is estimated at 20 - 30% of the upper basin chinook production (G. Susac personal communication; unpublished ODFW data). A total of 24.5 miles of stream within the upper basin are utilized by chinook for both spawning and rearing.

Juvenile steelhead trout production within the Forest Service-managed portion of the Elk River basin appears to be stable, with the designated section and tributaries producing an estimated 70-80% of all steelhead produced in the system (G. Reeves, unpublished data). The population structure of the juveniles include a number of larger 2+ steelhead pre-smolts (data from scale analysis by ODFW). Steelhead trout have the most ubiquitous distribution among the anadromous species; usage (by stream) include 2 miles on the North Fork (Wild River section), 0.5 miles on the South Fork (State-designated section), 2 miles of Butler Creek, 4.5 miles of Panther Creek, 5 miles of Bald Mountain Creek, 1 mile of Blackberry Creek, 1 mile in Anvil Creek, 1.5 miles of Red Cedar Creek, and a total of 1.5 miles in Slate, Sunshine, and Purple Mountain Creeks (the latter streams are major tributaries outside of the designated sections), as well as the 17 miles of the Recreation segment. Tributaries outside of the designated sections account for more than 50% of the entire upper basin steelhead production. Total miles used within the upper basin is 36.0.

Sea-run cutthroat trout and coho salmon also occur in various places and densities within the upper Elk River. Anadromous cutthroat have been found in all areas occupied by steelhead trout juveniles (34.0 total miles). Summer low-flow surveys by PNW and District crews have found that cutthroat may be relatively abundant (up to 30 per pool) and large in size (exceeding 24 inches in length). Coho salmon have been found primarily in the North Fork (Wild River segment), Red Cedar Creek, and Anvil Creek. The 1985 surveys conducted by PNW estimated that coho densities were as high as 0.61 fish/m<sup>2</sup> in the North Fork (Reeves 1987 draft report). During that year, coho were present in nearly all tributaries in the upper river. However, in subsequent years, coho have only been seen in Red Cedar, the North Fork, and Anvil Creek (Reeves et al unpublished data), at much lower densities, as well as in the upper mainstem within the Recreation segment.

Resident rainbow trout are found in the mainstem (Recreation segment), the lower North Fork (Wild River segment), as well as the upper North Fork (State-designated section). Total miles inhabited by resident

rainbow trout is estimated at 27 miles. ODFW biologists have identified Elk River as one of the few coastal basins with remnant populations of non-anadromous rainbow trout (P. Reimers, personal communication). In addition, resident cutthroat trout are also found in these areas and in many of the upper parts of tributaries above anadromous fish barriers (total miles of use about 40 miles, within and outside the designated sections). Most of the populations of resident fish appear to be below the current 8 inch legal size limit, especially in the smaller tributaries.

Oregon State Scenic Waterway - The North Fork above the falls harbors a resident population of rainbow and cutthroat trout. The falls successfully block access to the anadromous fish of the lower river. Similarly, the anadromous fishery extends just a short distance up the South Fork to a steep waterfall.

### **Recreational and Commercial Fishery Statistics**

The chinook salmon run on the Elk is regionally and nationally renowned and attracts hundreds of sport fishermen every year. Limited access causes crowding on the banks and delays at boat launches during peak times. Most of the upper Elk is closed to angling, but the downstream portion (outside the designated corridor) receives high angler use and supports local and regional fishing guide industries. During the peak of the season, angling effort is intense, with as many as 40 drift boats and 300 bank anglers fishing some 13 miles of river. The reasons for its popularity include: 1) the presence of large fish which average 25 pounds and include trophy fish over 50 pounds; 2) the quality of the fish (most of the chinook caught in the river are mint-bright and fresh from the sea); 3) the extended fishing opportunities offered as a result of the lateness of the run (October through December) -- only the Sixes and Chetco rivers offer a chinook fishery at this time of year; and 4) the increase in fishable days which is a result of the water quality (the water returns to fishable clarity rapidly after major storms -- 1 or 2 days, as opposed to 3-7 days for other rivers).

The Mt. Butler - Dry Creek EIS (approved 1976) lists output and dollar values for anadromous salmonids produced in the Elk River basin. These figures were the best estimates at the time, but are not given here because current data on fish populations and dollar values have improved considerably and are considered to be more accurate.

Statistics from ODFW indicate that the average annual sport chinook catch in the river (1972-1981) is about 2200 fish during the October - December season. In comparison, rivers like the Chetco (which is a much larger system) had an average of 3,000 during this period. A peak level was reached in 1977, when about 4000 adult chinook were caught. The fall/winter catch for 1989 is estimated at about 2,400 - 2,800 fish. In December 1989, more than 30 fishing guides from the south coast, Willamette Valley, the Rogue Valley, and northern California areas were seen operating on the river.

The Recreation fishery for winter steelhead trout is less intense than the fall chinook fishery. Average annual catch has varied between 600 and nearly 2000 fish for the period 1971-1980 (Berry 1981). The 1984 sport catch was estimated at about 1200 fish. The tag reporting records suggest that there has been a notable decline in sport catches within the last decade, although the numbers of juvenile steelhead smolts produced in the upper river has experienced relatively little variability in the last 5 years (Reeves et al 1988; Reeves 1990 unpublished data; G. Susac personal communication). Recent analysis of sport angling tag record data by G. Susac (ODFW, personal communication), however, strongly suggest that the apparent "decrease" in catch may be attributable to anglers erroneously recording steelhead caught on "Elk Creek" (Yaquina River tributary) as Elk River catches during the 1700's. Although there are reports of some hatchery stock introductions in the early 1970's, all steelhead currently in the Elk River system are wild fish. Many large and trophy size adults are present and caught during the winter and early spring fishery (unofficial record for the river is 26 pounds). Wild steelhead are currently under strict management regulations as dictated by the Oregon Wild Fish Policy (legislative statute passed January 1990) and Elk River steelhead stocks have been targeted for "wild fish-only" management (ODFW Draft Elk River Basin Fisheries Plan, 1990).

The fishery for resident trout or sea-run cutthroat occurs primarily in summer or early fall. Catch statistics are not available, but it appears that this fishery is limited to local residents. Sea-runs are also taken as an incidental catch while fishing for fall chinook.

Wild and hatchery chinook from the Elk River make substantial contributions to off-shore commercial fisheries based out of British Columbia, southeast Alaska, and Washington (36%, 7%, and 9% of all commercially-caught chinook originating from Elk River are captured in these areas respectively; Nicholas and Hankin, ODFW Report #88-1, 1988). In addition, due to a special season extension off the mouth of the river (remaining open until November 30th), Elk River chinook make a very significant contribution to local fishermen and fish processors located in Port Orford. In 1984, the dollar value to commercial fisherman of all chinook landed at Port Orford was \$247,990, with a total of 30% of the catch (in pounds; 28,100 lbs. or 1800 fish) or 36% (in value; \$89,267) landed during the fall special season (Lukas and Carter, ODFW Ocean Fisheries summary report 1984). In comparison to other coastal ports, it ranked second in 1984 for total catch value of chinook landed (Columbia River fishery excluded; Lukas and Carter 1984). The pound and dollar figures for the October and November fisheries are ODFW estimates (McQueen, Osis, and Scarnecchia, ODFW Ocean Salmon Catch report summary 1985); it is assumed that these figures represent only fish originating from Elk River, since the fishery is restricted to the area off the mouth of the river. The November fishery at Port Orford comprises 87% of the total chinook catch off the entire Oregon coast for that month (Lukas and Carter 1985). The average dressed weight for October/November chinook is 16.4 and 15.4 pounds, which is double the average for other ports (McQueen et al 1985). This is due to the fact that this fishery consists of large adult chinook which have reached maximum size just prior to their spawning run up the Elk River. Unofficial estimates from the 1989 commercial fishery indicate that about 4,600 fish were landed at Port Orford during October and November (G. Susac, ODFW, personal communication).

### **Salmonid Habitat: Present Condition**

The anadromous fish habitat on National Forest land is of high quality, with total miles of usage at approximately 34.0 miles. Production of anadromous salmonids within the upper basin appear to be limited by escapement rather than habitat (Reeves et al 1988). Additionally, approximately 40 more miles are utilized by resident trout. Most of the anadromous habitat is in excellent condition, (although there are some notable exceptions in several tributaries). In contrast, much of the resident trout habitat has been moderately to severely impacted by roading and harvest activities.

Approximately 80% of the stream reaches within the upper Elk River basin can be characterized by narrow, steep gorges with tightly constrained channels. Habitat in these sections is characterized by deep plunge pools, lateral scour pools along bedrock outcrops, rapids/cascades with pocket pools, and substrate composed of large boulders. Large wood is generally not present in these reaches. Habitat complexity elements include bed roughness, depth, and surface turbulence. In many places, riparian vegetation forms well-developed shade canopies.

The remaining 20% is comprised of low-gradient reaches in relatively unconstrained valley floor areas. Reeves (1987, 1988) found that some of these reaches supported diverse populations of salmonids and accounted for a high percentage of basin fish production. Reeves termed such low-gradient/high production & diverse areas "flats". As defined by Reeves, flats do not include all low-gradient reaches, but only those which contain particular physical/biological characteristics and associated high diversity/production of salmonids. While low-gradient, broader valley floor areas exist in all streams within the Elk River basin, not all display the physical and biological features which appear to be important for fish community diversity and production. Reeves (1987, 1988; personal communication) noted that such flats were found in basins with little management disturbance (lower North Fork, Red Cedar, lower Panther Creek, Anvil Creek). Data from numerous other coastal basins (Reeves/PNW, unpublished, 1985-1991; personal communication) further indicate that "flats" appear to exist only in basins with minimal management disturbance.

Flats are found in reaches with wider valley floor areas where sediment has been deposited, creating a low-gradient channel bordered by low-elevation floodplains and fluvial terraces (hence the name "flats"). These terraces are well-vegetated by stands of hardwood, conifers, and low-lying herb, brush, grass, and forb species. The interaction of the riparian area and stream channel appears to be the driving mechanism contributing to the high amounts of biological activity within such areas.

A number of factors related directly to habitat appear to influence the abundance and diversity of salmonids in flats. The stream channel is characterized by having high amounts of large wood, often



in the form of log jams, which create complex habitat, pool scour, and an abundance of cover. A wider diversity of habitat (pools, glides, riffles, side channels) is found here. The channel is often split into multiple channels, which increase the number of habitat units and total habitat area. Such physical features appear to enhance both production and diversity of salmonids. The low-velocity habitat is favored by post-emergent fry and coho/chinook salmon juveniles, while deeper pool habitat is utilized by cutthroat trout and older age steelhead.

Overwintering refuge habitat is crucial for salmonid species which require multi-year freshwater residency. Such habitat is not found in constrained, high gradient, high energy reaches, but occurs in abundance in flats. The low-lying, well-vegetated adjacent floodplains allow for lateral dispersal of flow and velocity reduction during high discharge, and the interaction of deposited in-channel/floodplain wood material, live vegetation, and split channels serve to create an abundance of quiet-water refuge habitat for juvenile salmonids.

Other biological activities appear to influence fish production in flats as well. While well-developed stands of riparian vegetation border the channel, they do not enclose the stream, and as a result, greater amounts of solar exposure occurs. This appears to enhance both primary and secondary productivity in these reaches, with a rich algal/moss carpet and associated invertebrate communities found in riffles and other shallow areas. Such forms the food chain for higher order macroinvertebrates and fish consumers. Primary production is often 3-5 times greater in unconstrained areas than in shaded, constrained reaches.

The channel is bordered by wide gravel bars and OSU/PNW researchers have found that extensive sub-surface biological activity occurs in unconstrained areas. Considerable undergravel carbon fixation via microbes and algae takes place beneath apparently "dry" gravel bars. Subsurface flow carries these nutrients to the stream channel, and, when added to nutrient inputs from alders bordering the channel, appear to significantly enhance the instream productivity of these reaches as well. Such sub-gravel areas are called hyperrheic zones, and their presence in Elk River have been documented in the flats (Gregory and Lombardi, unpublished).

The wide floodplains with their associated vegetation are sources of both large and fine organic material. Such nutrients are periodically made available to the channel and are restored by high flows which flood the flats. These direct carbon resources form an important source of nutrients for primarily consumer invertebrates. Organic material storage occurs primarily in low-gradient areas and their availability to instream organisms in such areas has been suggested as yet another factor contributing to the high productivity within unconstrained reaches.

Significant flats occur in lower Panther Creek, the lower North Fork, and Red Cedar Creek. The North Fork flat is within the designated Wild River section; Red Cedar is within the Grassy Knob Wilderness; and Panther Creek and Anvil are outside the Wilderness and designated sections. In addition to supporting the greatest number and diversity of juvenile salmonids, they are also sites which are subject to the greatest impacts from sediment and temperature increases (discussed below).

Oregon State Scenic Waterways - The upper North Fork stream habitat has been degraded by logging in the 1970's. The steep slopes and unstable soils have resulted in extensive slides and aggradation of the river.

The South Fork is in somewhat better condition having been logged in the 1960's and the vegetative cover has recovered to a greater degree. The steep river bed has moved sediment through the system at a faster rate than the North Fork, and has contributed to the recovery. The steep terrain in both Forks is prone to landslide activity which contributes to some habitat degradation.

### **Anadromous Salmonid Habitat: Opportunities for Rehabilitation**

The PNW/OSU study concludes that chinook production in the Elk appears to be limited by escapement rather than the quality or quantity of habitat. In addition, the current production of steelhead appears to exceed the capacity of the river system (G. Reeves 1988, unpublished data; unpublished G. Susac ODFW smolt trapping data).

Opportunities for habitat rehabilitation or enhancement within the Recreation/Wild sections are limited and are not likely to be cost effective. The North Fork cannot be accessed by road, which limits the use of large machinery necessary to install structures that could withstand peak winter flows. Habitat condition in the North Fork is already optimal, with its diversity and complexity of habitats. For the mainstem Recreation segment, machinery access is again a key limiting factor. Peak winter flows and high stream power would require the use of whole trees in excess of 100' in length with attached root masses. In most cases, the current technology will not be adequate to input whole, mature trees with attached root wads to form useful structures. Furthermore, it may not be possible to detect a measurable increase in fish production, given the already high levels arising from the current habitat condition.

Degraded habitat exists in Butler Creek, Bald Mountain Creek, and Purple Mountain Creeks. (These streams are outside the Recreation/Wild sections.) Large inputs of coarse sediment from clearcut unit landslides, road failures, and road gullies have been the primary source of impacts. Opportunities for instream rehabilitation in these areas are limited primarily because of poor access for machinery and extreme winter stream power due to high and rapid discharge events, and narrow, constrained canyons. Work would have to be done by handcrews; however, due to the stream power, such small-scale projects may not withstand winter flows. Road and slope stabilization projects to reduce or eliminate coarse sediment sources would have the greatest benefit for these streams.

### **Resident Salmonid Habitat: Opportunities for Rehabilitation**

Within the designated sections, existing resident trout habitat is in good to excellent condition. Degraded habitat exists outside of these segments, up in tributaries that have been impacted by road and harvest unit landslides. Opportunities for rehabilitation in these areas is severely limited by access. Projects that may be best suited for these upstream areas include riparian planting, and road/harvest unit landslide stabilization and/or prevention to reduce coarse sediment sources.

### **Threats/Risks to Salmonid Habitat**

The primary threats and risks to salmonid habitat within the Recreation and Wild river sections, and to the salmonid production in the upper Elk River basin, are primarily from roading and harvest activities conducted in areas upstream and outside of the designated sections. Threats include increases in temperature and increased coarse sediment delivered from upstream tributaries.

The rock types found in the basin produce very few fine sediments (see **Water Quality** and **Geology** sections). Consequently, siltation and turbidity increases are not considered to be major impacts to fish habitat in the Elk River. Recently, the natural re-routing of flow around a large log jam on Bald Mountain Creek (outside the corridor) has increased erosion around the toe of a landslide and has resulted in brief increases in turbidity to the lower segment of the Recreation section following large storms (PNW survey crew personal communication; G. Susac ODFW and G. Chen unpublished report 11/90).

Although water temperatures in fish-bearing areas of the Recreation/Wild section represent some of the best for streams in the southwest Oregon region, they are dependent upon cool water flowing from tributaries outside of the the designated sections. (These include tributaries that may or may not support salmonids.) The unconstrained reaches, in particular, are biologically productive but are also highly sensitive to temperature increases, since they are already exposed to high amounts of solar radiation. Management of streamside areas which provide cool water to such reaches is thus critical to maintaining salmonid productivity.

The primary impact of concern to salmonid habitat in the basin is aggradation from coarse sediments, delivered by road/harvest- related landslides that occur outside of the designated sections. Although many of these slides occurred several decades ago, it appears that the material is still being actively transported downstream, and some areas (road gullies, etc...) remain as sediment sources. Because of large particle size and reduced mobility, bedload sediment, once delivered to the stream, has slower transport rates and thus longer residence times in the stream. Consequently, downstream effects may not be observed until many years later. In particular, the low-gradient, productive reaches ("flats") serve as major storage sites and are thus sensitive to coarse sediment impacts. Excess bedload moves rapidly from small, steep and narrow streams and is deposited directly upon these flats. Thus, the potential for

effects on salmonid habitat and production are high and, as with temperature, sediment sources from streams outside the designated section can have significant impact to the fishery production within the Recreation and Wild segments.

### **Summary**

The upper Elk River watershed, particularly the designated Wild section (lower North Fork), is relatively undisturbed when compared to other watersheds in southern Oregon. The natural disturbances and processes evident provide a unique opportunity for scientific study. The PNW/OSU research recommends that the very valuable anadromous fishery on the Elk can best be protected and maintained through "sound land management policies."

In summary, the high fisheries value of the Elk River stocks can be attributed to:

1. High natural production of wild fish with quality habitat areas (flats);
2. A large run of salmon and steelhead which is heavily fished by both sport and commercial fisheries (outside the designated portion);
3. A minimally disturbed salmonid habitat appropriate for scientific study; and
4. A diverse salmonid population with a multitude of species present.

### **FINDINGS**

**The fisheries value of the federally designated sections of the Elk River is considered outstandingly remarkable based on the diversity of populations; excellent spawning and rearing habitat; downstream sport and commercial fishery (outside the designated portion); high productivity for its size; national reputation for excellent fishing; and the focus for fisheries research. The State of Oregon, however, does not find the fisheries above the falls on the North Fork or on the South Fork to be "special attributes" of the exclusively designated State Scenic Waterway.**

### **Cultural, Pre-Historic**

#### **Criteria for "Outstandingly Remarkable" Rating**

The river or area within the river corridor contains a site(s) where there is evidence of occupation or use by native Americans. Sites must have unusual characteristics or exceptional human interest value(s). Sites may have national or regional importance for interpreting prehistory; may be rare and represent an area where a culture or cultural period was first identified and described; may have been used concurrently by two or more cultural groups; or may have been used by cultural groups for rare or sacred purposes. Of particular significance are sites or features listed in, or are eligible for inclusion in, the National Register of Historic Places.

#### **EXISTING CONDITION**

Before the coming of early white settlers, the Elk River area was inhabited by the Quatomah band of the Tututni group of the Athabascan Indians. The lower Elk River, outside the National Forest boundary, was used more heavily than the upper river. The river corridor was used as a travel route by Native Americans. A main trail paralleled the mainstem for most of the length of the Recreation section, then angled up to the main ridge north of the Wild section. Segments of the trail system are still evident. There are no known village sites or religious sites within the National Forest boundary in the Elk River basin. The Siskiyou National Forest Cultural Resource Sample Design identifies areas of high, medium, and low likelihood of finding cultural resources in the Elk River basin. Five percent of the basin has high probability of containing cultural resource sites, primarily along the river and ridgetops. Approximately half of the basin has been surveyed, revealing one lithic scatter located on a major river bar within the designated corridor. The site has not been evaluated for its eligibility for the National Register of Historic Places.

## FINDINGS

Due to a lack of indications of any unusual or exceptional native American pre-historic sites, **pre-historic cultural values along designated portions of the Elk, North and South Forks are not found to be "outstandingly remarkable" or a "special attribute"**. The remaining high probability areas within the river corridor will be surveyed during site specific project analysis.

### Cultural, Historic

#### Criteria for "Outstandingly Remarkable" Rating

The river or area within the river corridor contains a site(s) or feature(s) associated with a significant event, an important person, or a cultural activity of the past that was rare, unusual or one-of-a-kind in the region. A historic site(s) and/or feature(s) in most cases is 50 years old or older. Of particular significance are sites or features listed in, or are eligible for inclusion in, the National Register of Historic Places.

#### EXISTING CONDITION

Historic sites located thus far in the Elk River basin include:

- 5 fire lookout sites (none now exist),
- 7 trail camps (structures destroyed or in disrepair),
- 1 USFS Ranger Station site (no structures remain),
- 5 cabin sites from early settlers and miners (structures destroyed),
- 7 trails, some used by Native Americans, others by miners (all fragmented, none used or maintained),
- 1 mining site along middle Elk River area, and
- 1 existing cabin on the upper North Fork (hand-hewn log construction, not standing).

There is potential for locating additional mining sites during site-specific project analysis; however, it is doubtful that the sites will be significant.

#### Oregon State Scenic Waterways

Historic sites located thus far on exclusively designated state segments of the North Fork consist of an existing cabin on the upper portion of the river. This cabin is hand-hewn log construction and is not standing. This site would not be eligible for the National Register of Historic Places. The probability of locating any significant sites on the North Fork or South Fork is low.

## FINDINGS

None of the identified sites are eligible for the National Register of Historic Places, and the probability is low for locating any significant sites. In comparison, the Sixes River to the north and Rogue River to the south received significant historical use by miners and early settlers and have much higher cultural resource value than the Elk. **The historic value of the Elk River corridor is determined not to be "outstandingly remarkable" on federally designated sections or to constitute a "special attribute" on designated State Scenic Waterway sections.**

### Cultural, Traditional Use

#### Criteria for "Outstandingly Remarkable" Rating

The river or area within the river corridor contains regionally unique location(s) of importance to Indian tribes (religious activities, fishing, hunting, and gathering). Locations may have unusual characteristics or exceptional cultural value being integral to continued pursuit of such activities. Locations may have

been associated with treaty rights on ceded lands or activities unprotected by treaty on ceded lands or in traditional territories outside ceded lands.

### **EXISTING CONDITION**

The Qua-to-mah Band of Athabaskan-speakers of northern Curry County was identified by the Bureau of Indian Affairs (BIA) in the 1850's. The Qua-to-mah were removed by the U.S. Army to the Siletz or Coast Reservation in June, 1856. On the reservation the BIA continued, for a number of years, to identify the Qua-to-mah and enumerate band members. The Qua-to-mah eventually became part of the confederated Tribes of Siletz. Following the passage of the General Allotment Act in 1887, the BIA held an allotment conference at Siletz in 1892. Each of the tribes band operated as a confederated unit in dealings with the United States.

The Elk River area was included in a treaty of land cession negotiated in 1851. The treaty failed to secure Senate ratification. The Elk River watershed was subjected to an adjudicated land claims settlement with Qua-to-mah descendants. The Elk River watershed is thus not a treaty cession area but the matter of aboriginal title was addressed by the litigation before the claims court. The area borders the aboriginal territory of the federally recognized Coquille Tribe but is not known as a regionally unique location of importance to Indian tribes.

Much of this section is excerpt from written correspondence from Stephen D. Beckham of Lewis and Clark College. (October 11, 1990.)

### **FINDINGS**

The designated sections of the Elk River corridor is not known as a regionally unique location of importance to Indian tribes. **Although not found as an outstandingly remarkable river-related value**, the protection of traditional Native American use will be addressed in site specific project analysis. **Cultural traditional use was not identified as a "special attribute" on the designated state scenic waterways.**

## **Geologic/Hydrologic**

### **Criteria for "Outstandingly Remarkable" Rating**

The river or the area within the river corridor contains an example(s) of a geologic or hydrologic feature, process, or phenomena that is rare, unusual, one-of-a-kind or unique to the geographic region. The feature(s) may be in an unusually active stage of development, represent a "textbook" example and/or represent a unique or rare combination of geologic features (erosional, volcanic, glacial, and other geologic structures) or hydrologic phenomena (large aquifers, springs, or other features).

### **EXISTING CONDITION**

The Elk River basin is located at the northern edge of the Klamath Mountains geologic province and includes Coast Range Mesozoic rocks which are unlike the Coast Range Tertiary rocks to the north and east. It is underlain by complex geology that strongly influences landforms, forest vegetation, fish habitat, and effects of land use. The most common rocks in the basin, Rocky Point Formation and Humbug Mountain Conglomerate, were deposited as marine sandstones, shales and conglomerates over the older Galice Formation and Pearce Peak diorite. Serpentinized peridotite is also exposed on Iron Mountain, outside of the river corridors.

These formations are found in other basins within the region, except for the locally-occurring Pearce Peak diorite. Similar igneous intrusive rocks are found further inland on the Siskiyou National Forest, but they are not present this close to the coast elsewhere in the region. The presence of diorite in the moist coastal climate is not ecologically significant however, because the strong climatic influence masks vegetative differences due to rock types.

Recent and possibly on-going uplift has created high relief and rugged, steep terrain. Debris avalanches and flows occur on the steeper slopes which are underlain by diorite and conglomerate. Areas underlain by highly-sheared or carbonaceous mudstones of the Galice Formation are more prone to slumps, earthflows, and streamside mass failures.

