United States
Department of
Agriculture

Forest Service

United States
Department of the
Interior

Bureau of Land
Management

February 1995

Decision Notice/ Decision Record

Finding of No Significant Impact

Environmental Assessment

for the Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California

(b) Upgrade culverts to larger sizes on existing and planned roads.

(c) Increase frequency of culverts on new and existing roads.

For logging slash treatment/prescribed fire:

(1) Eliminate hot burns on steep grounds.

(2) Eliminate burns in riparian management areas.

For livestock grazing:

(1) Include temporary and permanent exclusion from riparian areas to promote the reestablishment of shrubs, hardwoods, and fringe wetlands, and maintenance of stream-bank integrity.

For riparian and fish-habitat restoration:

(1) Establish a program that will contribute to long-term stream-habitat stability.

For cumulative effects:

(1) Conduct an analysis by national forest and BLM district to aid in the timing and location of timber harvest and location of roads and landings.

ALTERNATIVES 3 AND 4

Goals, objectives, standards, guidelines, and procedures (together referred to as "management direction") are the same for Alternatives 3 and 4. In Alternative 3, the management