Historical aerial photos and stream deposits provide evidence that the designated Wild section (North Fork) once experienced numerous debris flows. Thick stream deposits (alluvium) exposed from down-cutting of the stream have been dated as at least 83 years old. This large volume of sediment may have been deposited from transport of debris flows triggered by storms in the 1890's, following fires in the 1870's. These historical naturally-occurring debris flows may have contributed to today's highly productive fisheries by providing a source of wood for habitat structure and nutrients for aquatic productivity.

The geologic setting of the basin contributes to the water clarity of Elk River. Stream turbidity decreases more rapidly in the Elk River than in other coastal streams following rainstorms. The rock types generally weather to coarser-grained sediment than rocks found in adjacent coastal streams (eg. Otter Point Formation in Sixes River). Soils that develop on this rugged terrain tend to contain a higher proportion of rock fragments and a lower proportion of clays than in more gentle terrain. Fine sediment which is delivered to high gradient stream channels is transported rapidly through the basin. Surveys of streambed materials also indicate that relatively small amounts of fine-grained sediment are stored in the channel (see discussion of an exception, the earthflow in Bald Mountain Creek, under Water Quality)

The geologic setting also contributes to the development of stream channel characteristics which appear to be beneficial to fish. The unconstrained, low-gradient reaches ("flats") associated with high quality fish habitat are long-term sites of sediment deposition. These areas appear to correspond with weaker zones in the bedrock related to faulting and folding which exposes finer-grained rock types.

Because of its location as the northernmost publicly-owned watershed south of the Coast Range Tertiary rocks, Elk River has been a focus of research by Oregon State University and PNW Research Station. The value of the fisheries resources and potential for conflict with land use practices has led Siskiyou National Forest to provide continued watershed and fisheries research opportunities.

Annual precipitation in the Elk River Basin ranges from 90 inches near Anvil Creek to 120 inches at higher elevations. This range is not unusual for coastal mountains. Portions of the Olympic Mountains in Washington State exceed 240 inches. Approximately 80 percent of the precipitation occurs between October and March and only 4 percent occurs in June, July, and August. Precipitation occurs as rain and snow. Most of the basin is in a transient snow zone; snowpacks lasting through an entire season are rare even on Iron Mountain.

Flows are strongly dependent on rainfall patterns. Low flows on the Elk River are between 20 and 100 cfs and occur between June and October. High flows during storms are typically between 1,000 and 6,000 cfs and occur between November and April. Winter base flows are 200-500 cfs. Because of the frequency of storms in winter, flows can commonly stay above 1,000 cfs for several weeks at a time. From 1977 to 1987 the maximum flow recorded at USGS gauge #143272.60 at the Elk River Fish Hatchery and published by State of Oregon Water Resources Department was 8,660 cfs and the minimum was 16 cfs.

## **FINDINGS**

The geologic and hydrologic processes in the Elk River basin occur throughout the Klamath Mountains and Coast Range Mesozoic geologic provinces. **While they are not found to be "outstandingly remarkable", the geologic and hydrologic characteristics contribute to other values such as Scenic, Fisheries and Water Quality. For similar reasons, geologic and hydrologic characteristics were not found to be "special attributes" in the designated state scenic waterways sections but contributing to special scenic attributes.**

## Botanic/Ecologic

### Criteria for "Outstandingly Remarkable" Rating

The river or river area contains nationally or regionally important populations of indigenous plant species. Especially important are species considered to be unique, or significant populations of federal or state listed or candidate threatened, endangered, or sensitive species. Diversity of plant communities is an important consideration and could, in itself, lead to a determination of outstandingly remarkable.

#### EXISTING CONDITION

The corridor is dominated by Douglas-fir, which is a late seral species of the western hemlock series. Although most of the corridor is climax to western hemlock, there may be some areas climax to Port-Orford-cedar. Both series are common in southwestern Oregon. Due to historical fires, the basin is a patchwork of many age classes and tree species. The younger conifer stands are even-aged single-storied, and the older stands are multi-storied with several age classes. There is a significant amount of red alder within the corridor which has invaded after site-disturbing activities such as road-building or natural slides. The shrub layer is dense throughout the basin, particularly in the favorable moist soils along the river. Downed large woody material occurs naturally in the river course and the basin as a whole. Port-Orford-cedar and California laurel, which are regionally significant species, occur but are not restricted to the Elk River. Elk River vegetation is similar to that of other coastal rivers; local variation is limited.

Conifer stands with large Douglas-fir as the major species cover approximately half of the corridor acres, primarily occurring in the Recreation section. These old growth stands are interspersed with younger conifer stands.

Species diversity is limited when compared to other basins in the region. The relatively short, coastal Elk River is dominated by a wet, warm, marine climate, resulting in limited niche breadth. The marine influence dampens variation associated with parent rock diversity in comparison to other inland basins in the region. The continental climate characteristic of inland basins has greater swings in temperature and precipitation and allows the parent rock greater influence on vegetation expression, thus increasing species diversity. However, the change in elevation (aprox. 0 to 3000 ft.) with an accompanying change in soil types in the basin contribute to some floristic diversity. For instance, the headwaters of Elk River originate on Iron Mountain, a serpentine area that supports a highly diverse compliment of species. However, those areas of the highest diversity lie outside the Elk River corridor, the tributaries of the South Fork of the Coquille River (e.g. Rock Creek) generally having higher floristic diversity.

Preliminary surveys have revealed no threatened, endangered, or sensitive species (hereafter, TES species) within the river corridor. Probability of TES species occurring is low to medium along the main stem, while slightly higher along the upper reaches of the South Fork corridor due to the serpentine-influenced flora.

#### FINDINGS

**The ecological and botanical values in the corridor are not unique, rare, or exemplary when compared to other basins in the region, and therefore not found to be "outstandingly remarkable" in federally designated sections or a "special attribute" in state scenic waterways.** They are, however, important to the character of the river. The ecological significance of old growth is important as it relates to other values (scenic, wildlife, fisheries), and all age classes in the corridor are important to the functioning of the river system. Although indigenous species occur in the corridor, the populations cannot be considered unique, rare, or exemplary. Specifically, more exemplary populations of Port Orford cedar occur in Research Natural Areas in the Coquille River basin.

While other coastal rivers may have the potential for having a higher diversity of species or better forest stands, Elk River has the advantages of (1) being a river that is relatively long and far reaching into the forest interior, (2) having the majority of that length under publicly controlled management, and (3) already having existing stands of mature forest that contribute to exceptional scenic, fisheries, and water

quality values. These values are "significant" and contribute greatly to the overall value of the Elk River basin.

## Water Quality

### Criteria for "Outstandingly Remarkable" Rating

The river has exceptionally pure, clear, and/or clean water. The river is known for its water quality nationally or regionally. The river provides or has the potential to provide exceptionally high water quality for a variety of beneficial uses including but not limited to fish, wildlife, recreationists, and communities.

#### EXISTING CONDITION

A recent DEQ study (1988) revealed that many south coast rivers, including the lower portion of the designated Elk and the downstream reaches, are impacted by nonpoint source pollution, such as elevated water temperature and/or elevated levels of turbidity/sedimentation. As has taken place in the Elk River system, water quality in the south coast has been generally improving during the past two decades as watersheds have recovered from past timber harvest practices that were not up to current standards.

DEQ's current map of water quality conditions in the South Coast Basin shows the Elk River from the mouth to approximately Bald Mountain Creek (approximately 2 miles into the designated portion of the river) as having a moderate temperature problem affecting the fishery.

Recent timber harvest on private land in the basin has increased turbidity and possibly water temperature below Bald Mountain Creek, however, water quality is excellent in the remainder of the designated section above this point (90% of the entire designated portion of the river) when compared to other streams in southwest Oregon.

The significance of several values associated with the river are supported in a large degree by excellent water quality:

1. **Scenic:** the striking blue-green color and crystalline water quality is exceptional and contributes significantly to the high scenic values of the river
2. **Recreation:** the ability of the river to clear far more quickly than other heavily fished streams in the region following storms attracts sport fishermen to the river and adds to the downstream Recreation fishing value. Outfitters and guides congregate on the Elk (downstream of designated section) after a storm while other rivers are still murky. Water clarity also attracts swimmers, campers, boaters, and other recreationists.
3. **Fisheries:** low turbidity, cool temperatures, and lack of pollutants contribute to the excellent habitat and high fisheries value.

The water quality in the state and federally designated sections contributes to other downstream beneficial uses in addition to fishing. Oregon State's Elk River Salmon Hatchery uses river water in their rearing ponds. Ranchers along the lower reaches irrigate from the river.

#### FINDINGS

The excellent water quality in the Elk River is recognized as being a critical component of several river values and is found to be an "outstandingly remarkable" value of the federally designated section of the river and a "special attribute" of the state designated portions of the river.



# **APPENDIX E**

## **WATERSHED ANALYSIS**

United States  
Department of  
Agriculture  
Forest Service

# *Watershed Analysis*

## *Elk River Watershed*

### **Siskiyou National Forest**

Pacific  
Northwest  
Region

1994



## **ELK RIVER WATERSHED ANALYSIS**

*Powers Ranger District*

*District Ranger:*

*Cindy Enstrom*

*Project Leader:*

*Chris Park*

*Hydrologist*

*Project Team:*

*Glenn Chen*

*Fisheries Biologist*

*Randy Frick*

*Fisheries Biologist*

*Joel King*

*Forest Planner*

*Karen Ladd*

*Transportation Planner*

*Susan Mathison*

*Public Affairs*

*Kellie O'Neill*

*Landscape Architect*

*Cindy Ricks*

*Geologist*

*Connie Risley*

*Hydrologist in Training*

*Special Thanks To:*

*Tom Atzet*

*Bob Ettner*

*Janet Joyer*

*Bruce McCammon*

*Mary Stansell*

*Cover:*

*Kellie O'Neill, Design*

*Paula Fong, Art*

For further information contact:

Powers Ranger District

Powers, OR 97466

(503) 439-3011

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This watershed analysis is a dynamic document. It is not complete.  
Some sections are intended as placeholders, awaiting later editions of this analysis.  
Sections will be updated as information becomes available.

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## INTRODUCTION

**Location:** The Elk River Watershed, in southwestern Oregon, encompasses 59,520 acres; of these, 46,965 acres are in the Siskiyou National Forest. Fed by six major tributaries and numerous small streams, the Elk River enters the Pacific Ocean about three miles north of the town of Port Orford (Figures 1 and 2).

**Purpose:** The Elk River was designated as a Federal Wild and Scenic River by the Wild and Scenic River act of 1988. The Outstandingly Remarkable Values recognized in that designation are water quality and fisheries. This analysis provides a basis for protecting those values, and identifies activities which produce desirable watershed trends.

Elk River has a complex intermingling of social, ecological, physical and political processes. President Clinton's Forest Plan requires a watershed analysis to address important conditions and processes prior to most activities in key watersheds on Federal lands. Consequently, this analysis also contains terrestrial and social assessments. Sections related to these values are less complete. Watershed analysis is a dynamic process and sections will be updated as information is available.

**Climate:** The mild marine climate has annual precipitation amounts from 90 inches near Anvil Creek to 130 inches in the headwaters. Approximately 80 percent of the precipitation occurs from October to March, and four percent during June, July and August. A small portion of the watershed lies between 2400 and 4600 feet in elevation, within a transient snow zone.

**Geology:** The Elk River watershed, located at the northern part of the Klamath/Siskiyou Province and the southern part of the Oregon Coast Range Province, is comprised of Rocky Point sandstones and siltstones, Humbug Mountain conglomerate, shales of the Galice Formation, diorite intrusions and ultramafic rocks. The river leaves the Siskiyou National Forest through a broad valley, and enters the ocean through a small estuary. Recent and ongoing uplift (Muhs, et al., 1990) has created rugged, steep terrain with inner gorges adjacent to streams.

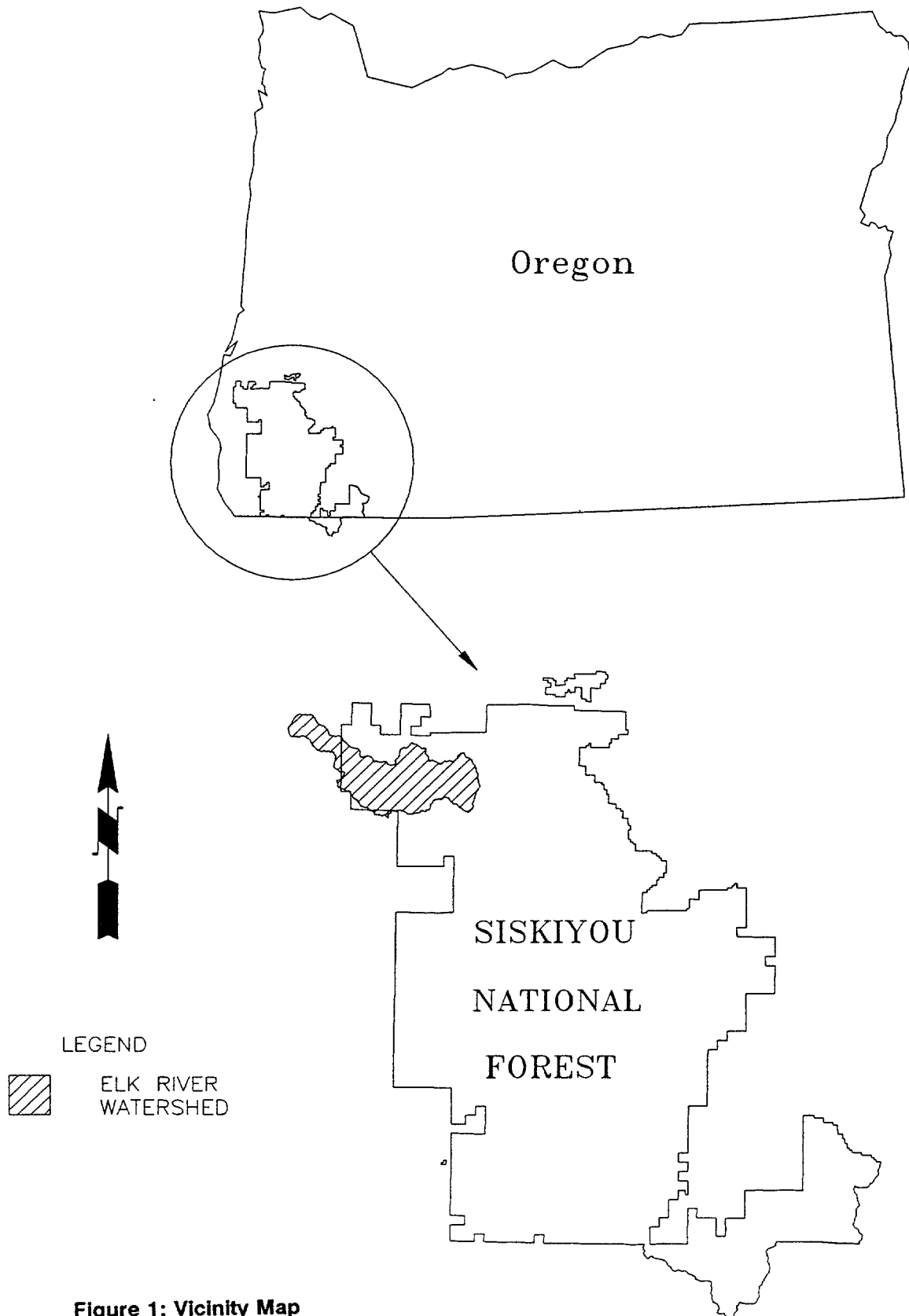
**Terrestrial:** The watershed has a hardwood/conifer mixture of Douglas fir, western hemlock, Port-Orford-cedar, jeffrey pine, Sitka spruce, tanoak, red alder, madrone, myrtle, and bigleaf maple. Under the tree canopy are huckleberry, salal, rhododendron, vine maple, willow, swordfern, poison oak and others. The major plant communities vary in age from early seral to old growth, and form habitat for a variety of animal species including the threatened northern spotted owl, marbled murrelet, and bald eagle.

**Fish:** Elk River is recognized for its role in maintaining the viability of native salmonid stocks. Fish are identified as an Outstandingly Remarkable Value for the Wild and Scenic River due to wild fish stocks, diversity of fish species, and high quality habitat. The Elk River watershed produces anadromous steelhead trout, coho salmon, chinook salmon, and cutthroat trout. Resident rainbow and cutthroat trout populations are also present. For a watershed of its size, Elk River is one of the highest producers of chinook salmon in the Pacific Northwest.

**People:** Throughout prehistoric and historic periods, people living in the lower Elk River have depended on the area's natural resources. Two primary sources of local income - fishing and logging - have decreased in recent years. Today, people bring different lifestyles and values to the area. Most people come to live in or visit the area because of its physical beauty and social amenities including the area's natural resources and relaxed lifestyle.

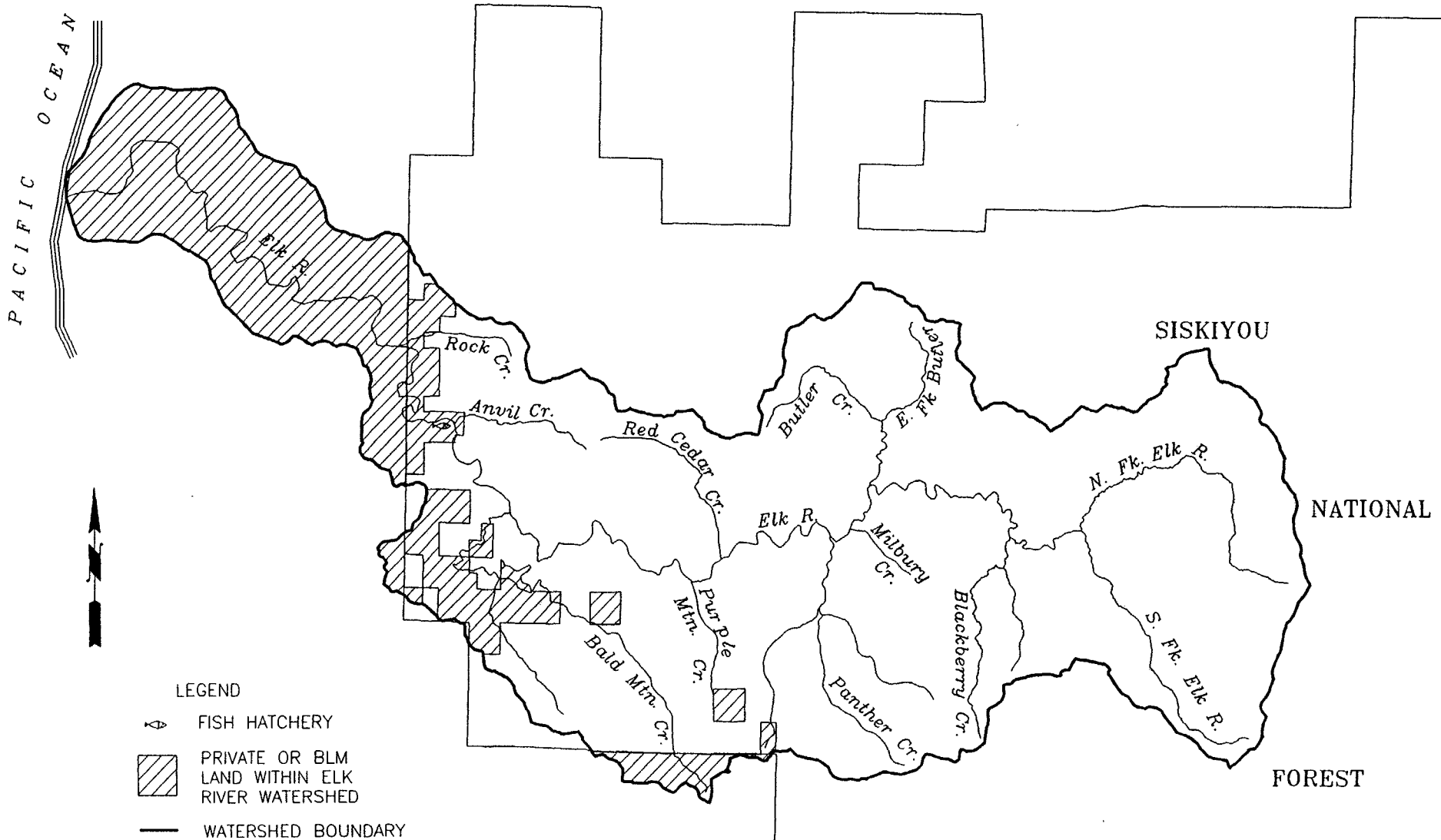


# VICINITY MAP



**Figure 1: Vicinity Map**

# ELK RIVER WATERSHED



### LEGEND




-  FISH HATCHERY
-  PRIVATE OR BLM LAND WITHIN ELK RIVER WATERSHED
-  WATERSHED BOUNDARY

Figure 2: Elk River Watershed

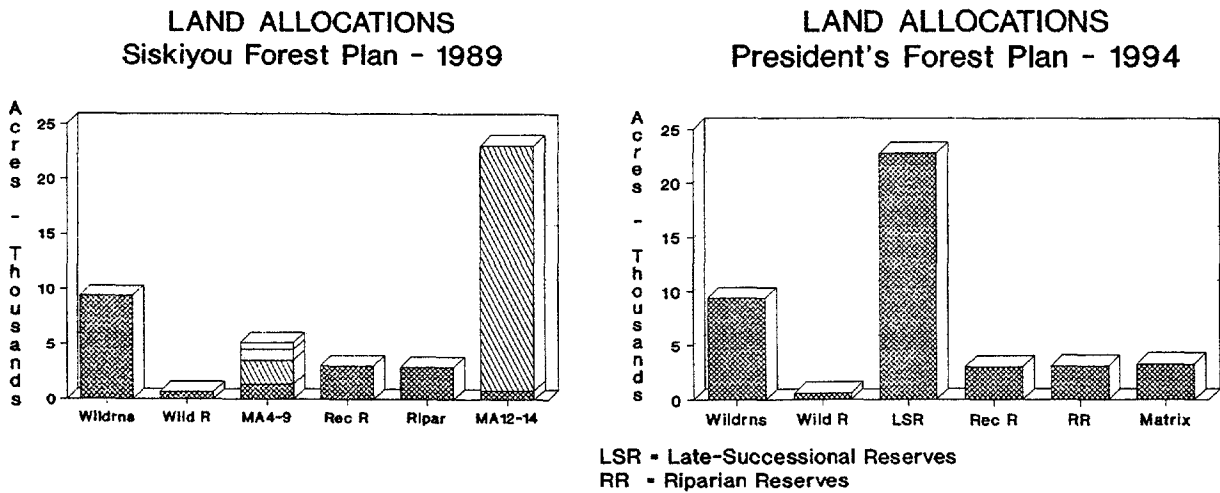
## CHAPTER 1

### ELK RIVER WATERSHED VALUES

The Elk River drainage is valued for its fish, wildlife, clean water, scenery, timber, and recreation. The watershed is representative of other old-growth ecosystems along the southern Oregon coast, and includes habitat for old-growth associated species such as the northern spotted owl.

Because Elk River flows directly into the Pacific Ocean it provides habitat for anadromous fish and sea-going animals such as the marbled murrelet. The Elk River fish hatchery supplements native fish populations and is important as a source of anadromous fish for the region.

The Siskiyou Forest Plan of 1989 provides management direction for Forest Service-managed lands within the Elk River watershed. The values for which Elk River is managed include: wilderness, botanical values, scenery, river- and watershed-related values, and general forest uses including timber production. The President's Forest Plan of 1994 designates a large portion of Elk River as part of a network of late successional reserves. Figure 3 displays these land allocations.



**Figure 3: Land allocations in the Siskiyou Forest Plan and the President's Forest Plan.**

In the Siskiyou Forest Plan, MA 4-9 are lands allocated for non-harvest uses: Botanical, Supplemental Resource, Wildlife.

MA 12-14 are lands managed for timber harvest, some with visual constraints.

In 1992, the Forest Service solicited and received written public comment on the Draft Environmental Impact Statement for the Elk River Wild and Scenic Management Plan (DEIS). Although people directed comments to the management alternatives described in the DEIS, their comments generally reflected the wide spectrum of public uses and values of the Elk River watershed. Most comments expressed values which are easily quantified, but many described feelings and values which are qualitative and/or difficult to verbalize, such as "security values" (FEMAT, 1993). These qualitative comments deal with emotion, experience, and feelings such as the value of a scene or place felt by a painter (Schroeder, 1993), the magnetic pull a person feels to be near nature, or the experience of living in the mountains or near the ocean. The collection of comments found in this chapter represents the common themes and sentiments expressed about the Elk River.

These written comments do not reflect all of the values and uses of the Elk River watershed. Many qualitative feelings and ideas are not expressed within the confines of a "public meeting" or formal comment period. The more subtle values and uses need to be recognized while paying attention to all values.

"I am a native Oregonian who believes that timber can be harvested as a crop and that a sustained yield can be maintained without harm to the Elk River."

"I live in Bandon and the people around here want local involvement, and would like to see finished products come from this wood..."

"We care about families, jobs and access to natural resources. We also care about clean water that salmon and trout can spawn in..."

"...I personally love the natural unspoiled beauty of the Elk River."

"Our family enjoys the beauty of the Elk River wilderness and I would like to share 'the Elk' with my grandchildren."

"My sons and I enjoy our annual visits to Oregon for steelhead and salmon fishing..."

"You need to recognize that Elk River is extremely important on a region-wide basis, because so many of our other salmon rivers have been severely damaged."

"I can't help but feel that Elk River is a small jewel in the forest crown worthy of your most diligent stewardship."

"I feel the only way to manage this fragile ecosystem is keep the old-growth forest ecosystem intact. We must save our old-growth Forests..."

"I feel the prime objectives should be protection of fish habitat..."

"I have been a fisherman's wife and I want to protect the rivers so we will always have salmon."

"It should be respected for its recreational, wildlife, and fishery values."

"I like roads for fire control access as well as mineral exploration and mining, and for logging."

"I would like to see maximum protection of an area I enjoy experiencing so much."

"With so many of the coastal towns dependent upon tourism and salmon fishing, we need to make every effort to keep our rivers clean."

"The Siskiyou N.F. needs to work more closely with local conservationists..."

"We want to see forestry practices improved."

The comments provide a synopsis of human values and uses of the watershed. The analysis will explore how these values relate to the social values described by Stankey and Clark in the Forest Ecosystem Management Assessment Team Report (FEMAT). Stankey and Clark (1991) developed a classification system of six categories of social values for forest resources: commodity values, amenity values, environmental quality values, ecological values, public use values and spiritual values. Additionally, two more categories were developed during the development of the FEMAT report: health and security values.

Using the FEMAT classification system, all of the social value categories were addressed except for spiritual, health and security values. Although these values were inherent in many of the comments, they were difficult to isolate without additional work more appropriate to specific, project-related planning.

A primary goal of watershed analysis is to assure that the full range of quantitative and qualitative public values and uses are considered. These values and uses help shape the goals for resource management and help identify "Key Questions" which determine the emphasis areas and depth of the watershed analysis.

The document is organized around the five categories of values specific to the Elk River watershed:

**Commodity Values**

- \* local employment relating to timber harvest
- \* fishing
- \* special use products

**Amenity Values**

- \* scenery

**Public Use Values**

- \* access and travel
- \* recreation
- \* landownership and management policy

**Environmental Quality Values**

- \* water quality

**Ecological Values**

- \* protection of forest and biodiversity
- \* protection of fish habitat

## CHAPTER 2 KEY QUESTIONS

Key questions focus the analysis on particular types and locations of cause-and-effect relationships, and discern conditions as they relate to values and uses of the watershed. The questions have been grouped into five categories: commodity aspects, amenity aspects, public use within the watershed, and environmental quality and ecology with its two components, terrestrial and aquatic. The page numbers referenced under each key question serve as a "quick index" to specific subjects within this analysis.

<b>A. COMMODITY ASPECTS OF ELK RIVER</b>	<b>Page</b>
<i>What type of local employment have the Elk River and its watershed contributed in the past?</i>	10-11
<i>Can the Elk River Watershed contribute to local employment opportunities in the future?</i>	53
<b>B. AMENITY ASPECTS OF ELK RIVER</b>	
<i>What is the present scenic condition of the watershed and how will it change?</i>	11-12, 47, 53
<b>C. PUBLIC USE ASPECTS OF ELK RIVER</b>	
<i>What is the present recreational use of the watershed?</i>	13
<i>How should recreational values be managed?</i>	53
<i>How has the watershed been accessed in the past and today?</i>	12
<i>What access should be provided for fire fighting, mining, logging and recreation in the future?</i>	53
<i>How will community values and feelings be integrated with ecosystem management?</i>	5-6
<i>Who owns and manages the land in the watershed and what policies govern its use?</i>	13
<b>D. ENVIRONMENTAL QUALITY AND ECOLOGY: TERRESTRIAL COMPONENTS</b>	
<i>What types of vegetation grow in the watershed?</i>	14
<i>Are there any threatened or endangered wildlife species living in the watershed?</i>	20
<i>What historic disturbance phenomena have occurred across the landscape?</i>	15-17
<i>What has been the effect of these phenomena on landscape vegetation amounts and patterns?</i>	15-19
<i>How have logging, road construction, and fire suppression altered historic vegetation patterns?</i>	15-17

	<b>Page</b>
<i>Are current patterns within the historic range of variability for the watershed? What are the appropriate arrangements and quantities of landscape elements to be maintained over time?</i>	54-56
<i>What are the processes that create snags and large woody material?</i>	19
<b>E. ENVIRONMENTAL QUALITY AND ECOLOGY: AQUATIC COMPONENTS</b>	
<b>Landslides and Surface Erosion</b>	
<i>What are the processes which deliver sediment, and where do they occur?</i>	21-25
<i>How much sediment has been delivered by natural processes and by human-caused activities and where?</i>	23-25, 36-46
<b>Water Clarity</b>	
<i>What current human uses affect water clarity?</i>	25, 41-45
<b>Large Wood Supply Affecting the Aquatic Ecosystem</b>	
<i>What are the processes which deliver large wood and where do they occur?</i>	25
<i>Where have management activities reduced the large wood supply below natural levels?</i>	25, 37
<i>Where are the areas of concern for future wood supply?</i>	51
<i>How can the supply of large wood be restored?</i>	57, 59-60
<b>Riparian Canopy Disturbance and Stream Temperature</b>	
<i>What processes reduce shade and increase stream water temperature and where do they occur?</i>	26
<i>Where have management activities increased solar exposure and stream water temperature over natural levels?</i>	26,41-44
<i>What are the future trends in stream shade, and how can these be improved?</i>	51-52, 59-60
<b>Stream Flow</b>	
<i>What management-related processes have the potential to change the natural magnitude and frequency of stream flow?</i>	27
<b>Stream Channel Morphology</b>	
<i>Where are channels sensitive to increased sediment and decreased large wood?</i>	27-28
<i>Is there evidence that channel morphology and sediment storage have changed from historic conditions?</i>	27-28,37, 39-46

	<b>Page</b>
<i>What are the expected channel morphology and storage condition trends?</i>	52
<i>How can the channel conditions be improved?</i>	57,59-60
<b>Stream Water Temperature Effects on Fish Habitat</b>	
<i>Where are fish habitats sensitive to increased stream water temperatures?</i>	28-29
<i>What are the existing temperatures and are they changed from historic ranges?</i>	28-29, 39-46
<i>What are the expected water temperature trends?</i>	51-52
<i>How can stream temperature be improved?</i>	57, 59-60
<b>Productive Flats</b>	
<i>What are productive flats and where do they occur within the watershed?</i>	30-31
<b>Fish Habitat, Distribution, and Populations</b>	
<i>What fish species inhabit the watershed? Are these different from the historic species?</i>	32-33
<i>What are the current fish habitat conditions, basinwide and in susceptible reaches?</i>	38
<i>Is there evidence that fish habitat conditions have changed from historic?</i>	32
<i>What are the expected trends in fish habitat conditions?</i>	52
<i>How can the fish habitat be improved?</i>	58-60



## **CHAPTER 3 PAST AND CURRENT CONDITIONS, PROCESSES**

In this chapter, the Elk River watershed is presented in the context of the values and key questions identified in Chapters 1 and 2.

### **COMMODITY VALUES**

Throughout prehistory and history, the economy of the southern coast of Oregon has focused on the area's natural resources.

In prehistoric time, the Quatomah band of the Tututni group of Athapascan- speaking Indians occupied the Elk River drainage. They spent winters in permanent villages located near the mouth and along the lower section of the river. During the rest of the year they travelled to the uplands to fish, hunt, and gather, relying on the rich salmon supply as a major food source. They also relied on acorns, camas, berries, deer, and a particularly plentiful supply of elk.

Fur trappers and traders, beginning in the 1820s, were the first non-Indians to harvest the coast's rich resources. Jedediah Smith's party crossed the Elk River in 1828.

The first settlement on the southern Oregon coast was Port Orford. The dominant economic pattern along the Elk, between the 1850s and the 1930s, was subsistence living. The early settlers along the lower section of the river cleared the forest for ranches. Residents lived by hunting, fishing, raising livestock, and growing food. Bartering was common. Small scale mining occasionally provided cash to supplement this subsistence lifestyle.

In 1853, when gold was discovered at the mouth of the Elk River, the people experienced a short-lived mining boom. After the turn of the century, mining operations in neighboring drainages, such as the Sixes and Rogue Rivers, provided employment for Elk River residents. Subsequent mining on the Elk itself was small scale. After World War II, the lower price of gold made mining even less profitable. Today, there is recreational mining on the Elk.

Commercial fishing began on the southern Oregon coast in the late 1800s with the construction of canneries and hatcheries. Residents near the mouth of Elk River found employment in these endeavors. In the mid-1900s a fleet of 60-70 fishing vessels operated out of Port Orford.

In the 1980s Port Orford ranked second among Oregon coastal ports in total chinook catch value (Columbia River fishery excluded; Lukas and Carter 1985). An extension of the commercial fishing season until November 30 increased the contribution of Elk River chinook to fishermen and fish processors located in Port Orford. Because the November season is confined to the area near the mouth of the Elk River, it provides a good indication of Elk River quantities. In 1984 the November Port Orford chinook catch was 28,000 lbs, which was 30% of the year's catch at Port Orford, and 87% of the November chinook catch off the entire Oregon coast (Lukas and Carter, ODFW Ocean Fisheries summary report 1984). By 1993, the November Port Orford chinook catch had dropped to 9,200 lbs (ODFW, Newport, Oregon).

The fall chinook run on the Elk also attracted sport fishing. Local residents recall the mid-1900s when they backed their pickup truck down to the river, caught salmon with nets, and flipped them into the back end until the bed was full. As recently as the mid-1980s hundreds of sport anglers travelled to the Elk each fall, with 40 drift boats and 300 bank anglers fishing some 13 miles of river. During this season 30 fishing guides from southern Oregon and northern California operated on the river.

Commercial logging in the Elk River watershed began in the mid-1800s. In 1851, the first shipment of cedar shingles left Port Orford for California. Until the 1930s, however, logging along the Elk River was small scale. The ranches on the lower part of the river produced lumber for their own use. During this time loggers split Port-Orford-cedar logs and floated them to a mill at the Marsh Ranch, where they were made into battery separators.

In 1936, Transpacific Lumber built a dock in Port Orford, and a logging railroad was built from the Elk River valley across the ridge to the dock. This marked the beginning of shipping Elk River lumber to larger markets in California.

A road built up the Elk River in 1954 accessed timber on National Forest land. The timber industry became economically important, with over 300 million board feet of timber harvested from National Forest land between 1954 and 1989. Two mills were supplied predominantly by timber from the Elk River watershed. Western States Plywood, located on the Elk River, employed 230 people. It closed in 1974 because it could no longer compete with larger mills. Moore Mill in Bandon, Oregon, is still in operation.

A succession of land designations has gradually reduced the amount of the timber for harvest. In 1984, Congress designated the Grassy Knob Wilderness, 9,394 acres of which lie within the watershed. In 1988 Congress designated a 19-mile segment of the Elk River as part of the National Wild and Scenic Rivers System. In 1990 the U.S. Department of Fish and Wildlife listed the Northern Spotted Owl as threatened, with 3,000 acres of critical habitat within the watershed. In 1992 the marbled murrelet was listed as threatened, and harvest restricted on its habitat. The President's Forest Plan of 1994 allocated most of the watershed to Late Successional Reserves, and designated Elk River as a Key Watershed. This plan provides for timber harvest on the 3,304 acres allocated as "matrix" lands within the Elk River watershed.

The economy still depends on the area's natural resources, though no longer relying heavily on Elk River. As logging and commercial fishing decline, tourism has increased. Retired persons have moved to the area because of its mild climate, sparse population, and natural setting. Restaurant, motel, and construction jobs remain steady, and there is a growing arts community.

#### **AMENITY VALUES: Scenery**

The scenic quality within the river corridor and watershed results from a combination of rock formations, water clarity, waterforms, vegetative features and landforms.

Rock types in the watershed contribute to the variety of water color, and clarity. The Elk River flows clear to crystalline blue-green water. The water course has interesting patterns of deep pools interspersed with small boulder rapids. Steep whitewater cascades have larger boulders with numerous waterfalls and plunge pools. In winter, water cascades from steep tributaries and slopes along the Elk River.

The variety of the vegetation types in the watershed creates visual diversity. Large old growth conifers, big-leaf maple, red alder and other deciduous trees and shrubs, meadows and moss covered rocks within the corridor provide variety to the color, texture, and structure of the setting.

**Lower Elk:** The lower portion of the Elk River (from the coast to the fish hatchery) flows through a wide valley bottom. The gently rolling hills, pastures, clumps of forest and scattered farmhouses characterize a rural, pastoral scene. From Highway 101 to the Elk River Fish Hatchery, the Elk River Road follows the south side of the wide valley. Long views extend to low-lying hills to the north, beyond the river. Timber management is evident on many of the slopes.

**Middle and Upper Elk:** The Elk River from the Fish Hatchery to the confluence of the North and South Forks flows through a steep, narrow canyon forming an inner-gorge environment. Streambanks are densely forested interspersed with bedrock outcrops. The Elk River Road (Forest Service number

5325), parallels the river's route, providing repeated short views to the river and steep south facing slopes throughout much of its stretch. Dense vegetation limits many views of the river during the spring and summer. In some areas the "detail" landscape can be viewed on the river bottom and on slopes above the river. Human disturbance is limited and primarily associated with mining, past timber harvest, and recreational facilities. The road is the most obvious alteration of the otherwise natural setting.

**North and South Forks of the Elk:** Upstream from the confluence, both forks of the river have steeper gradients and wider corridors. Slopes are densely forested above the North Fork. The road follows the South Fork, moving away from the river, with long, extended views. Past harvest and road activities can be seen above the South Fork.

**Tributary Landscapes:** Bald Mountain, Panther, Blackberry and Butler Creeks are the main river tributaries. The uplands in these drainages have many roads and harvest units. Views are short to moderate, with some extended views in the upper slopes of the subwatersheds. The west half of Butler Creek is in the wilderness.

**Wilderness:** The Grassy Knob Wilderness is moderately to extremely steep and heavily vegetated. Views are generally short to moderate due to topography and vegetation. Forest Road No. 5105 follows the ridgetop. The scenic condition is natural-appearing with a dense tree canopy mixed with shrubs.

## **PUBLIC USE VALUES**

- Access and Travel
- Recreation
- Landownership and Management Policy

### **Access and Travel**

In prehistoric times, the Elk River corridor provided a travel route between the coast and the interior. The main trail paralleled the river for most of the length of what is now the Recreation section, then angled up to the main ridge north of the Wild section. Segments of the trail are still evident.

This trail was the main access to the area until 1954 when the first road (Elk River Road) was built up the river from the coast. As the logging industry developed, roads connecting the Elk drainage with the South Fork of the Coquille River were constructed. Other roads now provide access from the east, west, south, and north.

The Elk River Road is still the main travel route between the coast and the interior of the Elk River watershed. The road provides access to private land, the Grassy Knob Wilderness, and the wild and recreation portion of the Elk River. It receives local use from private landowners, logging companies, miners and recreationists. A traffic counter located on Elk River Road at the end of the county road counted 23,597 vehicles on the road in 1993.

There are 170 miles of road under Forest Service management within the Elk River watershed. About 60 of these miles are maintained for passenger cars, 30 miles are closed, and the remaining 80 miles may require the use of a high clearance vehicle. All roads, with the exception of 11 miles of the Elk River Road, have a rock or native-soil surface; safe travel speed is less than 25 miles per hour.

## **Recreation**

With the construction of the Roosevelt Highway (Highway 101) in the 1920's, the southern Oregon coast became a popular recreation area well known for its scenic beauty. Recreational use within the river corridor has increased over the years. Fishing has become one of the most popular water-related activities of the area. Local residents of the area and visitors fish from drift boats or from the banks of the river, from the fish hatchery to the river's mouth.

Inland from the fish hatchery, on National Forest land, less recreation occurs, and it is concentrated within the river corridor. Residents of nearby communities use the river in the summer months for swimming, picnicking, sightseeing, and mining. Elk River receives light whitewater boating use, primarily between the fish hatchery and Slate Creek. Kayaks are the most common river craft. Rafts are occasionally seen on several sections of the River, and drift boats are very rare.

A few local residents hike and camp in the area, but these activities remain at low levels, and are limited by wet winters and steep terrain. Eight dispersed campsites are located along the river, including Sunshine Bar, which has a capacity of 35 people. Most of these campsites are primitive; only Sunshine Bar has a vault-type toilet. Campgrounds are less than 50% full on summer weekends, and receive very little use in the winter months. Developed sites are found at Butler Bar and Elk Lake campgrounds.

Three maintained ridgeline trails in the area receive light use: Barklow Mountain, Grassy Knob, and Iron Mountain trails. All three trails lead to abandoned lookout sites and offer scenic views of the surrounding mountains. The Pacific Ocean is visible from the summit of Grassy Knob. The trails are accessed by Forest Service Roads 5105, 3353220, 3347, and 5325. No trails exist within the river corridor. Trail use is generally related to hunting in the area, with some people hiking for pleasure. Approximately 80 visits occurred within Grassy Knob Wilderness in calendar year 1991.

None of the existing trails, campgrounds, and picnic areas meet accessibility standards stipulated in the Americans with Disabilities Act.

The Siskiyou Forest Plan FEIS identified three classifications of recreation experience in the Elk River watershed. The classifications are based on the Recreation Opportunity Spectrum (ROS), an inventory system which recognizes the quality aspects of recreation experience. The first class, Semi-Primitive Non-Motorized (SPNM), is characterized by a predominantly natural or natural-appearing environment of moderate to large size. User interaction is low, but there may be evidence of other users. This classification includes the Wild section of the river, the Copper Mountain Roadless Area, and the Grassy Knob Roadless Area on the west side of the Grassy Knob Wilderness, for a total of 4500 acres. The second type is Roded Natural (RN), which includes most of the watershed and the Recreation section of the river (30,000 acres). The remaining classification is Wilderness (WRS - Semi-primitive) where recreation opportunities are predominantly unmodified and user interaction is moderate. This includes 9400 acres of the Grassy Knob Wilderness and much of the north half of the Recreation section of the river.

## **Landownership and Management Policy**

The US Forest Service, the Bureau of Land Management and a variety of private land owners manage the land in the Elk River watershed. The direction for use and management of these lands varies by ownership. Management practices are not always consistent between ownerships and conflicts may arise from these discrepancies. Jurisdiction and regulations are discussed more fully in the Draft Elk River Wild and Scenic River Management Plan.

## ENVIRONMENTAL QUALITY AND ECOLOGY VALUES

Values associated with environmental quality and ecology are addressed in two categories; those associated with the **terrestrial ecosystem** and those associated with the **aquatic ecosystem**. Within each category are specific components which are key to each ecosystem's function. These key components are explored in this chapter.

### TERRESTRIAL ECOSYSTEM

- Vegetation
- Landscape Patterns: Disturbance Frequency and Patch Size
- Large Woody Material in the Terrestrial Ecosystem
- Wildlife

#### Vegetation

The forested portion of the Elk River watershed has a mixture of conifers and hardwoods with a ground cover of shrubs and forbs.

Forest stands have been grouped into "plant series", combinations of plant species that indicate the area's site conditions including soil type, site class, regeneration potential, and fire frequency. The Elk hosts four plant series: tanoak, hemlock, tanoak/hemlock, and tanoak/serpentine. While Douglas-fir is the most prevalent overstory species in all four series, the tanoak series also has sugar pine in the overstory, with an understory of tanoak, chinkapin, canyon live oak, madrone, and white fir; and the hemlock series also has western hemlock and Port-Orford-cedar, with an understory of tanoak, California laurel, chinkapin, Port-Orford-cedar, and red alder. Tanoak/hemlock is a blend of these two series. Tanoak/serpentine is the vegetation growing on serpentine soils in the watershed: Douglas-fir, Port-Orford-cedar, western white pine, and western hemlock in the overstory, with tanoak and canyon live oak in the understory.

The shrub and ground cover components of these series are mixtures of salal, huckleberry, rhododendron, Oregon grape, swordfern, beargrass, and poison oak; with azalea added on the serpentine. Also, two non-native species have spread into the watershed: gorse, which is highly flammable, and tansy ragwort, which is toxic to grazing wildlife.

Each plant series has vegetation in a range of age classes. Old growth, mature, young conifer, hardwoods, shrubs, and grasses/forbs occur in a variety of patch sizes. The plant series have different disturbance frequencies, and respond differently to changes in disturbance agents.

Port-Orford-cedar (*Chamaecyparis lawsoniana*) has been affected by disease. Although it is a small component of the minority of forest stands it appears in throughout the watershed, it is more concentrated on serpentine soils. The fungus *Phytophthora lateralis* infects Port-Orford-cedar roots, quickly killing the tree. Mortality is high in riparian areas where the water-borne spores have ready access to cedar roots; and along roads where vehicles transport the spores during muddy seasons.

The Region Five-Region Six Port-Orford-cedar Root Disease Action Plan of 1988 provides direction to ensure the viability and continued presence of the species in the ecosystem, throughout its range. Control strategies have been implemented within the watershed.

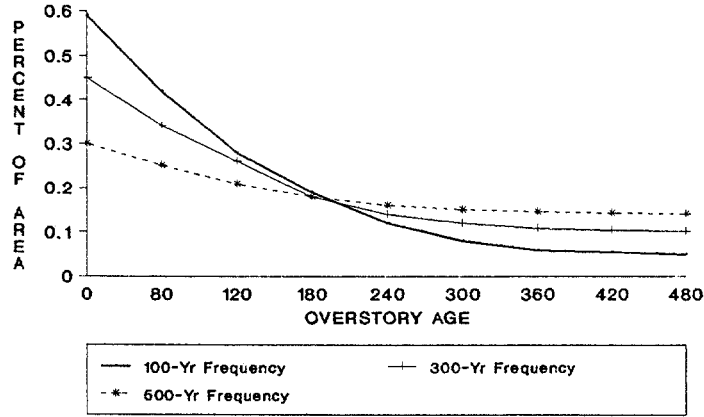
## Landscape Patterns: Disturbance Frequency

Natural disturbances in the terrestrial ecosystem include large scale fires and episodes of windthrow caused by cyclonic events such as the Columbus Day storm of 1962. These disturbances have been infrequent in the Elk River watershed.

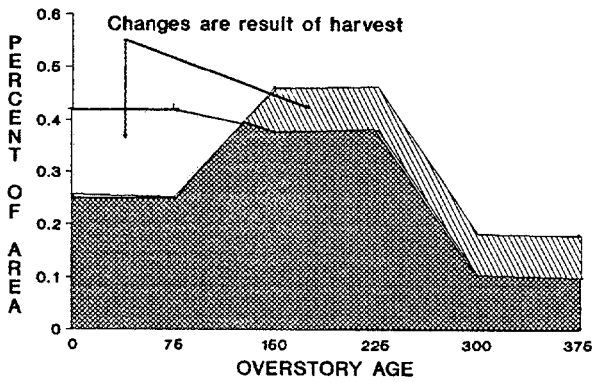
A fire disturbance may include a variety of burn intensities in response to moisture regimes, fuel loads, microclimates, topography, etc. The result is a mosaic of burn intensities and residual vegetation. In the Elk, moist conditions are found in drainages and north-facing slopes, while lightning tends to strike high, drier ridgetops. These conditions combine to create a pattern of early seral stages on ridgetops and midslopes with mature and old-growth stands in the drainages.

Figure 4 displays the age distribution curves that would occur if the stand replacement interval were constant at 100, 300, or 500 years; followed by graphs for each plant series of the *existing* age class distribution, which reflects all historical disturbances; and the *pre-harvest* age class distribution, which projects the distribution if harvest had not occurred. Because of the absence of accurate historical data, this interpretation only estimates general trends.

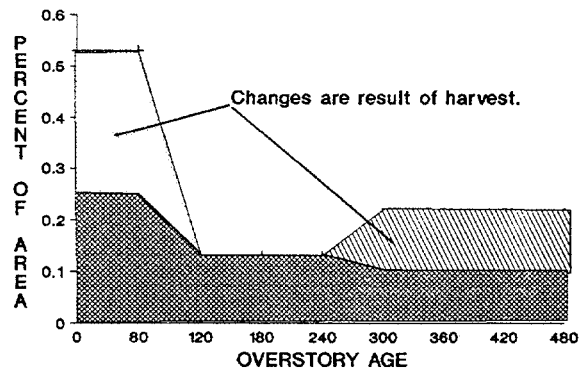
## AGE DISTRIBUTION Constant Stand Replacement Frequency



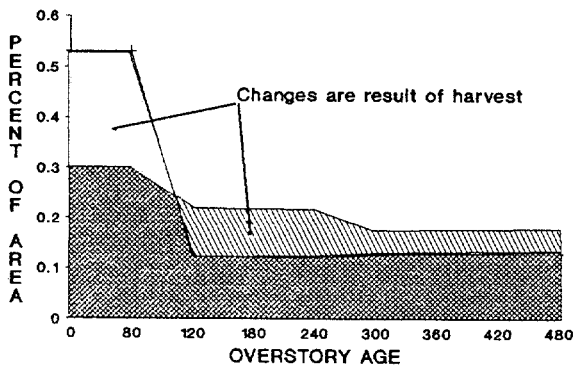
### TANOAK SERIES



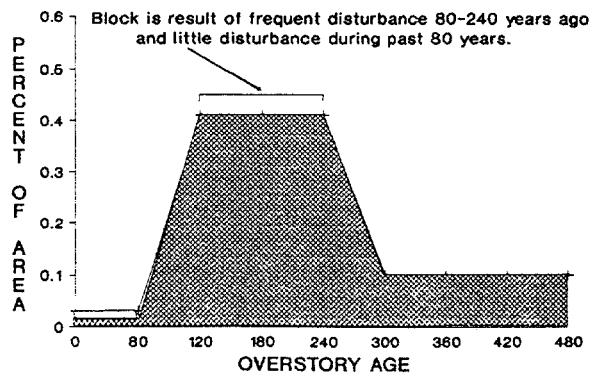
### TANOAK/HEMLOCK SERIES



### HEMLOCK SERIES



### TANOAK/SERPENTINE SERIES



Pre-harvest    
  Existing

Figure 4: Stand age by plant series.

The natural fire disturbance regime in Elk River is difficult to determine. Fires set by early Native Americans and miners created a fire disturbance interval of 100 to 300 years. Subsequently, fire suppression efforts begun in the mid-1900's lengthened the hypothetical non-harvest disturbance interval to 300 to 400 years. However, timber harvest shortens the stand replacement time and continued fire suppression mimics the longer regime. The net effect of the two processes is a vegetative pattern in the watershed that indicates a 100 to 200 year fire disturbance interval.

Figure 5 displays stand replacement interval by plant series (Van Wagner, 1978). As this figure illustrates, in the tanoak and hemlock series, the effects of harvest offset the effects of fire suppression, with a greater increase in fire frequency in the tanoak/hemlock association.

Miners periodically burned the serpentine areas during the 1800's. During the past 100 years few harvest activities have occurred in the tanoak/serpentine areas, and fire suppression has been very successful. Consequently, these areas show a large increase in disturbance interval from the 1800's to the 1900's.

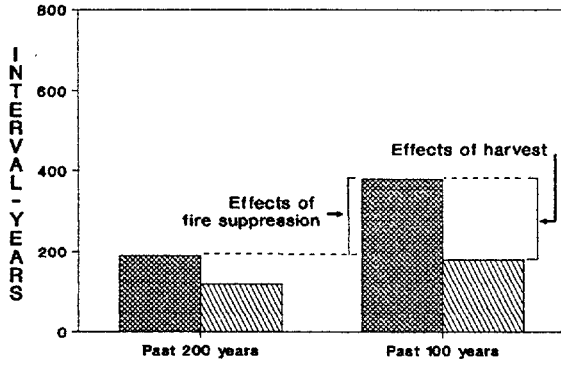
These changing patterns of fire frequency are supported by the fire scar intervals measured on existing ecology plots.

Other factors have influenced the fire occurrence interval (Atzet, 1982). A few decades ago, summer lightning was more common in the watershed than it is today (Atzet, oral communication). Future climatic changes could again increase the summer lightning frequency and the resulting natural fire ignitions.

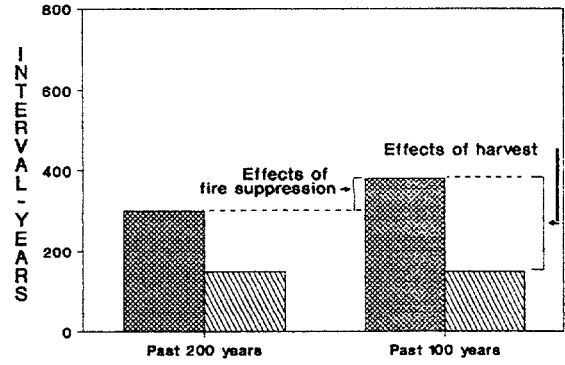
The quantity of fuel accumulations affects fire size and intensity. In current management practice, wildfire is suppressed to prevent the loss of merchantable timber and to protect investments in tree plantations, thinnings, and other developments. In many cases, this suppression results in unnaturally high levels of fuel accumulation. Timber harvest or thinning may also increase fire risk due to additional slash accumulations. In some case, these conditions are abated by piling or prescribed burning.



### TANOAK SERIES

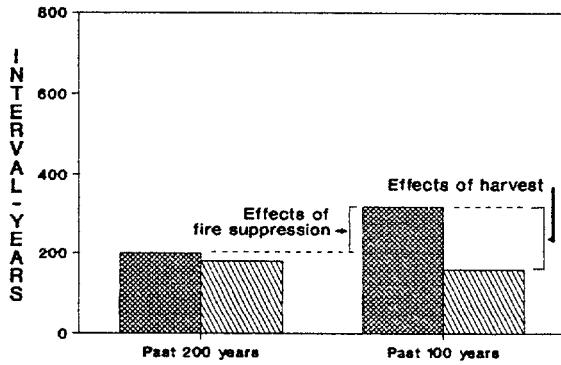


### TANOAK/HEMLOCK SERIES

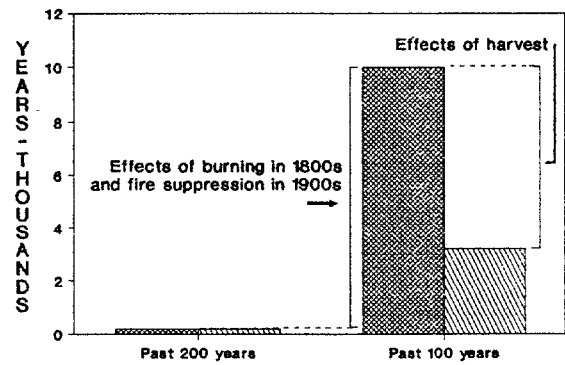


Pre-Harvest
  Existing

### HEMLOCK SERIES



### TANOAK/SERPENTINE SERIES



**Figure 5: Stand Replacement Interval by Plant Series**

Pre-harvest data is a projection of what the replacement interval would have been if no harvest had occurred.

## **Landscape Patterns: Patch Size**

At one time, the river corridor was forested all the way to the coast. Much of the lower watershed is now cleared and its predominant use is grazing.

The forested portion of the watershed is a patchwork of different age classes. Low intensity fires have left most old growth patches on the north-facing slopes. Moderate intensity fires have occurred on the upper one-third of west-facing slopes and average 75 acres. High intensity fires have occurred most often on upper, south-facing slopes and average 280 acres. The maximum size of existing patches is approximately 4000 acres; the minimum patch size is measured as less than 1 acre. The patches created by historical disturbance events such as fire or windthrow generally vary between 20 and 200 acres.

Typically, timber harvest in the watershed has resulted in patches which have changed the patterns created by wildfires and windthrow. The harvested areas generate single-storied stands which are similar to the vegetation patterns resulting from high-intensity, stand replacement fires. The clearcuts are generally 10-40 acre patches - smaller landscape patches than those created by the large, infrequent stand replacement fires. However, there are areas several hundred acres in size within Butler Creek and Purple Mountain Creek drainages that were harvested to salvage trees killed during fire or windstorms.

## **Large Woody Material in the Terrestrial Ecosystem**

Fire, wind, insects, and disease produce the snag and large woody material component within the watershed. Large woody material (LWM) is plentiful after each disturbance, and decay causes it to gradually decrease through time. LWM reaches its lowest level about 100 years after disturbance. At stand age 100 years, tree mortality begins to add large wood back to the forest floor at a rate greater than the decay rate - LWM begins to accumulate. These levels of LWM accumulation around age 100 can be used to develop standards, guidelines, and monitoring standards for management activities.

Inventories were conducted on two sites within the watershed which represent existing levels of LWM in the tanoak and hemlock series. The tanoak site has 100 cubic feet of LWM per acre, with very few snags greater than 20". Those snags were mostly western white pine, a shade intolerant species adapted to more frequent fires.

In contrast, the hemlock site had 290 cubic feet of LWM per acre and a high percentage of Port Orford-cedar (both standing and down). Because this species remains standing much longer than other conifer species and takes longer to decompose, it functions longer as large woody material in the ecosystem.

Salvage of dead cedar and removal of live cedar to help control spread of the disease remove large wood from the ecosystem.

## Wildlife

The Elk River watershed supports diverse wildlife populations typical of the northwest forests in the United States. Depending upon the disturbances and resulting pattern of vegetation, animals which need young or old forest habitat have predominated at different times in Elk River. In the recent past, the mature forests have provided habitat for late successional species such as the northern spotted owl. Harvest activity and off-forest land use have replaced fire as a producer of young seral habitat for deer or elk forage.

Three species on the Region 6 Sensitive Species list occur within, or immediately adjacent to, the Elk River corridor.

Species	Listing	Comments
Bald Eagle	Federal: threatened State: threatened	occasional sightings on river mainstem
Spotted Owl	Federal: threatened State: threatened	two nesting pairs, one resident single
Marbled Murrelet	Federal: threatened State: sensitive-critical	seven detections, 1989, twenty eight detect., 1990, confirmed nest site, 1992

**Figure 6: Sensitive Wildlife Species Found in the Elk River Watershed**

The Elk River watershed is not included in the list of key habitat areas in the Bald Eagle Recovery Plan (USDI FWS). Nearby rivers – the Sixes, Rogue, and Coquille – are key habitat areas. There are some potential nesting areas on the Elk on private land outside National Forest boundaries.

Active spotted owl nests have been found in the Grassy Knob Wilderness and the North Fork Elk subwatershed. A resident single owl occupies Panther Creek. Infrequent sightings of single owls occur elsewhere in the Elk River watershed, but greater concentrations exist in adjacent watersheds (S. Fork Coquille, Rogue).

Marbled murrelets have been detected (seen or heard) in various locations along the main stem of the Elk River, and potential nesting sites have been identified. The Elk River provides habitat for the marbled murrelet, with all of the watershed within 35 miles of the ocean, a band typically occupied by this bird. The river also provides a murrelet travel corridor to the South Fork Coquille watershed. Although few northwest coastal areas have as much old growth as Elk River, other coastal old growth habitats have larger populations of murrelets.

Deer and elk are indicators of early successional stages. The Elk River has smaller populations of deer and elk than other nearby watersheds.

All species of woodpeckers need standing dead and deformed trees. Most of the unmanaged stands in the Elk River watershed provide sufficient numbers and distribution of snags in all decay classes. Most of the managed stands in the Elk River have no snags or large live trees, because they were harvested at a time when it was common practice to clearcut all standing trees. Current standards and guidelines require that live and dead wildlife trees be retained on any new harvest units.

Wildlife habitat in the watershed will be discussed in greater detail as more information becomes available.

The **AQUATIC ECOSYSTEM** of the watershed is discussed at two different scales:

- the watershed scale addresses processes, conditions, and history for the entire watershed
- the subwatershed scale discusses the smaller tributary watersheds and stream reaches.

### **AQUATIC ECOSYSTEM - Watershed Level**

Landslides and Surface Erosion  
Water Clarity  
Large Wood Supply Affecting the Aquatic Ecosystem  
Riparian Canopy Disturbance and Stream Water Temperature  
Stream Flow  
Channel Morphology  
Stream Water Temperature and Stream Flow Effects on Fish  
Productive Flats  
Fish Habitat, Distribution, Populations

### **Landslides and Surface Erosion**

Landslides and surface erosion are long-term processes which help form the landscape.

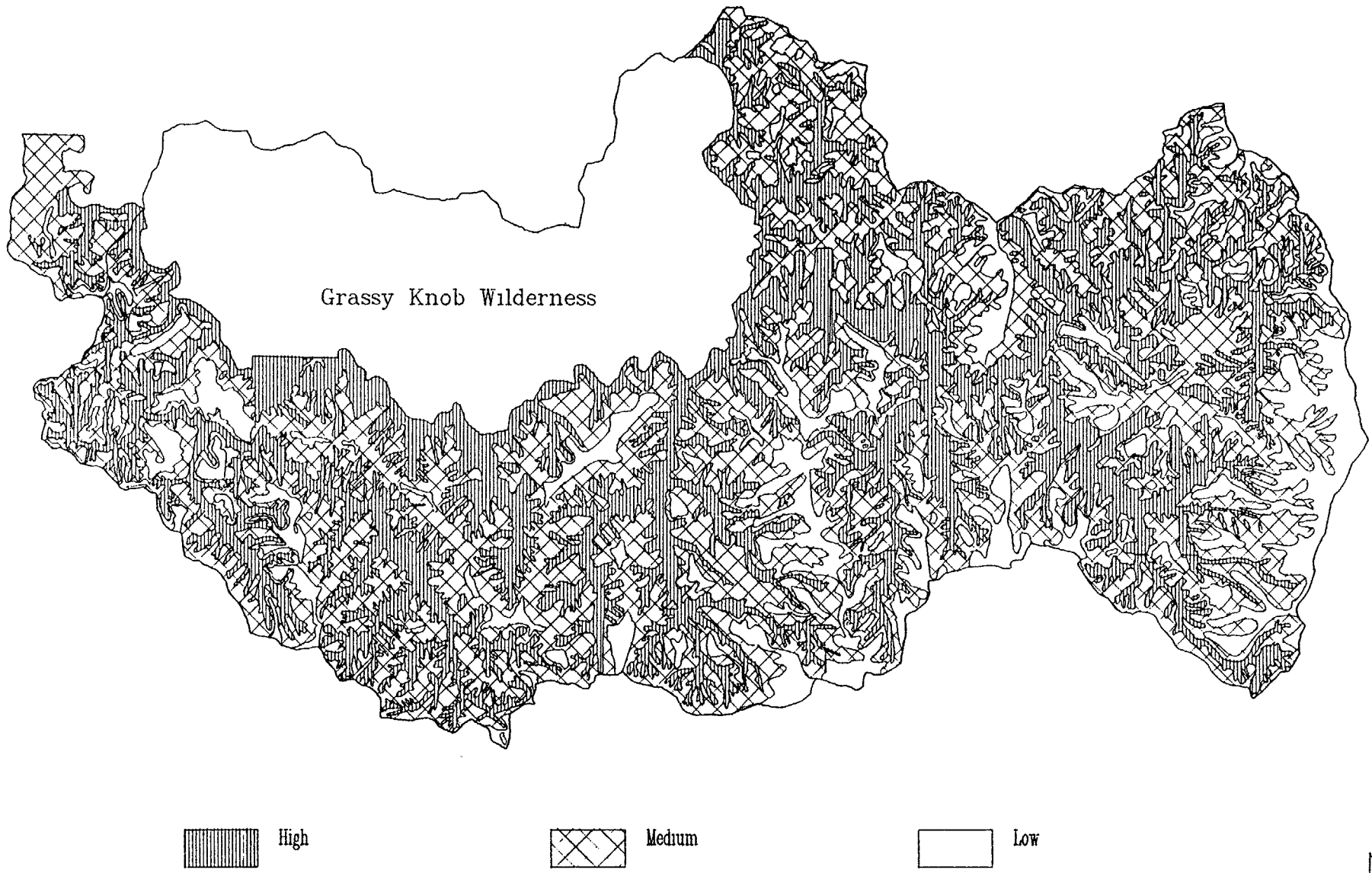
Landslides in the Elk River watershed vary considerably in size and age, from large, ancient, inactive features to small, active slides. The ancient features are believed to have been active during a different climatic setting, such as a wet period following a glacial advance. Earthquakes may also trigger large landslides. In October, 1980, a small landslide covered a portion of the Elk River Road below Butler Bar apparently triggered by the Crescent City earthquake.

Surface erosion is a source of chronic sediment delivery on some soil types. Coarse sediment moves downslope by creep, ravel, or shallow landslides.

The relative probability of delivery from landslides and surface erosion was interpreted from 1986 aerial photographs (1:12,000 scale). Zones of high, moderate, and low "watershed sensitivity" were delineated based on slope angle, slope shape, geologic structure (faults), proximity to streams, and presence and types of landslides in similar terrain. Figure 7 displays watershed sensitivity in Elk River.

# Elk River Watershed Sensitivity

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High

Medium

Low

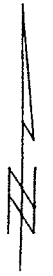
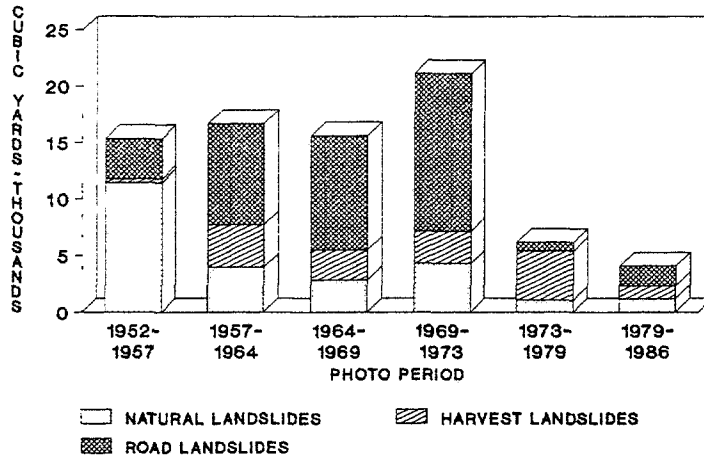


Figure 7: Watershed Sensitivity Map  
Mapping not yet available for Grassy Knob Wilderness

Landslide volumes were estimated using methods discussed in Appendix B: Data Used to Support Analysis. Figure 8 displays the natural, harvest-related, and road-related landslide volume rates, calculated as the volume of landslides per year. Natural landslides occurred at the highest rate during the time period which included the 1955 storm.



**Figure 8: Landslides above Anvil Creek**

Road- and timber harvest-related landslides and surface erosion differ from naturally occurring processes in timing, amount of sediment delivered to a stream channel, amount of large wood included, and degree of disruption of the surface and subsurface flow of water. The history of road construction and timber harvest is illustrated in Figure 9.

Along roads, soil disturbance and interception of water flow can cause landslides or erosion which would not occur under natural conditions. Existing road-related slides are located primarily on high watershed sensitivity lands, but 25% are located on moderate watershed sensitivity lands. The amount of large wood contained in road-related slides depends on whether the slopes below have been harvested. The amount of sediment delivered to the stream is generally lower for road-related slides than naturally occurring slides adjacent to streams.

Timber harvest causes a loss of strength from tree roots and a change in the pattern of soil moisture. With root strength gone, more landslides may occur on slopes in areas of high watershed sensitivity. More sediment will be delivered from landslides or surface erosion where trees are harvested from riparian areas.

In the past, harvest units were burned at high intensity in the fall. On slopes where duff and litter were consumed, rainfall ran over the ground surface instead of soaking in, producing localized surface erosion. Surface erosion is negligible on more recent low to moderate intensity spring burns.

Road and harvest-related landslides within the watershed delivered 2.2 times more sediment volume than naturally-occurring landslides between 1952 and 1986. More detailed data on sediment delivery is displayed in the subwatershed section.

# Elk River Managed Stands and Roads

Figure 9: History of road construction and harvest

E - 30



Stands harvested in  
the 1950's



Stands harvested in  
the 1970's



Stands harvested in  
the 1990's



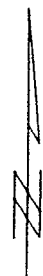
Stands harvested in  
the 1960's



Stands harvested in  
the 1980's



Roads



Roads intercept rainfall and subsurface flow, which can cause surface erosion. Measurements show that road drainage erosion is a relatively minor component of sediment delivery in the Elk River watershed due to the high rock fragment content of most soils (Appendix B: Data Used to Support Analysis).

In recent years, sediment which had been sidecast from roads and landings has been "pulled back" to more stable positions. These projects typically remove 200-800 cubic yards of sediment which might otherwise slide and be delivered to a stream.

### **Water Clarity**

The water clarity of Elk River is outstanding, and is recognized as being a critical component of several river values. The striking blue-green color and crystalline water quality are exceptional. Water clarity affects recreational uses such as fishing, boating, rafting, and sight-seeing along the Elk River. The Oregon State Salmon Hatchery at Elk River uses this clear river water in their rearing ponds.

The water of the Elk River is clear most of the year, except during major winter storms when sediment from banks and slides can cloud the water for short periods. Sediment delivered to the Elk River has a high content of coarse grained material, which rapidly settles out of suspension. This reduces the potential effect on water clarity, and gives the river the ability to clear far more rapidly than other rivers.

Recreational suction mining in Elk River during low summer flow clouds the water for a short section below the mining activity. As river gravels are suctioned from the streambed, fine particles are released causing a cloudy plume downstream of the suction dredge. Current operating plans for suction dredging include a range of requirements to mitigate potential effects on fish and fish habitat. The State of Oregon prohibits placer mining with suction dredges having greater than 4" openings on State Scenic Waterways.

### **Large Wood Supply Affecting the Aquatic Ecosystem**

Large wood is delivered to stream channels by landslides, by falling from adjacent riparian areas, and by transport from upstream sites. The importance of large wood for fish habitat is discussed in the Channel Morphology and Productive Flats sections.

Along the lower Elk River valley, land adjacent to the river has been cleared for pasture, and much of the riparian vegetation removed. In 1883, A. G. Walling noted that Elk River was used to transport up to 10,000 board feet of white cedar (Port-Orford-cedar) logs daily. It is likely that these log drives altered or destroyed riparian vegetation, and removed large wood and jams. More recently, substantial amounts of large wood have been removed to allow access to drift boat anglers.

Above the hatchery, salvage and selective cedar harvest have removed some large wood from the stream. During the 1970's, large wood jams were removed from several tributaries because many scientists believed they created barriers to fish passage for spawning. This practice was discontinued as a result of research indicating the beneficial value of large wood.

Areas delineated as high watershed sensitivity for delivery of sediment are also potential sources of large wood. Past harvest within these areas has reduced the potential supply of large wood to stream channels by 27 percent. While there is probably a sufficient supply of potential large wood within the watershed, specific areas may have been seriously depleted (see subwatershed section).



## **Riparian Canopy Disturbance and Stream Water Temperature**

Stream temperature is a function of several factors including solar intensity, climate, channel morphology, vegetative/topographic shade, channel shape, and the amount of stream surface area exposed to solar radiation. Large storms and human activities, such as timber harvest, mining, and roads also have the potential to influence stream temperature by altering the amount of shade-producing vegetation and channel shape.

In 1940, riparian areas on the mainstem were well-vegetated with mature and old growth Douglas-fir and hardwoods. Aerial photographs reveal mature trees on the flood plains, indicating that major disturbances had not occurred in several decades.

Stream temperature measurements along the Elk River are not available prior to 1968. The effects of the 1955 and 1964 floods can only be estimated by comparing channel and vegetation changes on historic aerial photographs. Dramatic changes are evident by comparing the 1940 photos with those taken soon after the 1955 flood.

The Elk River Road, which parallels the mainstem, was constructed in the riparian area on the south bank. The combination of road construction in 1954 followed by high flood flows in 1955, that caused massive road failures, resulted in a major loss of several miles of riparian vegetation on the south bank. Because the mainstem is primarily oriented east to west, the south bank can provide approximately 95 percent of the potential stream shade. Vegetation accounts for potentially 62 percent of the stream shade with topography providing the remaining shade. The loss of shade trees and channel changes probably resulted in increasing summer stream temperatures on the mainstem by several degrees. After the next major storm, in 1964, further changes were evident, but significantly fewer than occurred in 1955.

Today, the riparian area on the south bank remains altered from its pre-1955 condition. The riparian area below the road in several areas has revegetated with predominantly hardwoods. Hardwoods are not sufficient in height to adequately shade the mainstem during the summer. The road's close proximity to the stream permanently removed tall conifers that once provided stream shade.

The temperature is in the upper 60°F on the mainstem above the fish hatchery and reaches 70°F at the hatchery, at river mile 13, and river mile 22, just above Sunshine Creek. These temperatures are at or near the threshold where conditions become undesirable for cold water fish. Below the Forest boundary the river is aggraded, with wide shallow stream reaches. Gary Susac, biologist with the Oregon Department of Fish and Wildlife, reported in 1991 that mainstem temperatures approximately 5 miles below the hatchery were critical, with measured values reaching 75°F.

With the loss of some of the mainstem stream shade provided by conifers, tributaries with cool water are critical in helping to lower mainstem temperatures. Six of the tributaries -- North and South Fork, Red Cedar, Purple, Milbury and Blackberry Creeks -- have cool summer peak temperatures ranging from the high 50°F to low 60°F and help to lower mainstem temperatures. Three tributaries, Butler, Bald Mountain, and Panther Creeks, are warm with peak temperatures ranging from 66°F to 68°F . They have little or no effect on buffering mainstem temperatures. It is likely that Bald Mountain Creek is contributing to increasing mainstem temperatures (McSwain, 1988). The higher stream temperature in these three tributaries is the result of timber harvest and road construction.

The 1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution, indicated that the lower portion of Elk River from the mouth to approximately Bald Mountain Creek (2 river miles above the Forest Boundary) has a moderate temperature problem.

## **Stream Flow**

The average annual water yield is estimated to be 267,000 acre feet. Low mean monthly flows of 20-100 cubic feet per second (cfs) occur between June and October, and high flows of 1000-6000 cfs occur between November and April. Storms which caused high streamflows in the area can be determined from the USGS gauge on the South Fork of the Coquille River at Powers, Oregon. Peak flows of a magnitude greater than the 10-year return interval occurred in 1944, 1955, 1964, and 1971 (Ryan and Grant, 1991), and 1982 (McSwain, 1987). The December 1964 flow was estimated to have an 80-150 year return interval.

Aspects of streamflow that have the greatest effect on aquatic habitat are quantity, peak flows which affect channel morphology and fish, low flows which restrict migration and reduce available habitat, and the size and frequency of channel-forming events. All of these may be affected by timber harvest and road construction. However, studies quantifying the effects have found results varying from no effect to highly significant effects, depending on the characteristics of the watershed being studied. Because watershed characteristics in the Klamath/Siskiyou province are unique to this province, results of studies in other areas may not be applicable to the Elk River watershed. Therefore, some mechanisms that could contribute to effects on streamflow will be discussed in this section, but not specific effects or quantities.

Road surfaces and cutslopes intercept water, and road ditches act as intermittent streams, transporting water more rapidly than natural processes. These properties of roads combine to change the timing and increase the size of peak flows. The potential for effects from increased peak flows are the greatest in areas where road density is highest and stream banks are unstable. Potential effects include increased channel erosion and a decrease in spawning success of some fish species. The watershed area above the hatchery has an overall road density of 2.3 miles of road per square mile of land. This road density increases the stream channel network by less than five percent (Appendix B: Data Used to Support Analysis). The channel network expansion is greater in some subwatersheds; in Milbury Creek, the most densely roaded area at 5.1 miles per square mile, the channel network is expanded by approximately 25 percent. The magnitude of increased peak flows resulting from roads is unknown.

Harvested areas can increase snow accumulation and a rain on snow event can result in rapid melting of the snow, increasing peak flows (Harr, 1976). Less than 5 percent of the total watershed area is in the transient snow zone, and only a small percentage of this area has been harvested. Consequently, it is not likely that peak flows have been affected by existing harvest activities in areas that may be susceptible to rain on snow events.

## **Channel Morphology**

Water and sediment interact with landforms, bedrock, boulders, and large wood to shape the stream channel. Stream flows which are large enough to transport sediment in the stream bed can alter channel morphology. Sediment delivered to stream channels may be transported or stored, depending on the amount, particle size, and timing of the input. Increased sediment input may cause channel widening and braiding, increased frequency of bed sediment transport (increased mobility), and storage of sediment on floodplains, in gravel bars, and within the channel causing decreased pool area (Sullivan, et.al., 1987). These effects, known collectively as "aggradation", may be observed in channels with lower stream gradients, where velocities are infrequently high enough to transport the sediment. Sediment storage along channels may delay downstream effects of sediment transport, providing a "buffering" effect.

Changes in patterns of open riparian canopies are one indicator of channel response to disturbance. Ryan and Grant (1991) measured these patterns on six subwatersheds in Elk River on aerial photos from 1956 to 1979. This technique does not detect aggradation or degradation when streamside vegetation is not affected, or minor changes in channel location or geometry (Grant, 1988).

Ryan and Grant (1991) found that the length of open riparian canopies along fourth- and fifth-order channels (class I) did not change appreciably from 1956-1979.

Open riparian canopies along first and second-order stream channels (class IV and III) increased 30-fold between 1956 and 1979, and were generally located along or near roaded or harvested sites. The greatest increase in openings was attributed to the 1964 storm. Overall, 73% of the landslides and all of the surface erosion were associated with roads or harvest. The Ryan and Grant (1991) analysis did not cover the effects of the 1955 flood. Additional measurements from the 1940 and 1956 aerial photographs would show the extent of riparian openings in small streams which results from stormflow under natural conditions.

Gravel bars were measured along the mainstem of Elk River on 1940-1986 aerial photos (Ryan and Grant, 1991). The number of gravel bars increased by 77% overall. In the upper segment which is wider and lower gradient, gravel bars increased more in size than in number. In the lower segment which is narrower and steeper, a greater increase in the number of bars was observed. The most notable evidence of channel widening and an increase in the number and size of gravel bars occurred below the confluence with Purple Mountain Creek. This change can be attributed to sediment coming from Purple Mountain Creek following a period of poor timber harvest and road construction practices in the 1960's.

There is increasing evidence that the 1955 flood had a greater effect on channel morphology than the 1964 flood for many coastal northern California and southern Oregon streams. Aerial photography and oral history from Redwood Creek, California (Ricks, 1985), Pistol River (oral communication), Shasta Costa Creek (Park, 1990), and Elk River indicate that high flows eroded channel banks and riparian vegetation considerably. Interviews with Jim and Phyllis Woodward, long-time Elk River residents, indicate that substantial changes to the lower river morphology occurred as a result of the 1955 storm.

The adverse effects of the 1955 flood were probably heightened by the construction of the main access road (#5325) on the south side of Elk River in 1954. Comparison of aerial photos taken before and after this event shows that the road fill was placed within the portion of the stream channel subject to annual peak flows. This reduction in channel area confined the 1955 flood resulting in extensive scour of the north streambank and erosion of the road fill along the south. It is not known how much fill was lost from the road and deposited downstream in the lower-gradient channel below the National Forest boundary, but the amount was likely significant.

Below the National Forest boundary, comparisons of the Elk River channel from 1940-1986 aerial photos show increased numbers and sizes of gravel bars, loss of riparian forest, and increased widths of active channel bars (Ryan and Grant, 1991). Where the channel is unconfined as it flows through the valley floor, the channel has shifted its location in some areas as much as 100 yards. In this low gradient valley floor, sediment was deposited changing pool geometry and frequency. Dramatic new flood plains were established. These changes in the lower valley were probably aided by the continual removal of streamside vegetation and large conifers during agricultural development. The observations are consistent with local accounts of decreased pool depths and increased bank erosion. Lifelong residents suggest that Elk River was too deep to cross in most places during the summer (G. Susac oral communication, interview with D. Marsh). Today most of the river is extremely shallow within the lower valley during low flow periods.

### **Effects of Stream Water Temperature and Streamflow on Fish**

Water temperature is a determining factor in the composition and productivity of the aquatic ecosystem in streams. Increased temperatures favor the introduction and proliferation of "warm water" species to the detriment of "cold water" salmonid species found in Elk River.

Increases in water temperature also directly affect fish stress levels. Higher water temperatures reduce water oxygen capacity, and this, combined with metabolic demands associated with

increased temperature, leads to greater stress on fish. Sustained temperatures above 70°F will result in mortality for anadromous salmonids. Availability of thermal refuges, such as cooler stratified layers in deep pools, or undergravel seeps, can partially compensate for such effects.

The present stream temperature of 68°F - 70°F on the mainstem above the forest boundary is less than optimum for fish survival and success. The stream temperature increases from 70°F to 75°F five miles below the Forest boundary. When under stress from water temperatures exceeding 70°F, fish populations may have reduced fitness, greater susceptibility to disease, decreased growth, and changes in time of migration/reproduction. Growth begins to decline and eventually ceases as the water temperature approaches the upper lethal temperature of 75° F for steelhead trout (Beschta et al. 1987).

The influence of natural variability in flow on fish in the Elk River has been well-documented (Reeves 1988). The spawning habitat accessible to migrating anadromous fish varies with the flow regime from year to year. For example, low flows during the fall drought of 1986 resulted in no chinook production in the upper river, because adults could not enter this part of the watershed. As a consequence, the fish spawned in the lower mainstem and juveniles had limited rearing habitat. A winter freshet in 1987 dislodged many of the eggs and resulted in high mortality and low juvenile populations the following year. Normally, higher fall/winter base flows ensure passage to smaller tributary streams which offer a refuge to egg and fry stages during large storms. Where structures like road culverts have limited juvenile migration, the effects of low flow spawning conditions are exacerbated.

At this time, no dams or other flow-regulating devices are present on the Elk within the upper reaches. Below the Forest boundary, continual water withdrawal by private landholders for agricultural purposes may affect summer survival of salmonids rearing in this portion of the watershed. This particularly impacts rearing conditions for coho salmon and limits the acclimation zone for all downstream migrants to the ocean.

## Productive Flats

Low-gradient reaches with high fish productivity and diversity are known as "productive flats". The locations of these flats within Elk River are displayed in Figure 10. Flats are associated with soft (weak) rocks along the mainstem and on the lower reaches of tributaries such as Red Cedar Creek, Panther Creek, and the North Fork Elk River (Figure 2). In the portion of Elk River above the hatchery, approximately 20% of the stream reaches have low-gradients and are relatively unconfined. These reaches are long-term sites of sediment deposition (McHugh, 1987).

Reeves (1988) found that a number of flats support diverse populations of salmonids and account for a high percentage of the fish standing crop. Flats are sensitive to increased sediment and temperature, and decreased large wood supply.

Flats support a wide variety of habitat types. Sediment is stored in broad floodplains and river terraces within the wide valley floor. The channel often splits around vegetated islands or large wood jams, increasing the number of habitat units and total habitat area. Riparian vegetation provides organic matter, nutrient storage, and low velocity flow areas, increasing levels of biological activity. Accumulations of large wood create complex habitat, scour pools, and provide abundant cover. Deep pools appear to be the major factor in supporting high fish densities and species diversity.

The variety of habitat types support a diverse assemblage of aquatic organisms. Low-velocity riffles and side channels are favored by post-emergent fry. Pools support a mixture of coho, chinook, steelhead fry and yearlings, and older age cutthroat trout, with different species and age classes occupying specific areas within the pools. Shallow riffles are occupied by young-of-the-year trout and are sources of aquatic invertebrate drift forage. Higher-velocity, deeper riffles are used by yearling and older-age trout.

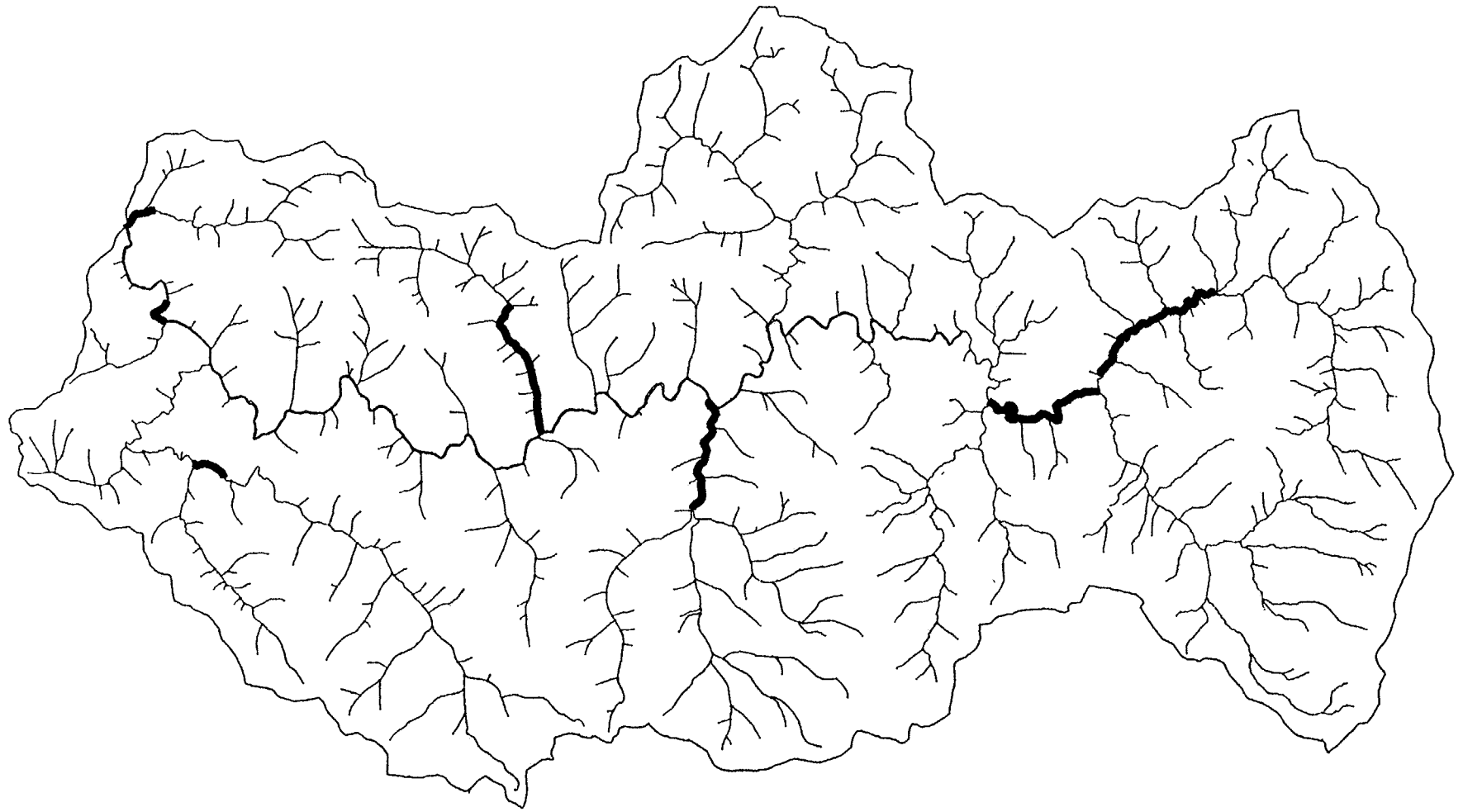
Winter habitat during high flows is crucial for salmonid species that reside in freshwater for more than one year, particularly coho salmon, steelhead, cutthroat trout, and resident trout species. Well-vegetated floodplains disperse flow laterally and reduce velocities during high flow. Large wood, live vegetation, and split channels create quiet-water refuge habitat for juvenile salmonids.

Floodplain and river terrace vegetation provide organic matter. These nutrients become available to invertebrates within the channel following high flows which inundate the flats. At lower flows, organic matter trapped in low-gradient areas is available to instream organisms. Slower water velocities allow soluble aquatic nutrients to be retained longer for use by primary producers and secondary consumers.

Hyporheic zones have been found along a number of the flats in Elk River (Gregory and Lombardi, unpublished). Instream productivity is enhanced by subsurface biological activity along unconfined reaches in hyporheic zones. Microbes fix carbon beneath apparently "dry" gravel bars. Intergravel flow carries nutrients from the microbes and from nitrogen-fixing alder root nodules to the stream channel.

# Elk River Productive Fish Flats

Figure 10: Productive Flats



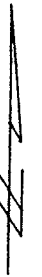
E - 37



Class I, II and III streams



Productive Fish Flats



## Fish Habitat, Distribution, and Populations

Watershed salmonid fish production is driven largely by the production in tributary streams. Tributaries are particularly important for species such as coho salmon and steelhead trout whose life histories have evolved to avoid competition with other salmonid species by utilizing smaller streams. Tributaries serve as refuge for juvenile salmonids during high flow periods; young fish escape winter floods by seeking out protected side streams. Larger tributaries are also utilized by predominantly mainstream species such as chinook salmon, and thus add to the total watershed populations of these fish as well.

The Elk River supports one of the most important and valuable wild runs of anadromous fish in coastal Oregon. Today, the major anadromous salmonid species found in Elk River are chinook salmon (*Onchorhynchus tshawytscha*), winter steelhead trout (*Onchorhynchus mykiss*), and sea-run cutthroat trout (*Onchorhynchus clarki*). However, at the turn of the century, the primary species may have been coho salmon (*Onchorhynchus kisutch*).

The Elk River valley was one of the last areas to be settled along the Oregon Coast. A number of long-time residents interviewed stated that local residents preferred to fish the nearby Sixes River, instead of the Elk, because the Sixes had a substantial run of larger chinook salmon, whereas in the Elk, mostly coho salmon were caught. The lower river was well suited for coho salmon: heavily wooded with spruce and hardwoods, and having multiple channels, slow backwater pools, and numerous log jams.

Dramatic changes in habitat, particularly in the lower watershed, may have been a major cause for the change in dominant fish species from coho to chinook salmon. The key habitat elements which are important for coho salmon no longer exist in the lower Elk. A combination of activities has contributed to these habitat changes. These activities include removal of in-channel wood due to log rafting operations, periodic clearing of wood to maintain drift boat fishing access, increased bedload sediment from upstream sources (generated by harvest and road-related landslides, and large natural storm events), extensive loss of riparian areas from agricultural activities, and similar riparian loss due to bank stabilization projects. At present, habitat conditions now favor chinook salmon and steelhead trout production.

**Chinook:** For a watershed of its size, the Elk River is one of the highest producers of chinook salmon in the Pacific Northwest. The number of chinook produced from the upper reaches varies annually but is estimated at about 40% of the total system production. When only wild fish are considered, the upper reaches account for up to 80% of total wild fish production. Fluctuations in this production are primarily due to variations in flow during the fall/winter months (low flow limits access to the upper watershed and forces chinook to spawn in the mainstem below the hatchery), and sport/commercial fishery escapement (G. Reeves, COPE Report vol. 1, #3, 1988).

Chinook salmon utilize the 17 miles of the upper mainstem, the lower two miles of the North Fork Elk, 1.5 miles of Red Cedar Creek, two miles of Panther Creek, 0.5 miles of Anvil Creek, and approximately 1.5 miles of Butler Creek. Contribution from non-designated tributaries is estimated at 20 - 30% of the upper watershed chinook production (G. Susac personal communication; unpublished ODFW data). A total of 24.5 miles of stream within the upper watershed are utilized by chinook for both spawning and rearing.

Nicholas and Hankin (1988) describe the extended freshwater residency of juvenile chinook in the upper Elk River as an unusual occurrence for coastal Oregon stocks. This may be due in part to the presence of favorable water temperatures in the upper river, as well as the lack of a large estuary at the mouth. In most other systems, juveniles spend considerable time in the estuary, growing to the larger sizes that favor ocean survival.

Adult Elk River chinook salmon are characteristically three and four-year old fish which return primarily from November through January. This is a departure from many other coastal stocks, most of which return earlier in the fall. It is thought that the delay in adult spawning migration is an environmental adaptation to low-water conditions which persist on the southern Oregon coast during the fall months. The Elk also appears to be the southern boundary between north-migrating and south-migrating coastal chinook stocks (Nicolas and Hankin, 1988).

Of concern in any watershed that contains mixed populations of native and hatchery salmonids are the potential effects on wild fish stocks resulting from hatchery supplementation. Long-term hatchery programs have been shown to alter stock characteristics of anadromous salmonids in the Pacific Northwest. In many watersheds today, fisheries scientists are attempting to rectify such problems and protect remaining stocks of wild fish.

The State of Oregon's Department of Fish and Wildlife has operated a chinook salmon hatchery in the Elk River since 1968. Even before construction of the hatchery, far-sighted ODFW managers and scientists began to address the importance of understanding the characteristics of wild stocks, in particular, the value of genetic variability found in native fish. An intensive and unique research program was begun in the mid-1960's to study the life history of Elk River fall chinook salmon. Research results were instrumental in the development of the chinook hatchery program. Only Elk River fish were used for the broodstock program, a significant departure from other programs which used a single non-native stock to supplement a number of watersheds. Breeding followed a complex series of matings to maintain the genetic variability discovered in the life history research. Today, Elk River fall chinook stocks are healthy and its hatchery program is perhaps the best example in the Pacific Northwest of balancing supplementation with wild stock integrity.

**Steelhead:** Juvenile steelhead trout production within the upper reaches and tributaries accounts for an estimated 70-80% of all steelhead produced in the system (G. Reeves, unpublished data). Steelhead trout have the most ubiquitous distribution among the anadromous species; usage (by stream) include 2 miles on the North Fork, 0.5 miles on the South Fork, 2 miles of Butler Creek, 4.5 miles of Panther Creek, 5 miles of Bald Mountain Creek, 1 mile of Blackberry Creek, 1 mile in Anvil Creek, 1.5 miles of Red Cedar Creek, and a total of 1.5 miles in Slate, Sunshine, and Purple Mountain Creeks, as well as the 17 miles of the mainstem. Densities in the North Fork have been estimated to be over 4,000 fish/1000 meters (PNW unpublished data). Total miles used within the upper watershed is 36.0.

A high percentage of extended-residence juvenile steelhead have been noted by ODFW researchers in the Elk River watershed. Typically, in most coastal systems, the majority of outmigrant steelhead smolts are 2 years old. However, trap data indicates that 20-25% of Elk River steelhead do not smolt until 3 years in age (G. Susac unpublished data).

**Cutthroat and Coho:** Sea-run cutthroat trout and coho salmon also occur in various places and densities within the upper reaches of Elk River. Anadromous cutthroat have been found in all areas occupied by steelhead trout juveniles (34.0 total miles). Summer low-flow surveys by PNW and District crews have found that cutthroat may be relatively abundant (up to 30 per pool) and large in size (exceeding 24 inches in length). Coho salmon have been found primarily in the North Fork (Wild River segment), Red Cedar Creek, and Anvil Creek. The 1985 surveys conducted by PNW estimated that coho densities were as high as 0.61 fish/m<sup>2</sup> in the North Fork (Reeves 1987). During that year, coho were present in nearly all tributaries in the upper river. However, in subsequent years, coho have only been seen in Red Cedar, the North Fork, Panther, and Anvil creeks (Reeves et al. unpublished data). These tributaries appear to account for all of the present coho production in the entire watershed.

**Resident Fish:** ODFW biologists have identified Elk River as one of the few coastal watersheds with remnant populations of non-anadromous rainbow trout (P. Reimers, oral communication). They are estimated to populate 27 miles within the mainstem Elk, the lower North Fork and the upper North Fork. Resident cutthroat trout are estimated to occupy 40 miles, including these areas and in many of the tributaries above anadromous fish barriers.



## **AQUATIC ECOSYSTEM - Subwatershed Level**

Some components of the aquatic ecosystem are best examined in finer detail by subwatershed. This section examines each subwatershed, describing its respective condition and unique characteristics.

Landslides and Surface Erosion

Large Wood Supply Affecting the Aquatic Ecosystem

Channel Condition

Fish Habitat, Distribution and Populations

Subwatersheds

North Fork Elk River

Panther Creek

Bald Mountain Creek

Butler Creek

Blackberry Creek

South Fork Elk River

Smaller Tributaries

Elk River has six major tributaries with drainage areas known as subwatersheds. The six subwatersheds range in size from 3,000 to 9,000 acres and are displayed in Figure 11. Within the Forest boundary numerous smaller tributaries to Elk River (known as "facing" drainages) are grouped into middle and upper areas. Tributaries help to maintain overall watershed fish production by distributing the effects of catastrophic, large-scale natural events. Natural events can affect different areas in the watershed at different times, and produce a mosaic of productivity with subwatersheds at various stages of recovery. Existing conditions are a product of past natural and human-caused events.

Data on existing conditions of landslide sediment yield, large wood supply, channel conditions, salmonid fish habitat, and salmonid fish species are summarized in the following subwatershed tables. Following the subwatershed tables, these data are integrated into the narrative descriptions of cause and effect for each subwatershed.

# Elk River Subwatersheds

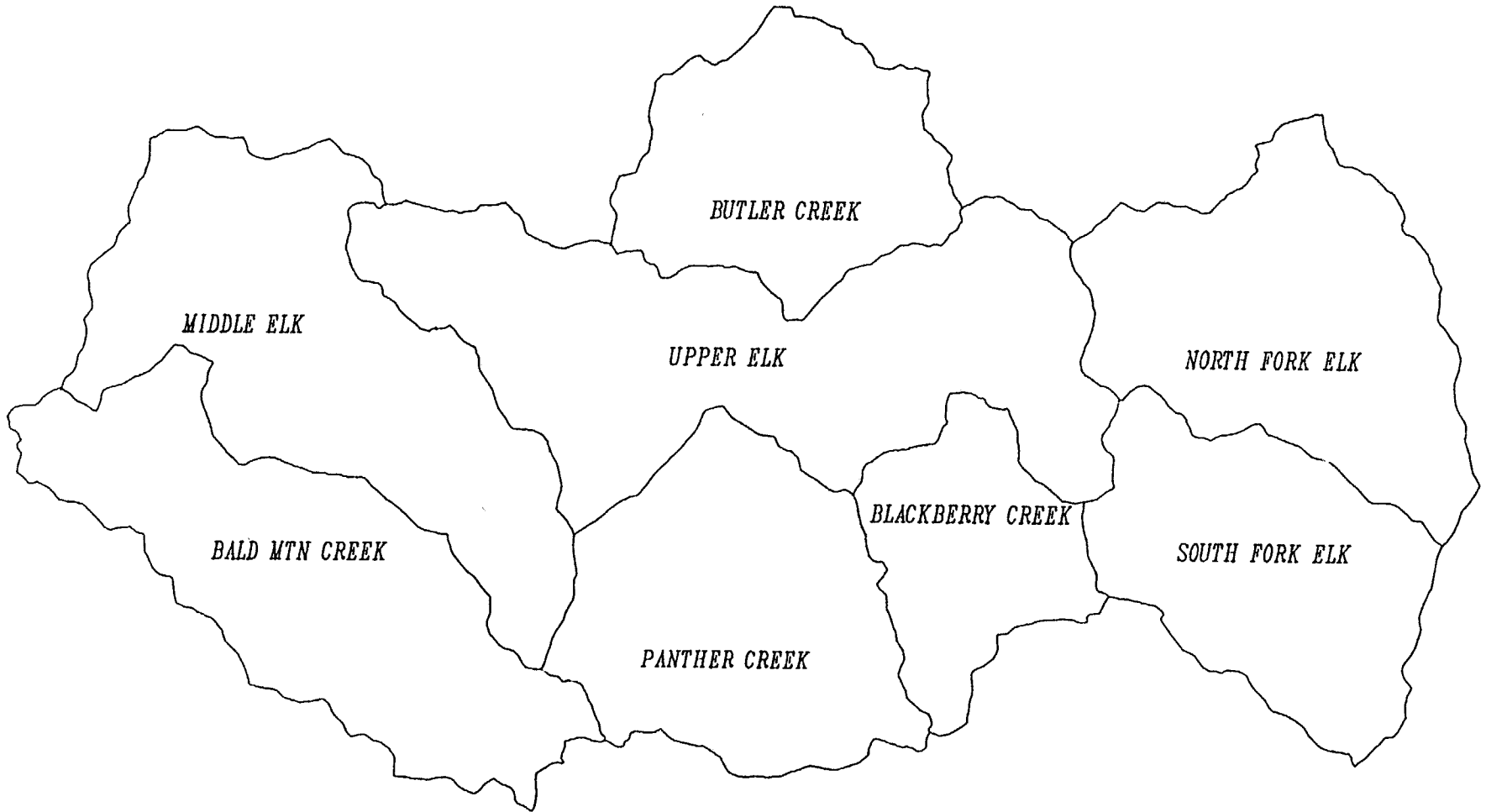
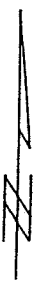


Figure 11 : Elk River subwatersheds



## Landslides and Surface Erosion

Landslide sediment yield varies among the subwatersheds due to inherent slope stability and land use history. The total volume of delivered sediment has been divided by the area of the subwatershed to allow meaningful comparisons. Figure 12 displays landslide sediment yield for subwatersheds in Elk River. High yield areas may be concentrated within a single landslide (eg. a large natural slide in the east fork of Panther Creek), or distributed across part of the watershed (eg. harvest slides in the east fork of Butler Creek). Figure 9 indicates the areas of greatest road and harvest disturbance. Within the Middle Area, sediment yield from road construction on high watershed sensitivity lands is concentrated in Purple Mountain Creek.

Where timing of landslide sediment delivery is relevant to current channel conditions and recovery rates, it is discussed in the narrative descriptions of the subwatersheds.

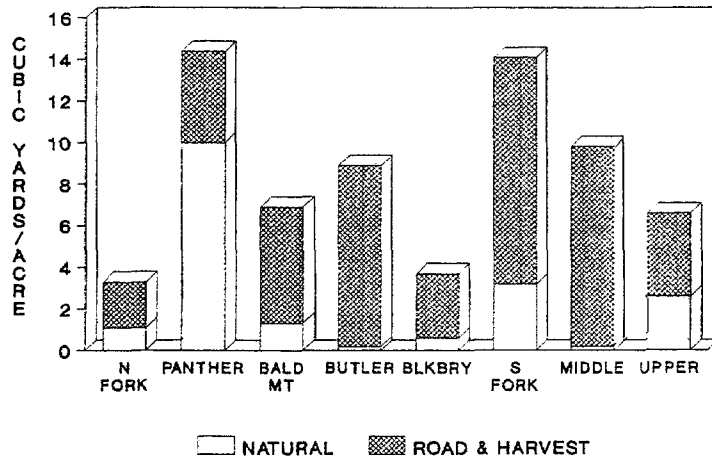
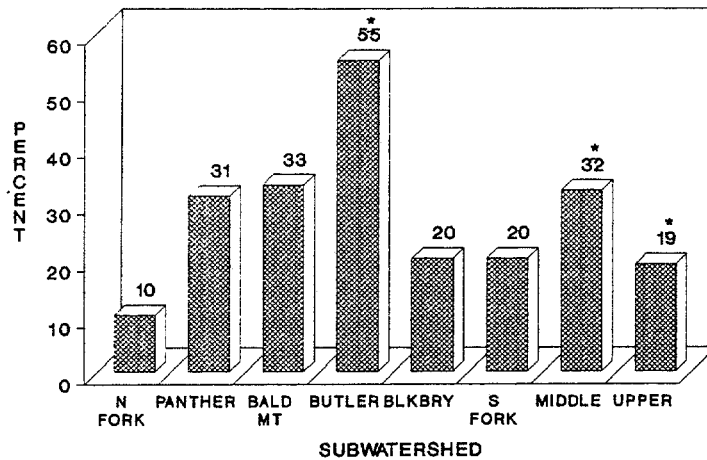


Figure 12: Landslide sediment yield for Elk River subwatersheds, 1952-1986.

## Large Wood Supply Affecting the Aquatic Ecosystem

The area mapped as high watershed sensitivity (Figure 7) is a reasonable approximation of the area which can supply large wood to stream channels. Figure 13 gives the percentage of the area mapped as high watershed sensitivity which has been harvested. Some of these stands are now composed of hardwoods and will not provide large wood to channels until replaced by conifers.



**Figure 13: Large wood supply, percent harvested from high watershed sensitivity area**  
 \*Data is for only the portion of the subwatershed outside Wilderness.

## Channel Condition

Comparison of channel surveys, channel changes in historical aerial photographs, estimates of sediment delivery and the channel capacity to transport sediment indicate how the channel has responded to natural and human disturbance. Figure 14 summarizes those findings. Stream temperature can be affected by both removal of shade trees and excessive sediment loading which can cause the channel width to increase and depth to decrease.

	N Fork	Panther	Bald Mt	Butler	Blkbry	S Fork	Middle	Upper
Past Channel Effects From Sediment	Low	Mod	High	High	Low	Mod	High	Mod
Stream Temperature	Low	Mod	Mod	Mod/High	Low	Low	Low	Low
Drainage Area Acres	6107	5790	6788	4380	2985	4943	7321	8810
% gradient at Critical Reach	1.2	1.0*	0.8	0.8	2.0	0.8	NA	NA**

\* Critical Reach is at Panther Forks, lower Panther gradient is 2.5%

\*\* Red Cedar Creek gradient is 1.0%

**Figure 14: Summary of channel condition by subwatershed**

## Fish Habitat, Distribution and Populations

Watershed habitat and population data were generated from various stream surveys to interpret the resource values for watershed salmonid habitat. These surveys include those conducted by USFS PNW under the direction of Dr. Gordon Reeves (1985-1991) and are augmented by data from surveys conducted by the Powers Ranger District (1988-1991), which used increased sampling for fish (more time periods for sampling and more units sampled per effort). Figure 15 displays the factors used to develop these values:

Tributary watershed	Miles avail	Fish Information:			Current Habitat Conditions @ Low-Gradient Reach							
		Anad Species present	Pop'n size	Contrib. to Elk River	P:R ratio**	# pools	Large wood/pool	% pools >3' deep	Reach length (miles)	Winter habitat	Habitat Ranking	HABITAT VALUE
North Fork (to falls, 2 mi)	2	coho chinook steelhead cutthroat res trout	high high high high high*	high high high high high	0.73	44	(54/44) = 1.22	50%	1.25	exc	# 1	HIGH
Panther Cr (incl. 3 forks)	5	coho chinook steelhead cutthroat res trout	mod* mod high mod mod*	high high high high mod	0.68	18	(32/18) = 0.56	44%	1.00	exc	# 2	HIGH
Bald Mt Creek (mainstem to falls)	7	coho chinook steelhead cutthroat res trout	low* low* high mod mod*	mod mod high mod high	0.64	77	(77/59) = 1.31	39%	0.50	exc	# 4	MODERATE
Butler Cr (to forks)	2	coho chinook steelhead cutthroat res trout	low low mod low low*	low low mod low low	0.94	8	(6/8) = 0.75	13%	0.25	poor	# 6	LOW
Blackberry Cr (above forks)	2	steelhead cutthroat res trout	mod low low	mod low low	0.50	4	(4/3) = 1.33		0.75	fair	# 3	MODERATE
South Fork (to Elk Lake side)	1.5	coho chinook steelhead cutthroat res trout	low low mod low mod*	low low mod low mod	0.30	33	(19/33) = 0.56	33%	0.50	fair	# 5	MODERATE
Middle face drainages	2.5	steelhead* cutthroat	low* mod	low mod	n/a	n/a	n/a	n/a	0.50	poor	# 7	LOW
Upper face drainages	1	steelhead cutthroat	low low	low low	n/a	n/a	n/a	n/a	0.25	poor	# 8	LOW

\* Historically present in greater abundance

n/a = data not available

\*\*P:R, Pool to Riffle ratio

Figure 15: Assessment of Resource Value for Watershed Salmonid Habitat

## North Fork Elk River

The North Fork begins at approximately river mile 30. McHugh (1987) observed that the lower North Fork flows through an unconfined channel formed within a fold in the bedrock of the Rocky Point Formation. Large, ancient dip-slope failures have delivered debris to the wide axis of the fold. Sediment deposits form multiple terraces up to 33 feet above the current stream surface. The highest terraces may correspond to tectonically elevated Pleistocene marine terraces located 19 miles to the west. Extensive wildfire in the watershed has created even-age (80-90 years) stands; however, charred old-growth snags were noted on the terraces suggesting the higher terraces are more than several centuries old. Stream constrictions and related large wood accumulations are formed by reworked deposits from the ancient failures, or where more resistant rock types are exposed in the channel.

The earliest aerial photos show extensive areas of open canopy with multiple large wood jams and aggraded reaches. Historical aerial photos and stream deposits provide evidence that the North Fork has been subjected to numerous debris flows. Thick deposits exposed from downcutting of the stream occurred prior to 1910. This large volume of sediment may have been deposited from transport of debris flows triggered by storms in the 1890's, following fires in the 1870's. These debris flows may have contributed to today's highly productive habitat by providing a source of wood for habitat structure and nutrients. The sediment fans at the mouths of the tributaries are chronic sediment sources for the North Fork.

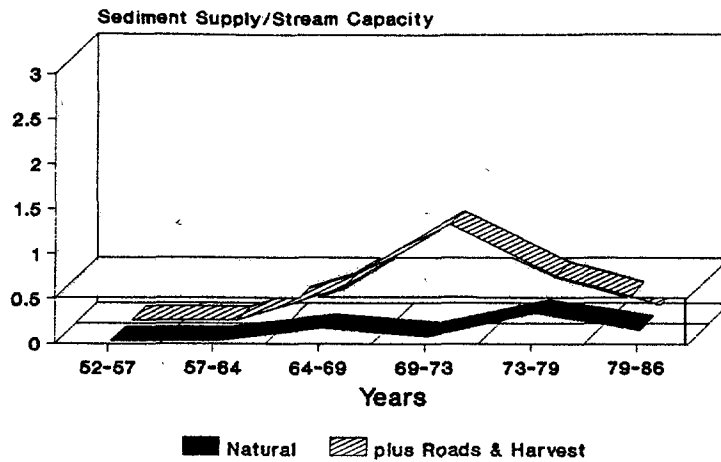
Immediately upstream of the Rocky Point formation, the channel flows through Humbug Mountain Conglomerate, where it develops a steep gradient that is a barrier to anadromous fish (this includes the falls). Above the steep reach, more gentle hillslopes are underlain by Galice Formation.

Sediment quantities that exceed the stream channel's capacity to transport sediment can cause changes in channel geometry and streambed composition. Sediment from landslides related to roads and harvest primarily in 1970-72, has aggraded the stream channel of the upper reach. It is unknown how much of the sediment may have been transported through to the fish habitat of the lower North Fork.

Figure 16 estimates the lower North Fork's sediment transport capacity relative to sediment delivered from both natural and land use practices. Sediment delivery values used in the analysis may be an overestimate, since a proportion of the sediment delivered to the upper reach remains in storage. The sediment transport capacity of the lower North Fork was only exceeded for a brief period in the early 1970's. Based on these findings, it is speculated that land use practices have not adversely affected the lower reach. This is consistent with field observations which show the lower channel to be in excellent condition (Appendix B: Data Used to Support Analysis).

Summer stream temperature in the North Fork is excellent, with maximum temperatures in the low 60° F.

The North Fork contains high quality salmonid fish habitat, and all salmonid species indigenous to the watershed are present in high numbers. The unconfined stream reach in the lower two miles (Figures 2 and 10) is accessible to anadromous fish and exhibits all of the benefits to aquatic diversity associated with productive flats. This reach is particularly important for chinook and coho salmon production.



**Figure 16: North Fork Elk River Channel Response to Sediment**

Ratios greater than 1.0 indicate sediment supply exceeds stream transport capacity. Ratios greater than 0.5 indicate possible effects on channel morphology.

### Panther Creek

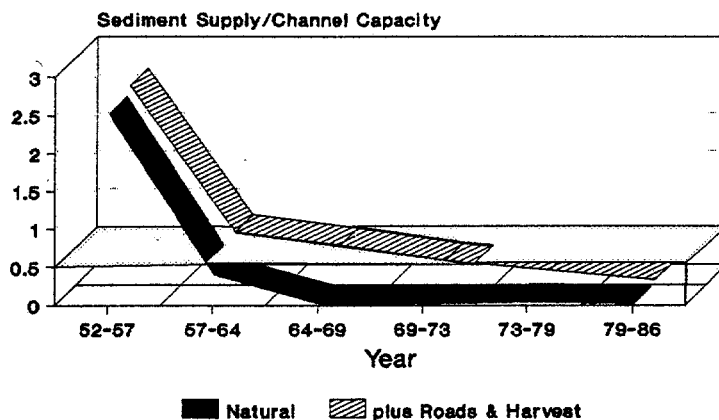
Panther Creek is a southern tributary which enters Elk River at approximately river mile 23. McHugh (1987) observed that the mainstem of Panther Creek follows a major fault. Sediment from large ancient slumps and slides has created multiple, historically long-term terrace deposits bordering a wide flood plain. The terraces are well vegetated with older stands of trees. The stream flows in a sinuous pattern, deflected between the terraces and resistant bedrock, and is characterized by shallow glides and riffles. Lateral scour pools are shallow; lateral and mid-stream gravel bars are common. Near the mouth of the stream is a faulted contact between the Galice and Humbug Mountain Formations. As the stream flows through the more resistant conglomerate, the bedrock channel is constricted and develops a bouldery, stepped gradient.

The East Fork of Panther Creek flows through the Galice Formation. Several large, natural failures have created unstable deposits of sediment which periodically fail, delivering boulders, finer-textured sediment, and large wood to the channel. These deposits have created a stepped stream gradient, a high degree of channel sinuosity, and multiple stream constrictions, which are sites of long-term wood accumulations. Sediment is stored behind the jams and is released periodically during high stream flows. The East Fork does not have any extensive areas of open riparian canopy or aggradation. One aggraded section appears along the toe and downstream of a large natural landslide which is active at the toe. This section is about a mile upstream from the confluence with the mainstem. This slide has delivered an estimated 44,000 cubic yards of sediment to the channel, presumably from the 1955 storm. This slide accounts for the high sediment yield for Panther Creek shown in Figure 12.

The West Fork of Panther Creek flows through the Humbug Mountain conglomerate. Slopes are steep, and ravel is the dominant erosion process. The stream course is controlled by the major faults, resulting in long, linear reaches and a low degree of channel sinuosity. Several debris slides and flows delivered pulses of fine sediment to the stream as a result of harvest prior to 1956 on privately-owned land in section 36, and harvest in 1972 lower in the drainage. Woody material is limited to small logging slash. Intermittent scour and aggradation is typical of the West Fork of Panther Creek. Because the stream reach is relatively steep and straight, the stream channel and banks are vulnerable to scour from debris flows.

Both the East and West Fork lower reaches are aggraded from past sediment delivery. The lower mile of the West Fork where the gradient varies from 2 to 3 percent, remains severely aggraded. Despite low sediment delivery for the past 20 years, recovery has been slow with the channel just beginning to form pools behind logs and boulders and the width to depth ratio improving. If sediment loading remains low it is estimated that full recovery will occur over the next 15 to 25 years.

Figure 17 compares the total sediment delivered from both natural and land use practices to Panther Creek's sediment transport capacity in the "productive flats" area (Figures 2 and 10) (see Appendix B: Data Used to Support Analysis). Total sediment values used in the analysis may be an over estimate, since a proportion of the sediment delivered to its upper reach and East and West Fork remains in storage. Based on the transport analysis, it is estimated that the large natural slide on the East Fork and road and harvest activity in the late 1950's through the 1960's created excessive sediment loading to the "productive flats" area on the mainstem. This probably resulted in loss of pool volume from encroachment of gravel bars as coarse-grained sediment accumulated. Because of the lack of fine-grained sediment, loss of pool volume from the accumulation of fine sediment probably did not occur. The low level of sediment delivery for the past 20 years combined with the ability of the mainstem to move sediment has allowed the channel to recover. This is consistent with field observations which show the lower channel to be in excellent condition.



**Figure 17: Panther Creek channel response to sediment**

Ratios greater than 1.0 indicate sediment supply exceeds stream transport capacity.  
 Ratios greater than 0.5 indicate possible effects on channel morphology.

The East Fork of Panther Creek has several large, natural failures which periodically deliver boulders and finer textured sediment to the channel. These periodic failures cause short term adverse affects to water clarity in the mainstem of Panther Creek and the downstream mainstem of the Elk River.

Measured stream temperature at the mouth of Panther Creek reaches a summer peak of 65.5 degrees F. From river mile 1 to the mouth the stream temperature increases 4 degrees. The channel is wide, increasing stream heating through this section. Such areas, while warm in temperature, are considered to be fish/aquatic production "hotspots". Elevated temperatures in these reaches contribute to higher productivity, but must be moderated by cool water input from upstream sources. Average peak summer temperatures for most of the resident fish habitat, in the upper portions of Panther Creek, range from 59 to 62 degrees F. Estimates indicate that summer stream temperature at the mouth has increased 4 degrees from timber harvest in the upper part of the drainage. Without



further disturbance, Panther Creek stream temperature is predicted to decrease at a rate of 1.6° F every 10 years.

Panther Creek contains all of the salmonid species present in the watershed, has a moderate population of both species of salmon and a high steelhead population, and is rated as the second most important subwatershed. The lower mile of Panther Creek is a productive flat, susceptible to changes in sediment and large wood input as discussed above. A maximum of 6.5 miles of habitat are accessible to anadromous fish.

### **Bald Mountain Creek**

Bald Mountain Creek is a large southern tributary that enters the Elk River at approximately river mile 15, two miles above the fish hatchery. The lower third of Bald Mountain Creek drainage is largely under private ownership. Except for a small area in the upper part of the watershed managed by the BLM, the remaining area is under Forest Service management.

A flat is located above the confluence of the mainstem and the South Fork of Bald Mountain Creek (Figures 2 and 10). This area is surrounded by large slump-earthflows in complex geologic structure with multiple faults (McHugh, 1987). Weaker Galice Formation and ultramafic rocks are mixed with more resistant metavolcanics and diorite exposures. Periodic undercutting of the slump-earthflows by the channel causes reactivation of the slides, with chronic sediment and large wood delivery to the channel. The channel is sinuous with a low gradient, wide floodplain, and multiple terrace deposits with high groundwater retention. Reaches upstream in the diorite are straighter, with shallower channel units resulting from durable cobble-sized sediment delivered by debris slides and torrents.

The presence of many large boulders and large wood jams that completely blocked the channel in the lower to middle portions of the creek was documented in a 1930's log transport feasibility report (Port Orford Ranger District). Reeves (1984) reported the importance of large wood jams, both partial and complete, in accumulating and retaining gravels in lower Bald Mountain Creek. The formation and degradation of debris jams appears to be an on-going process. There is evidence of many previous jams along the stream, particularly at channel constrictions. When a jam breaks, woody material and gravel move downstream and become incorporated into new or existing jams. There are several partial jams in the upper portion of the survey area that are in various stages of rebuilding. The largest jams are located in the middle to lower sections. According to local residents, these jams were smaller before upstream jams broke during a storm event in 1986. An estimated 50-75% of the wood in these jams accumulated since that event. At one site where the jam is estimated to be 5 meters high, nearly all of the estimated 10,240 cubic meters of gravel accumulated as a result of that event (local resident, oral communication with Reeves).

Considerable quantities of sediment have been delivered to the mainstem of Bald Mountain Creek, both directly and via two tributaries which enter from the south in section 27. Notable landslides are from Roads 5502 and 5400020, from harvest on privately-owned land in section 22, and from harvest of the Oakridge units in 1979.

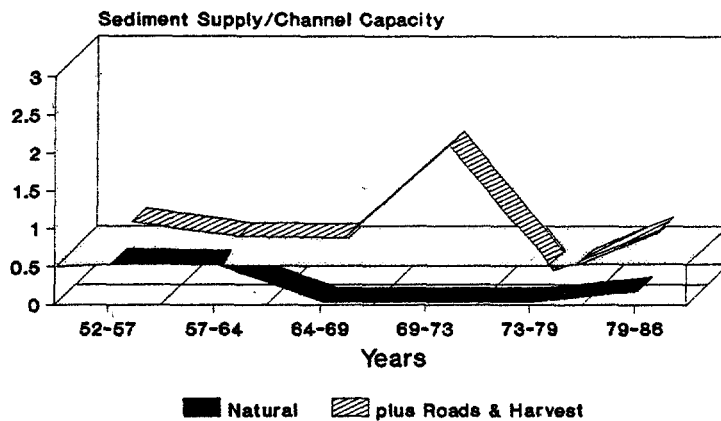
McHugh (1985) documented an increase in open riparian canopy perhaps resulting from the 1964 event, but also saw an upstream shift in the distribution of open riparian canopy from 1956, 1969, and 1979 photos. The magnitude of road and harvest-related slides in this upstream reach has aggraded the channel and created a distinct change in the riparian vegetation.

Figure 18 compares the total sediment delivered from both natural and land use practices to Bald Mountain Creek's sediment transport capacity in the low gradient area on the mainstem (Figures 2 and 10) (see Appendix B: Data Used to Support Analysis). Total sediment values used in the analysis may be an overestimate, since a proportion of the sediment delivered to its upper reaches remains in storage. Based on the transport analysis, it is estimated that the sediment transport capacity has been continually exceeded for the past 40 years from harvest activity predominately on private lands.

The excessive sediment loading to the mainstem has caused pools to fill and the channel width to depth ratio to significantly increase. These findings are consistent with field observations and fish surveys. It is speculated that the continued persistence of debris flows from road and harvest units may be affecting channel recovery.

A periodic source of turbidity is present at the toe of a large earthflow located in T33S, R14W, section 20, adjacent to the USFS property in the northwest quarter of that section. In the past, a shift in the channel location directed streamflow into the landslide toe, carrying fine sediments downstream which clouded Bald Mountain Creek and the mainstem Elk River below the confluence. Water clarity of the mainstem of the Elk River was affected past the fish hatchery and well into the lower river, following the largest winter storms and persisting for two to three days. Presently the toe of the earthflow is protected from erosion by large wood and boulders.

Measured temperatures at the mouth of Bald Mountain Creek reach a summer peak of 67° F. Estimates indicate that summer peak stream temperature at the mouth has increased 6° F as a result of timber harvest and road construction. Estimates further indicate that most of the stream heating occurs on the lower mainstem of Bald Mtn Creek where the temperature increases from 60°F at river mile three to 67° F at the mouth. This is primarily attributed to a wide aggraded channel and the harvest of tall conifers which were replaced by hardwoods as the primary stream shade. Recent harvest on private land in 1988 did not leave adequate riparian buffers to protect stream temperature. Estimates show that the stream temperature at the mouth was increased by 0.5°F after harvest. With continued harvest on private land and debris flows, it is speculated there will be little or no stream temperature recovery.



**Figure 18: Bald Mountain Creek channel response to sediment**

Ratios greater than 1.0 indicate sediment supply exceeds stream transport capacity.  
 Ratios greater than 0.5 indicate possible effects on channel morphology.

A report from the Oregon Game Commission (mid-1960's) indicated that Bald Mountain Creek contained coho and chinook salmon, in addition to steelhead trout. Increased quantities of sediment and elevated stream temperatures may be responsible for the loss of the salmon in Bald Mountain Creek. Today, salmon juveniles are largely absent from Bald Mountain Creek, but the high densities of juvenile steelhead contribute substantially to the Elk River steelhead population. The salmonid habitat rating is moderate, with some flats not meeting their productive potential. A maximum of five miles is accessible to anadromous fish in the subwatershed.

The Bald Mountain Creek subwatershed may be an example of how timber harvest and road building can influence the assemblage of anadromous fish. Sediment loading and alteration of stable stream habitat features favor winter steelhead that spawn in the spring after most gravel-shifting rainstorms occur. Juvenile steelhead can rear successfully in riffle-dominated environments. Salmon prefer pool habitat and large wood material (coho), and are usually associated with more stable stream systems.

## **Butler Creek**

Butler Creek is a northern tributary entering Elk River at approximately river mile 24. The west half of the Butler Creek watershed is within the Grassy Knob Wilderness. Butler Creek is underlain by steep slopes of the Humbug Mountain Conglomerate and Rocky Point Formations. Debris chutes deliver sediment containing the rounded gravels that are preferred for spawning substrate into Butler Creek and into the mainstem Elk River.

One of the most intense disturbances in the Elk River watershed occurred in the lower east fork of Butler Creek in 1961 (Figure 2). Within a single harvest unit of 330 acres, trees were clearcut from unsuitable lands and from riparian areas, roads were constructed in midslope locations and within the east fork. A hot fire consumed the remaining ground cover. The resulting chronic ravel and debris avalanches buried the east fork channel. Ongoing ravel requires regular maintenance of the road ditches. McHugh (1987) observed that the east fork debris chutes correspond with the intersection of rock bedding and joint planes.

Periodic, less intense sediment delivery from road and harvest has continued to the present. Today, the primary sediment source of concern is the major access road from Butler Bar to the north, Road 5201. Ravel from the steep cutbanks and slides of unstable fillslopes will continue to be delivered to the mainstem of Butler Creek. Because lower Butler Creek is relatively confined, with higher gradient, sediment tends to be transported to the mainstem, rather than stored. The sediment load carried by Butler Creek to the mainstem of Elk River has created a large fan below the confluence.

Ravel from Road 5201 is also a concern for water clarity. It may produce some moderate adverse effect on water clarity in Butler Creek with minimal effects on the mainstem of the Elk River.

Measured temperatures at the mouth of Butler Creek reach a summer peak of 68°F. It is estimated that summer stream temperature at the mouth of Butler Creek has increased 7° to 8° F as result of timber harvest activities.

The primary source of heating in Butler Creek is the east fork located approximately 1 1/4 miles from the mouth. Water temperatures as high as 78°F from the tributary mix with the mainstem of Butler increasing temperature from 59°F above to 67° below the tributary. The elevated temperatures within the tributary limit its value as fish habitat. Stream temperatures above the east fork are good for resident fish habitat ranging from the 55°F to 59°F.

Without further disturbance, estimates show that Butler Creek's stream temperature at the mouth is decreasing at a rate of 1.4° F every 10 years. The recovery rate has been slowed by continued ravel and shallow failures from the large 1961 harvest unit along the east fork.

Butler contains primarily steelhead and resident trout. It has a low habitat value and a low contribution to the salmon and trout population, and a moderate contribution to the steelhead population of Elk River. Of the major tributaries to Elk River, Butler Creek has the lowest habitat ranking.

## **Blackberry Creek**

Blackberry Creek is a southern tributary located at approximately river mile 28. Blackberry Creek has two branches, known as the east and west forks. The effects of past road- and harvest-related disturbance in the upper east fork of Blackberry Creek are not evident in the stream reaches utilized by anadromous fish (particularly below the forks). There is little evidence of excessive coarse sediment aggradation or channel instability (the stream substrate is composed primarily of large rocks or boulders, with abundant growths of moss). Large wood is abundant, stable, and of natural origin. Streambanks along these reaches are also stable, much of it being composed of bedrock walls. Riparian areas are intact, with large alders, big leaf maple, and Douglas-fir providing 85-95 percent shading. The stream temperature is good ranging from the mid 50° F in the upper reaches to the 60°F at the mouth.

Stream surveys (USFS 1984) indicate that the only anadromous fish species which rears in Blackberry Creek is the steelhead trout. ODFW surveys have found few or no chinook salmon using Blackberry Creek as a spawning site (G. Susac, personal communication). The primary use by steelhead appears to be in the reach below the forks (stream mile 0.0 to 0.5). Anadromous fish access may have been restricted in the past by the culvert under Forest Service Road 5325. In 1985, fish passage was improved by installing weirs in the culvert to lower flow velocity and by raising the outlet pool to reduce the jump height. Blackberry Creek contains only steelhead and resident trout, and is considered of moderate importance to the Elk River steelhead population. Approximately one and a half miles are accessible to steelhead.

## **South Fork Elk River**

The South Fork Elk River begins at approximately river mile 30. In the South Fork, a large earthflow constricts the channel, providing a barrier to fish migration approximately one mile upstream from the mouth of the creek. The extensively aggraded reaches above this constriction are due to sedimentation from both natural sources such as the debris flow from the south side of Copper Mountain, and the intensive road and harvest disturbance in the subwatershed during 1964-69 (Figure 9).

A large earthflow located on the South Fork approximately a half mile from the confluence with the mainstem periodically delivers sediment to the channel. This source of sediment will occasionally affect water clarity on the lower South Fork and upper mainstem of the Elk River.

The South Fork is exceptionally cool with summer peaks reaching only 59°F. The stream runs subsurface during the summer, through the aggraded reach, so it is not exposed to solar heating. This accounts for the unusually cool temperature.

The South Fork Elk River contains low numbers of steelhead and resident trout, with occasional presence of coho salmon. Habitat is limited to the lower mile of the creek and nearly all steelhead rear in the lowest quarter-mile of this stream. The anadromous fish use is extremely limited due to steep gradients and numerous barriers. The contribution to Elk River steelhead population is rated as low.

## **Smaller Tributaries**

The mainstem of Elk River has numerous tributaries which are too small to be designated as subwatersheds. These are known as "facing" drainages, and have been divided into groups of Lower, Middle, and Upper areas. The Lower Area drains into the mainstem downstream from the hatchery. The Middle Area includes Anvil, Slate, Purple Mountain, and other unnamed creeks. The Upper Area includes Red Cedar, Sunshine, Lost, Milbury, Bungalow, and other unnamed creeks.

These tributaries are important as sources of sediment and large wood because of their proximity to the mainstem. The high volume delivered by natural slides in the Upper Area (Figure 12) is mainly from three large slides ranging from 9,600 to 17,700 cubic yards which failed prior to 1973. In the Middle Area, four road-related slides ranging from 10,300 to 29,400 cubic yards failed prior to 1969 along Elk River Road No. 5325. Within Purple Mountain Creek (Middle Area), intense road and harvest disturbance following the 1962 blowdown event caused extremely high sediment delivery from landslides and surface erosion (Figure 12).

Red Cedar Creek is included in the Upper Area. Located entirely within the Grassy Knob Wilderness, all disturbance in this watershed has been of natural origin. Humbug Mountain Conglomerate is present in the upper watershed, with a high-gradient bedrock and boulder cascade channel (McHugh, 1987). The lower mile of Red Cedar Creek is within the Galice Formation. Several relatively large inactive debris slides are present within the deep soils. Debris deposits form terraces along a relatively sinuous, low-gradient channel. Large wood accumulations are present at channel constrictions.

In the lower channel, a debris slide in February, 1986 (known as the "alder patch" to stream survey crews) was cited as having reduced the areas of pools and glides by 22% and 72%, respectively, between surveys in 1985 and 1986 (Reeves, 1988, p.13). The landslide inventory update by McHugh did not detect a new slide in Red Cedar Creek. This may be because it was a reactivation of an existing slide, a slide that was too small to include (<100 square meters), or an oversight in the inventory. Additional information about the effects of such a natural event on fish habitat could be gained by reexamining the aerial photos and comparing pool and glide areas from subsequent stream surveys.

The smaller tributaries such as Anvil, Red Cedar, and Purple Mountain Creek contain lesser amounts of aquatic habitat for salmonids. The stream temperature on these tributaries is good ranging from the mid 50° F to low 60°F. The lower reaches of these tributaries are important for juvenile refuge from high stream temperatures and high flow conditions in the mainstem.

## **CHAPTER 4 CONDITION TRENDS**

### **COMMODITY VALUES**

Elk River's direct economic contributions to the local economy are minimal. The President's Forest Plan will result in the harvest of approximately one million board feet of timber each year, and fish runs may continue to supply a few commercial fishing jobs.

### **AMENITY VALUES: Scenery**

In the lower portion of the Elk River, road and building construction will continue to increase as the area continues to grow in popularity. Service-oriented small businesses may proliferate in response to the needs and expectations of visitors.

The President's Forest Plan will result in a decline in opportunities for timber harvest in the upper portion of the Elk River. This will result in the maintenance of a Natural to Near Natural scenic condition. Views to the river from the Elk River Road will become more limited as vegetation continues to grow in the foreground. Increased recreational use and development may be more evident along the Elk River Road.

In the North Fork, South Fork, and the tributaries, previously harvested units will become less evident as vegetation continues to grow.

The scenic quality of the Grassy Knob Wilderness area will remain the same.

### **PUBLIC USE VALUES: Recreation and Access**

Most of the current recreation use in the Elk River watershed takes place within the river corridor. This pattern is likely to continue into the future. The Elk River is easily accessible from the parallel road on the south bank, and the most suitable sites for dispersed or developed campgrounds are found close to the river.

Driving for pleasure will probably continue to be another popular recreation use of the area. The recent designation of the Rogue-Coquille corridor as a Scenic Byway will likely result in "spill over," increasing recreation use of the Elk River Road.

Road decommissioning as part of watershed restoration efforts will result in increased semiprimitive, nonmotorized recreational opportunities and decreased semiprimitive, motorized opportunities. This will affect hunting and other recreation use patterns.

## **ENVIRONMENTAL QUALITY AND ECOLOGY: Terrestrial Ecosystem**

### **Landscape Patterns: Disturbance Frequency and Patch Size Large Woody Material**

#### **Landscape Patterns: Disturbance Frequency**

Decreased fire frequency can result in a variety of associated changes to stand structure, fire intensity, patch sizes, and the amount of large woody material found on site. Stand structure changes to a more dense understory with a higher percentage of shade tolerant trees, such as western hemlock, in the overstory. The increased fuel loading from fire suppression activities generally results in more high-intensity, stand replacing fires and a net reduction in large woody material. Existing plantations are characterized by "flashy fuels" and will host high intensity fires, which in turn, further reduce large woody material levels.

Increased fuel loading of understory and overstory vegetation alters fire behavior. If the infrequent disturbance patterns of approximately 500 to 800 years continue, then fires will be less frequent than historical patterns, but larger, and more intense.

Weather conditions and vegetation patterns determine the amount of blowdown (Spies and Franklin, 1989). As the patch size increases, the edge effect decreases. Consequently, as patch sizes increase with the changing disturbance pattern, less blowdown is expected to occur. The reduced edge effect and blowdown may be somewhat counter-balanced by the increased western hemlock stand component. Western hemlock is less wind-firm than Douglas-fir; as it becomes a larger component of the overstory, more blowdown can be expected.

Future disturbance trends will vary with the amount and type of disturbance events and management activities. If suppression activities are successful and no harvest occurs, the projected disturbance interval would be 500-800 years. Figure 19-A displays projected age class distribution and Figure 19-B displays projected stand replacement intervals.

#### **Landscape Patterns: Patch Size**

The patch size in the proposed Late-Successional Reserves will become larger as a combined effect of curtailed timber harvest and continued fire suppression. Larger patches will reduce the amount of edge habitat while the amount of interior old growth habitat will increase.

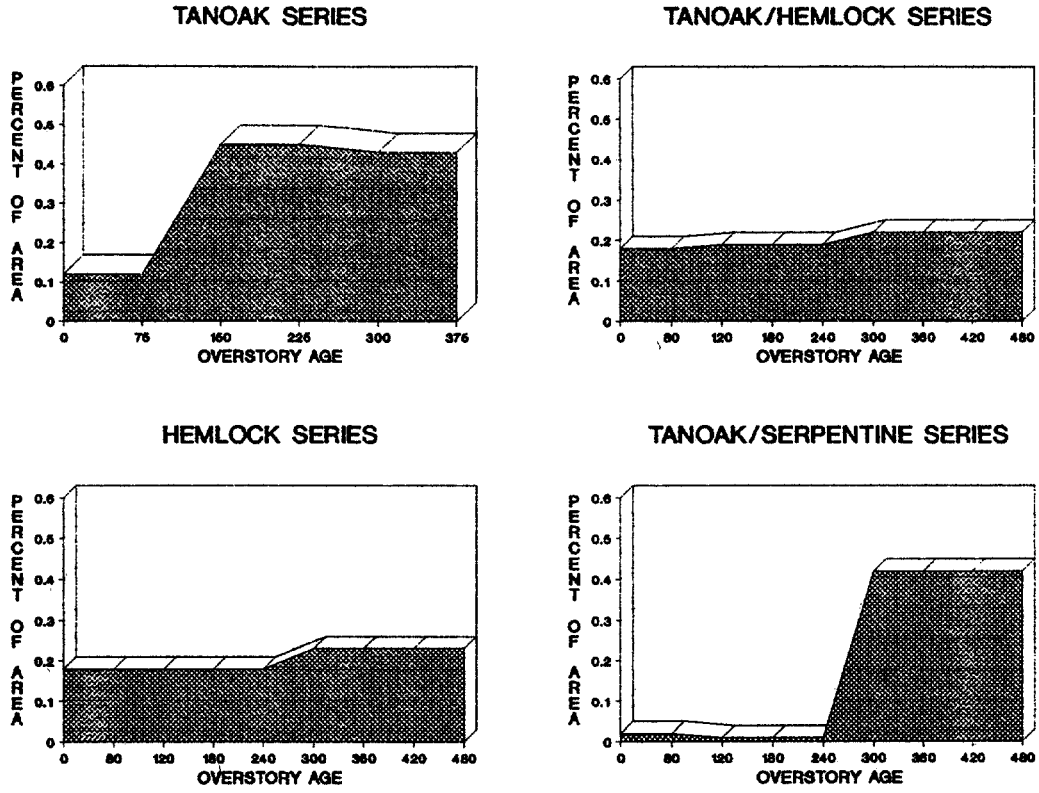


Figure 19-A: Projected Age Class Distribution

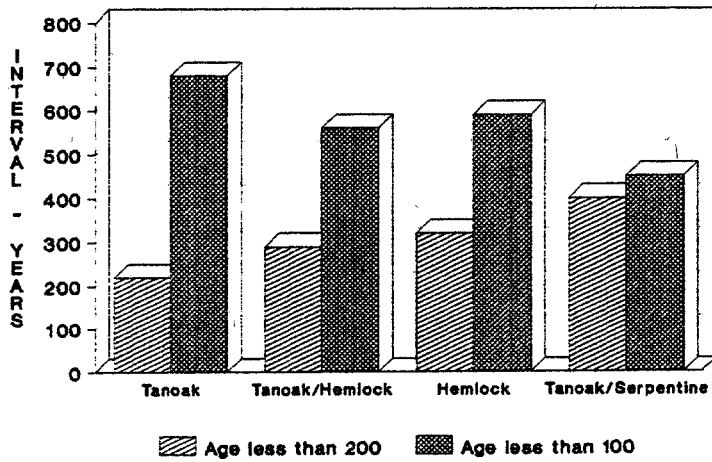


Figure 19-B: Projected Stand Replacement Interval



## **Large Woody Material in the Terrestrial Ecosystem**

The amount of large woody material in the watershed is projected to increase due to growth and development of structure associated with older forests. even though the more intense, though less frequent, stand replacement fires will consume more large wood.

## **ENVIRONMENTAL QUALITY AND ECOLOGY: Aquatic Ecosystem**

- Landslides and Surface Erosion
- Water Clarity
- Large Wood Supply Affecting the Aquatic Ecosystem
- Riparian Canopy Disturbance and Stream Water Temperature
- Stream Flow
- Channel Morphology
- Fish Habitat, Distribution, and Populations

### **Landslides and Surface Erosion**

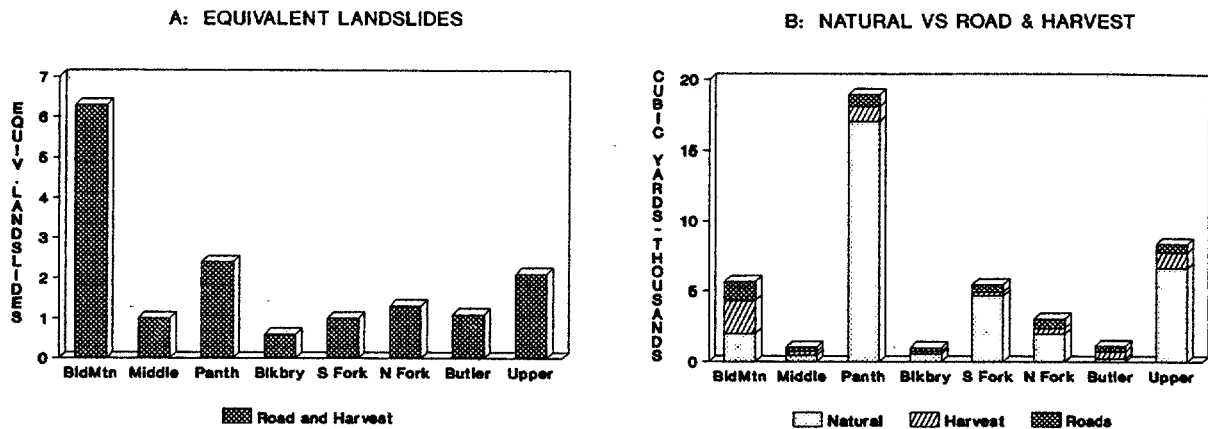
Sediment delivery is expected to continue from three sources:

- \* the continued effects of past activities on both Federal and non-Federal lands,
- \* new management-related disturbances on non-Federal lands, and
- \* natural disturbances.

Sediment delivery and surface erosion are expected to be reduced from levels observed from 1960 to the late 1980's. This anticipated change is a result of reduced timber harvest and road construction activities as well as improved land management practices. Because timber harvest has traditionally generated road maintenance funding, the designation of Late Successional Reserves will reduce funds available for road maintenance. Older roads will continue to fail and erode in some areas.

An average volume of road and harvest-related sediment delivery has been estimated for each subwatershed for the next decade and is displayed in terms of numbers of landslides (Figure 20 A). The method used to calculate this volume is discussed in Appendix B. These values include the location and timing of past activities and anticipated future activities for non-federal lands. To provide a context, road and harvest-related landslide sediment is compared with similar estimates for natural landslides (Figure 20 B). The frequency of large natural slides such as the one that dominates the East Fork Panther Creek, is not easily predicted. Therefore, natural slide volumes are expected to vary considerably from these values.

Landslide sediment delivery could be reduced if a comprehensive restoration program is implemented as detailed in Chapter 5.



**Figure 20: Estimated Future Sediment**

Natural volumes are based on past landslides. Future volumes are uncertain.

### Water Clarity

Water clarity is expected to remain excellent in future decades. However, if roads begin to fail as the result of reduced maintenance, chronic loss of water clarity could occur.

### Large Wood Supply Affecting the Aquatic Ecosystem

Large wood already in the channel will continue to move downstream. Previously harvested areas with potential to deliver additional large wood will be in a state of recovery for the next 100 years as immature conifers grow. This includes approximately 27 percent of the watershed area that lies outside of the Wilderness.

For most areas, sufficient large wood remains to meet future needs. However, two subwatersheds may have long-term effects from loss of large wood supply. Reaches of Butler Creek outside of the Wilderness may be seriously depleted from harvest of some of the area potentially supplying large wood. Future recovery may be delayed because surface ravel and shallow failures slow establishment of new conifers. Approximately 33 percent of the potential large wood supply has been lost on Bald Mountain Creek. Here, there may be minimal recovery in harvested riparian areas as hardwoods dominate these once conifer-rich areas.

In general, the supply of large wood to off-Forest reaches will continue to be limited by agricultural practices and development.

### Riparian Canopy Disturbance and Stream Water Temperature

McSwain (1988) compiled existing data to evaluate summer stream temperature trends in Elk River. The study concluded that overall, maximum stream temperatures in the mainstem Elk River have been declining since 1964. The three subwatersheds with elevated stream temperatures, Bald Mountain, Panther, and Butler, are expected to show a decline in summer stream temperatures as shade trees grow in harvested riparian areas. Estimated recovery rates range from a low of 0.5°F/decade in Bald Mountain to a high of 1.6°F/decade in Panther Creek.

Below the Forest boundary, stream temperatures are expected to remain critical. Cooling trends within the forest boundary will not be sufficient to offset stream heating below the boundary resulting from the loss of riparian vegetation.

### **Stream Flow**

As vegetation grows in previously harvested units and roads are decommissioned, any effects these activities may have had on streamflow will gradually decrease.

### **Channel Morphology**

The ratio of sediment delivery to stream transport capacity was shown in Chapter 3 for the three subwatersheds analyzed in detail. The historical condition may be compared with the projected future condition for both natural and road/harvest sources.

Two subwatersheds which remain most affected by excessive sediment loading are Butler and Bald Mountain. Future recovery trends will remain poor despite a decrease in sediment production, because of depleted large wood supply and continued timber harvest on private lands in Bald Mountain Creek. Tributaries to the mainstem of Panther Creek are expected to continue to recover, incising and creating deeper pools over the next two decades.

Channel conditions are expected to improve overall. However, if road maintenance continues to decline without decommissioning unmaintained roads, channel conditions could again decline.

Below the Forest boundary, loss of vegetation from private development will continue to affect stream bank stability, producing sediment from bank erosion. This, combined with the continuing absence of large wood, will slow recovery in the lower reaches. The recovery process may be further affected by changes in sediment production on-Forest.

### **Fish Habitat, Distribution and Populations**

Fish habitat is in degraded condition in the east fork of Butler Creek, the lower mainstem of Bald Mountain Creek, and the mainstem of Elk River below the Forest boundary.

The temperature in the east fork of Butler Creek will gradually decline as the aggraded stream channel continues to incise and riparian vegetation matures. However, it will be several decades before the stream temperature is reduced enough to improve summer rearing conditions.

In Bald Mountain Creek, continual sediment delivery from timber harvest and roads on private land will delay coho salmon habitat recovery. The reduction of potential large wood supply, another key element for coho habitat, may also slow the recovery rate.

Below the Forest boundary, habitat conditions are expected to remain in critical condition as the result of excessive summer stream temperatures. Despite some cooling upstream, the loss of riparian vegetation from private development will continue to result in critically high stream temperatures.

Juvenile coho salmon require complex habitat for over-wintering before migrating to the ocean. Reduced sediment delivery will help the re-formation of pools, but it is uncertain how much habitat recovery is possible with the continual disturbance of streambanks, loss of riparian vegetation from private development and resultant high summer stream temperatures. It is critical that riparian management practices be modified to ensure that the lower river channel includes large wood complexes and other instream features for optimum salmonid rearing habitat.

## **CHAPTER 5 DESIRED TRENDS AND RECOMMENDED PROJECTS**

### **COMMODITY VALUES**

The desired future trend for the Elk River watershed would involve a variety of activities; individually, each will make a small contribution, but collectively, they will provide a broad spectrum of reliable and sustainable commodity values. The activities would include:

- \* a predictable supply of timber harvest and related employment,
- \* steady to slightly increasing fish runs for sport and commercial fisheries,
- \* employment opportunities in restoration work, road decommissioning, and riparian planting for bank stabilization
- \* economic diversification through non-timber forest products including mushrooms, boughs, conks, etc., and
- \* eco-tourism, and natural resource interpretation.

### **AMENITY VALUES: Scenery**

The desired trend is to maintain the natural beauty along the Elk River and within the watershed. In the upper river corridor, the Forest Plan and the President's Plan complement these goals for natural beauty, or natural appearing landscapes; the elimination of roads for watershed restoration will restore the natural landscapes. As vegetation grows, views from the Elk River Road may be maintained by cutting vegetation adjacent to the road.

### **PUBLIC USE VALUES: Recreation and Access**

As stated in FEMAT, "The information on recreation demand that is reported in the Oregon and Washington State Outdoor Recreation Plans indicate there is a high and increasing demand for recreation settings with little development and management activity, relatively low use, and no motorized access permitted. For example, recent work by Swanson and Loomis (1993) indicates that although there are about 5.5 million acres already currently allocated to primitive and semiprimitive, nonmotorized recreation, the forecasted demand by the year 2000 will be nearly 13.5 million acres" (FEMAT 1993).

The elimination of roads for watershed restoration will complement the local and regional demands for semiprimitive, nonmotorized opportunities. Semiprimitive, motorized opportunities may be enhanced by upgrading existing recreation facilities along the Elk River Road to modern accessibility and pit toilet standards.

The main roads, Elk River Road number 5325 and Iron Mountain Road number 5502 will be essential for fire control.

## ENVIRONMENTAL QUALITY AND ECOLOGY: Terrestrial Ecosystem

The desired trends would extend the historic trends under which the watershed has evolved, maintaining biodiversity within the watershed.

Landscape Patterns: Disturbance Frequency and Patch Size  
Large Woody Material

### Landscape Patterns: Disturbance Frequency

For the watershed, the desired stand replacement interval would be within the range of conditions under which all species have evolved and would not approach the extremes of the range (Swanson, et.al.). This range will vary by plant series (Figure 21).

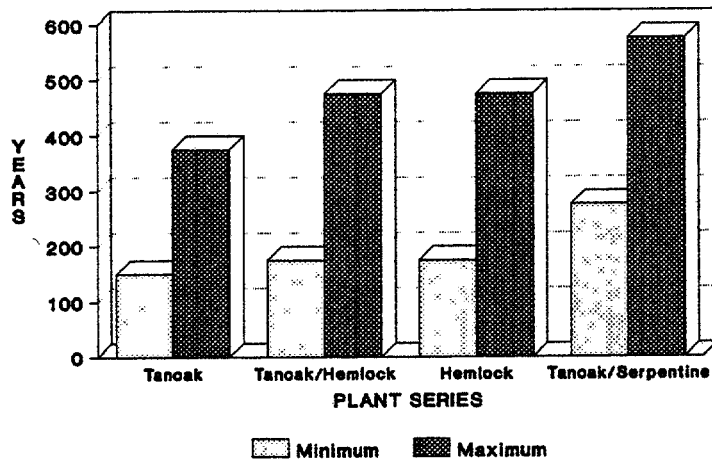
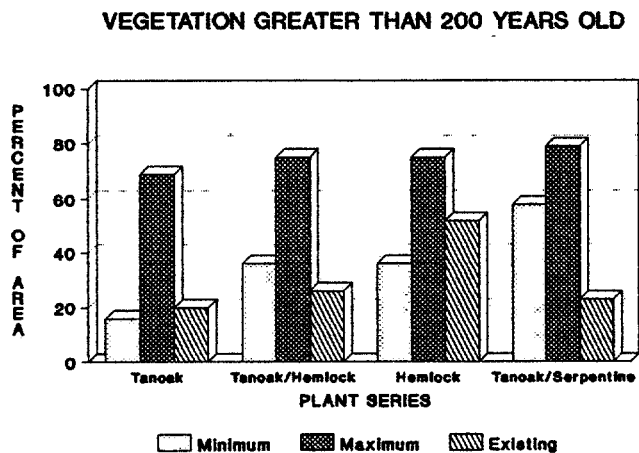
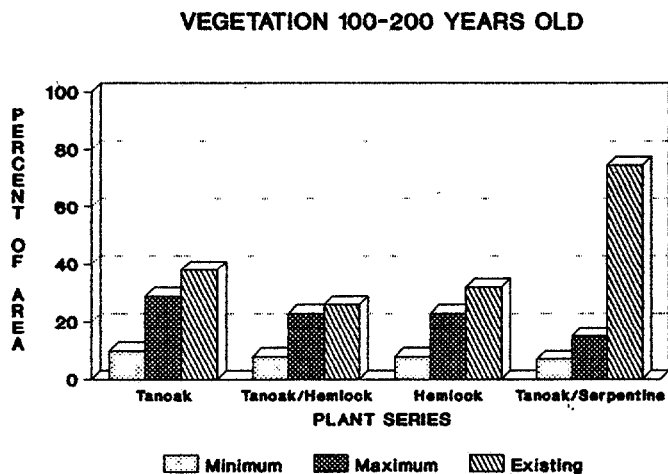
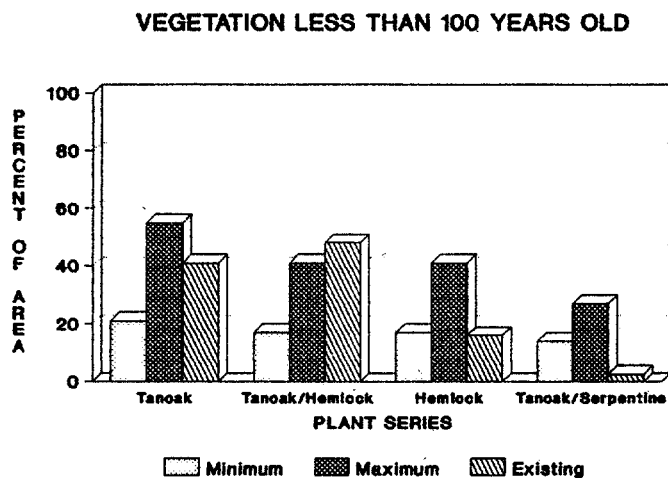


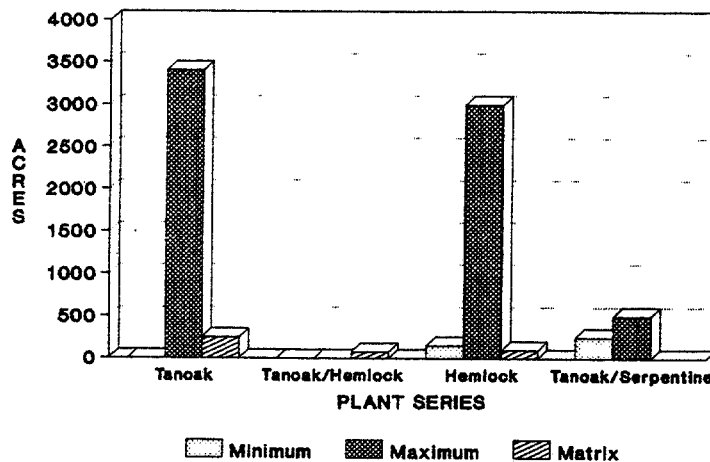
Figure 21: Desired stand replacement interval

Given the desired range of stand replacement intervals, the range of age class distributions displayed in Figure 22 should be appropriate.



**Figure 22: Desired age class distribution by plant series**

The existing age class distributions for the hemlock, tanoak/hemlock, and tanoak/serpentine plant series are outside the desired ranges shown in Figure 22. This existing imbalance can be corrected by vegetation management activities such as fire and harvest, dispersed over a 50-year period. Figure 23 shows the range of treatment acres that would correct this imbalance, and the acres of matrix land available for treatment.



**Figure 23: Desired acres for vegetative treatment, and matrix acres, by plant series.**

Treating only matrix lands will not correct the existing departure from natural trends. For example, the tanoak/serpentine plant series appears to have the largest imbalance with an excess amount of vegetation between 100 and 200 years of age, and a limited amount of vegetation less than 100 years of age. However, the land available in the matrix is not sufficient to correct the imbalance. The plants and animals dependent upon the young seral stage in the tanoak-serpentine plant series have limited habitat. Use of prescribed fire in the Late-Successional Reserves could correct this imbalance.

### Patch Size

The desired patch size should include the range of conditions under which all species in the watershed evolved and should not approach the extremes of the range. This range will vary by plant series. An estimate of this desired range of patch sizes needs to be completed using tools such as the FRAGSTAT computer program.

### Large Woody Material in the Terrestrial Ecosystem

The amount of large woody material on site will vary. The extremes between no large woody material and excessive amounts of large woody material may occur through naturally occurring events such as wildfire and windthrow. In effect, the entire range of large woody material levels will probably occur throughout the landscape.

The Siskiyou Forest Plan (1989) Forest-wide Standard and Guideline 7-8 requires leaving 20 to 60 cubic feet of large woody material per acre. This is considerably less than the 100 to 290 cubic feet per acre on the two inventoried sites within the watershed. These sites were theoretically at the lowest point of large woody material accumulation in the natural stand development cycle. More data is needed to determine appropriate levels of large wood for all plant series.

## **ENVIRONMENTAL QUALITY AND ECOLOGY: Aquatic Ecosystem**

- Landslides and Surface Erosion
- Water Clarity
- Large Wood Supply Affecting the Aquatic Ecosystem
- Riparian Canopy Disturbance and Stream Water Temperature
- Stream Flow
- Channel Morphology
- Fish Habitat, Distribution, and Populations

### **Landslides and Surface Erosion**

The desired trend is to reduce sediment delivery in areas where rates are above natural levels. This could be enhanced by road decommissioning and drainage stabilization.

### **Water Clarity**

Projects intended to reduce sediment delivery and improve bank stability will also ensure continued water clarity.

### **Large Wood Supply Affecting the Aquatic Ecosystem**

The desired trend is to accelerate reestablishment of large conifers through vegetative treatment. High priority areas include east fork of Butler Creek and the mainstem of Elk River.

### **Riparian Canopy Disturbance and Stream Water Temperature**

A mixture of seral stages within the range of natural variability across the riparian zones of the watershed is desired, in order to maintain cool stream temperatures. In areas where temperatures have increased as a result of management activities, reestablishing conifers will provide long-term shade and cooling. This is particularly important in the East Fork Butler, Bald Mountain Creek, and along the mainstem of Elk River.

### **Stream Flow**

Although the exact effects of harvest and road construction on streamflow in the watershed are unknown, road decommissioning and drainage stabilization will restore natural streamflow patterns. Effects of harvest will diminish as vegetation continues to grow.

### **Channel Morphology**

Desired future trends include establishment of a cooperative joint effort between private land owners and the Forest Service to restore damaged stream channels. The focus of this effort would be to restore the channel in Bald Mountain Creek and the lower Elk River below the Forest Boundary. Priority Projects would include stabilizing sediment sources such as roads in Bald Mountain and streambanks on the lower Elk River and establishing future large wood sources.

In addition to the joint effort, the focus on federal lands is the east fork of Butler Creek. The desired future trend in this subwatershed is to reduce chronic sediment sources to allow the aggraded channels to incise and create a narrower channel with deeper pools.



## **Fish Habitat, Distribution and Populations**

The desired trend for the Elk River watershed is a functioning ecosystem, sustaining healthy populations of anadromous and resident salmonids, non-salmonid fishes and other aquatic organisms. Elk River is the most northern large watershed in the South Coast basin under substantial Federal ownership. The health of this system is important to fisheries diversity on the Oregon Coast.

The historic assemblage of salmonids: coho salmon, fall chinook salmon and searun cutthroat trout once dominant in the lower valleys and lower Forest stream segments has changed. This change is partially due to emphasis on fall chinook salmon production for commercial and sport fishing, and alterations in the lower valley from agricultural development. It is unclear at this time if major restoration activities will take place on downstream private land. Restoration work on National Forest lands without complementary work in riparian zones in the lower valleys and some tributaries will not restore the biodiversity in Elk River. Aquatic systems on Federal lands should be maintained at the high end of the range of natural variability to promote recovery on the lower reaches.

Subwatersheds on National Forest will continue to be subject to major winter storms, wildfire, and other agents of change. These phenomena will cause large amounts of sediment and large wood to be transported in the system. The impact of these events on the aquatic and riparian ecosystems would be ameliorated by maintaining mature conifer and hardwood trees in riparian areas. It would be desirable to reduce road densities in subwatersheds, with priority given to decommissioning roads in areas with erodible soils and geology and steep sideslopes.

Large wood complexes and individual pieces would be present in the stream channel in a range from 20 to 150 pieces per mile. These would vary with the geomorphology of the stream segment. Confined valley segments would generally contain fewer pieces, arranged in complexes at nick points in the channel. Low gradient unconfined segments would contain an average of 80 or more pieces of wood per mile in more variable configurations (Columbia Protocol, 1994).

The future fish habitat condition of Elk River and tributaries would continue to be rated as good. Under the proposed President's Plan, wide stream buffers and reduced resource extraction activities in headwater areas will cause fish habitat to be more diverse. Pool area with quality cover for salmonids will probably increase, summer stream temperatures will decrease and better quality water will be supplied to the fish hatchery and downstream valley habitat.

The following attributes and numerical values are recommended critical elements to assess fish habitat condition in productive flats. The intent is to use productive flats as a measure of habitat conditions and upslope processes. These numbers are guidelines based on the range of natural variability of streams in the Pacific northwest. Actual numbers should be based on site-specific analysis at the project level.

- Pool frequency will vary with the width of the channel, approaching one significant channel pool greater than 3 feet in depth every 5 to 10 channel widths, in low gradient unconfined segments
- Width to depth ratios in low gradient segments of streams will be ten or less, when dividing the mean wetted width of the channel by the maximum depth of the adjacent channel pool.
- The diversity of aquatic insects and other aquatic organisms will remain stable or increase.
- Fine sediment in the fish-bearing segments of the watershed will remain stable or decrease as roaded areas are restored.
- Large wood pieces in low gradient unconfined stream segments will range from 20 to 150 pieces per mile.

A sustainable and functioning aquatic ecosystem in Elk River will require that conservation measures and restricted exploitation activities be applied across the entire watershed and adjacent marine habitats.

## RECOMMENDED PROJECTS

Projects that would promote the desired trends for watershed values are listed in Figure 24 and described below.

VALUES	TOPICS	PROJECTS
Commodity		all projects could contribute
Amenity	Scenery	decommission roads restore viewpoints
Public Use	Recreation	upgrade recreation facilities
Environmental Quality and Ecology: Terrestrial	Vegetation	eradicate non-natives control spread of POC root disease
	Disturbance Frequency	vegetation management
	Patch Size	analyze patterns
	Large Wood - Terrestrial	revise SFP S&Gs
Environmental Quality and Ecology: Aquatic	Landslide and Erosion	decommission roads
	Large Wood - Aquatic	plant conifers
	Stream Temperature	plant conifers
	Streamflow	decommission roads stabilize road drainage
	Channel Morphology	plant conifers install structures
	Fish Habitat	decommission roads stabilize road drainage plant conifers install structures

**Figure 24: Recommended Projects to Promote Watershed Values**

Site-specific areas for these activities would be identified at the project level.

### Description of Recommended Projects

1. **Restore Viewpoints:** Cut vegetation that grows up and obscures scenic views along Forest Service Road 5325.
2. **Upgrade Recreation Facilities:** Upgrade and maintain access points to the river along Forest Service Road 5325, including pullouts, parking areas, and trailheads. Upgrade developed campgrounds to modern standards, with full accessibility.
3. **Vegetation Management:** Use fire and harvest as vegetation management activities, dispersed over a 50-year period, to bring the vegetation disturbance frequency back within the natural range within the Siskiyou NF portion of the watershed. Initially, this should be done only in one or two selected subwatersheds that have lower fish habitat and population values.
4. **Analyze Patterns:** Examine historical and existing patch size distributions to determine size of future fire and timber management projects within the Siskiyou NF portion of the watershed.

5. **Eradicate Non-natives:** Eradicate the undesirable non-native plant species gorse and tansy, within the Siskiyou NF portion of the watershed.
6. **Implement Port-Orford-cedar Root Disease Action Plan.** This includes road closures and seasonal driving restrictions; and roadside sanitation cutting, limited to trees less than 8" dbh and within 50' of the road edge.
7. **Revise Siskiyou Forest Plan Standards and Guidelines (SFP S&G):** Inventory natural levels of large woody material in the four plant series in the watershed. Use this data to revise the SFP Standards and Guidelines for leaving LWM following timber harvest.
8. **Decommission Roads:** On roads that will be closed, remove culverts, pull back sidecast fill material, outslope to restore natural drainage, deep rip, and plant with appropriate species. Priority roads are midslope, cross live creeks, or are actively contributing sediment. Priority areas are Panther Creek, Bald Mountain Creek, Purple Mountain Creek, Butler Creek, and Milbury Creek.
9. **Stabilize Road Drainage:** On roads that will be left open but infrequently maintained, evaluate drainage for functioning during storms. Perform work such as outsloping, removing outside berms, and waterbarring above culverts.
10. **Plant Conifers in priority areas:**
  - Riparian areas where hardwoods have replaced conifers and are not tall enough to shade the channel; primarily Butler Creek, Bald Mountain Creek, and Elk River, both above and below the Forest boundary.
  - Along the lower Elk River below the Forest boundary, where vegetation removal has caused the stream banks to erode at an accelerated rate and depleted the supply of large woody material. Planting conifers and other species on the stream banks and in the riparian area will provide long-term channel stability, stream shading, and large wood.
  - In harvested areas of the East Fork Butler Creek subwatershed, where the supply of large wood is depleted.
11. **Install Structures:** On the lower Elk River outside the Forest boundary, use natural material such as logs, root wads, and boulders to armor the stream bank and protect planted conifers. Placing natural materials as resistance structures on the outside curves of the river meanders will help create deeper scour pools and narrow the river width while the vegetation is growing. Place logs and boulders in locations that will add complexity to the fish habitat and reestablish pools, without reducing sediment transport capacity.

Within the National Forest, conifers and hardwoods planted for bank stability and stream shade will also need protection. Natural materials placed on point bars and high gravel bars where work is feasible will provide interim stability. Large wood complexes placed at nick points in the channel gradient will also complement upslope restoration work.

Below the Forest boundary, restoration of coho salmon habitat is the highest priority. This will require a cooperative effort between several federal and state agencies and private landowners. The work will be designed for long-term restoration of the processes that create and maintain habitat, and will complement the upstream restoration on public lands.

## RIPARIAN RESERVE WIDTHS

Watershed analysis provides the basis for considering modification of the riparian width specified in the 1994 Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents (ROD), Appendix, B-13. The following discussion considers the option to modify Riparian Reserve widths in a small area of matrix lands in the watershed. These matrix lands comprise 7% of the total watershed within the Forest boundary, and are located in parts of Panther Creek, Blackberry Creek, and very small areas in the South Fork Elk and Upper Area.

Riparian Reserve widths on perennial streams must approximate those specified in the ROD, Appendix, C-30. This discussion focuses on intermittent streams, which comprise an estimated 50% of the channel network. Criteria for considering modification of widths in each subwatershed are: hillslope, riparian, and channel processes, and the subwatershed's function in the total watershed.

	Panther	Blackberry	South Fork	Upper Area
Past channel effects from sediment	Mod	Low	Mod	Mod
Loss of large wood	31%	20%	20%	19%
Fish habitat value	High	Mod	Mod	Low

Figure 25: Results of watershed analysis for subwatersheds in matrix.

**Panther Creek:** Has high fish habitat values and is one of the most productive subwatersheds. The east and middle fork tributaries are the only areas in matrix lands. Both tributary channels have been affected--the middle fork by past management activities, the east fork by a large natural landslide--and are in a state of recovery. The potential large wood supply has also been reduced (pp. 40-42). **It is recommended that interim reserve widths be maintained. For thinning to acquire desired vegetation characteristics, appropriate riparian buffer widths should be determined through site specific evaluation by an interdisciplinary project team.**

**Blackberry Creek:** Has only moderate fish habitat value, with a moderate steelhead population, its only anadromous species. There is no evidence that the channel has been affected by excessive sediment from any source. The moderate fish habitat value is attributed to the limited area of stream accessible to anadromous fish. Blackberry Creek does contribute cool stream temperature and large wood to Elk River, and these should be maintained (p. 45). **It is recommended that this subwatershed be considered for modification of interim reserve widths on intermittent streams. Interdisciplinary project teams should consider appropriate buffer widths based on site specific information and type of proposed activity.**

**South Fork Elk and Upper Area:** Both areas have low fish habitat values because of the limited habitat available to anadromous fish. There is no evidence that sediment from any source has adversely affected fish habitat and there is only a small amount of matrix land in both these areas. A portion of the groundwater influence area for the Elk Lake (Laird Lake) earthflow is included in matrix land. **Project teams could consider appropriate buffer widths on intermittent streams based on site specific information and type of proposed activity.**

Any modification to reduce or increase buffer widths should be done at the project level by an interdisciplinary team and be based on site specific information including potentially unstable areas, nutrient cycling, habitat for riparian dependent species, and corridors for terrestrial species. Accurate identification of channel heads will be critical in the lower basin of Blackberry Creek and upper middle fork of Panther Creek, where steep debris avalanche or ravel-prone slopes are present. All riparian buffers should meet Aquatic Conservation Strategy Objectives, ROD, Appendices B and C.

## MONITORING PLAN

Monitoring is an essential component of any management action and should be guided by the results of the watershed analysis. The 1994 Record of Decision for Amendments to the Forest Service and Bureau of Land Management Planning Document (ROD), Appendix B-32; and Siskiyou National Forest Land and Resource Management Plan (pages V-9 thru V-14) provide guidance for project monitoring.

Monitoring allows us to make decisions based on site specific information. Monitoring results will provide information for updates and revisions to both watershed analysis, and project planning and design. With a smaller federal work force, successful monitoring will depend on a cooperative effort by research stations, universities, other agencies, community groups and volunteers.

The Forest Service has been monitoring in the Elk River watershed for several years. Projects include stream temperature, measured with recording thermographs at several locations, macroinvertebrate sampling, and fish habitat surveys modelled on Hankin and Reeves. The USGS has been collecting streamflow data with its gage at the fish hatchery. In addition to on-going monitoring, several studies have been conducted by research stations and universities. Studies included landslides, erosion, channel morphology, fish populations and habitat, and provide base information for future monitoring. Most monitoring and studies have been conducted within the Forest boundary.

The following table identifies monitoring that would provide information on the condition, maintenance, or recovery of values associated with Elk River.

VALUES	TOPICS	MONITORING PROJECTS
Commodity		
Amenity	Scenery	Photo points of visual quality from viewpoints on main road
Public Use	Recreation	Number of visitors using recreation facilities
Environmental Quality and Ecology: Terrestrial	Vegetation	Location and number of non-native plants eradicated: trends/location
Environmental Quality and Ecology: Aquatic	Landslides and Surface Erosion	Photo inventory
	Large Wood - Aquatic	Riparian stocking surveys Large wood in channel
	Stream Temperature	Stream Shade - Solar Pathfinder thermographs
	Channel Morphology	Photo points Channel cross sections
	Fish Habitat	Hankin and Reeves type survey Macroinvertebrate sampling Photographic inventory of aquatic and riparian restoration projects

Figure 26: Recommended Monitoring Projects

## **High Priority Locations and Types of Monitoring**

1. Continue monitoring that is presently occurring in the watershed.
2. Lower Elk River:
  - Stream Temperature monitoring.
  - Channel Morphology - photo points and/or channel cross sections
  - Fish Habitat - Photo inventory of aquatic and riparian restoration projects.
3. ELk River productive flat above the Forest Boundary
  - Photo points and/or channel cross sections
4. Bald Mountain Creek:
  - Landslides and Surface Erosion - photo inventory
  - Channel Morphology - photo points and/or channel cross sections on low-gradient reaches of the mainstem
5. East fork of Butler Creek:
  - Landslides and Surface Erosion - photo inventory
  - Channel Morphology - photo points and/or channel cross sections

The Elk River Watershed Analysis team and Project Restoration Teams share the responsibility to assure that needed monitoring is accomplished. It is vital that these teams work with other agencies, the residents of Elk River and concerned citizens in neighboring communities to accomplish monitoring on the lower river. All monitoring projects should: (1) have a written plan, (2) statespecific objectives, (3) be tied to the ROD, the Siskiyou Forest Plan, and the Elk River Watershed Analysis, (4) define how the data are to be collected and stored, (5) assign responsibility, (6) follow a timeline.

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## Appendix A

### Index of Relevant Information, including Maps

At the request of the Siskiyou National Forest in the mid-1980's, researchers from Oregon State University (OSU) and the U.S. Forest Service Pacific Northwest Research Station (PNW) initiated a series of studies on erosion processes, channel form, water temperature, and fish populations. Concurrent with these studies, juvenile fish traps were installed and operated by ODFW to estimate wild anadromous salmonid production in various portions of the basin.

Interviews with local residents

Woodward Oral History - Draft Transcript

Geologic mapping from Curry County upgraded by McHugh, 1987. Polygons available on GIS layer GE3 (Powers RD).

Watershed Sensitivity Mapping by Cindy Ricks - on 1986 aerial photos (Westside Engineering Zone), transferred to GIS layer WS3 (Powers RD).

Landslide maps by McHugh - Hardcopies only (Westside Engineering Zone). Historic landslide inventory on Lotus spreadsheets (Westside Engineering Zone).

Road construction and timber harvest history - Lotus spreadsheets (Westside Engineering Zone), GIS layers (Powers RD).

Streamflow data: Elk River mainstem at Hatchery 1977-1988, and Milbury Creek 1989-1990.

Elk River North and South Forks stream flow - average monthly.

Summer Stream Temperature Monitoring data 1990-1991

Maps of Fish Species Distribution, Significant Fish Habitat Areas, and Productive Stream Reaches (Powers RD).

Chen, Glenn, Elk River Basin Stream Surveys 1986-1990 in Lotus and QuattroPro format. 1984 general stream survey data. Field Data sheets and Observation notebooks for 1986-1991 (PNW Research Station, Corvallis Lab).

## **Appendix B**

### Data Used to Support Analysis

*Landslide Inventory:* McHugh (1986) identified and measured landslides and other slope features from seven sets of historical aerial photographs covering 1943 through 1979. McHugh updated these data for 1979 through 1986 using the same inventory methods (McHugh, 1988, pers. comm.). Debris slides, debris avalanches, failing toes of slumps and earthflows, and debris flows that were active during this period were inventoried. Information collected on the 223 slides within Elk River included area, slope, aspect, elevation, rock type, percentage delivery to streams, and photo-bracketed date of failure. The relation of the slides to harvest units or road construction was noted, and the date of such disturbance was recorded. Area, depth and percent delivery to stream channels were measured in the field for 25 percent of the landslides. A relation between photo-interpreted area and field-measured volume was used to estimate volumes for slides that were not field-verified.

*Landslide Sediment Delivery Projections:* Estimates of future landslide sediment delivery are based on past numbers, volumes, and timing of slides following road construction and timber harvest.

Although there is evidence that improved land use practices result in decreased numbers of landslides, these estimates are based on old practices, particularly for road construction. For newer roads constructed between 1979 and 1986, no road-related landslides larger than the minimum detectable size (100 sq meters) have been observed. However, this sample includes only 0.7 miles on high and 3.8 miles on moderate watershed sensitivity. The natural landslide rate increased slightly for 1979-86 over that for 1973-79, which may be attributed to the 1982 storm (Figure 8). In comparison, Figure 8 shows a considerable decrease in the rate of harvest-related landslides over this period, partially due to a decrease in acres harvested, improved land management practices, and different timing of storm events. The rate of road-related landslides increased considerably, but all were from roads constructed prior to 1979.

The mean volume of road-related landslides during 1955-1969 was 2553 cubic yards, and during 1970-1986 decreased by 44%. During this latter time period, new roads were located further away from streams and the practice of sidecasting sediment on steep slopes was discontinued. The average percentage of sediment delivered from road-related slides is lower than from natural or harvest-related slides which are closer to streams (McHugh, 1987). An unsubstantiated observation of road-related slides suggest that they occur with a higher density in harvested areas. Roads on high and moderate watershed sensitivity land delivered 13 times as much sediment per acre as harvest on high watershed sensitivity land (1952-1986). The mean volume of harvest-related landslides during 1955-1969 was 2510 cubic yards, and during 1970-1986 decreased by 42%.

The number of years between road construction or timber harvest and each landslide was used to construct a "susceptibility curve" to estimate landslide timing.

*Road Drainage Erosion:* Road drainage erosion was sampled on 4.25 miles (74 drainage outlets) for three rock types in 1992. Most of the eroded sediment was redeposited on the slope before entering a drainage. The average distance between the drainage outlet and deposit was 20 feet. Sediment entered streams from erosion only where the drainage outlet was in or within 20 feet of a natural drainage. The relatively high rock fragment content in the soils that were sampled allow rapid infiltration and dissipation of energy. Finer-textured soils on Galice mudstones or altered diorite are expected to develop deeper, longer gullies. Three landslides were also located in association with the drainage outlets.

*Channel Network Expansion:* Based on inventory of 74 road drainage outlets, the mean ditch distance to the nearest drainage outlet(s) was 346 feet. The number of drainage crossings was counted from overlaying the road and stream networks. Because the smallest streams in the network are interpreted from maps and aerial photos rather than field mapping, these values are approximate.

# drainage crossings x mean ditch distance to outlet = Road drainage distance

Percent channel network expansion =  $\frac{\text{(Road drainage distance)}}{\text{(Road drainage + channel distance)}}$

	Elk River above hatchery	Milbury Creek
Area (sq mi)	73.4	0.81
System/Nonsystem Roads (mi)	169	4.1
Channel Distance (mi)	440	4.0
# drainage crossings	314	19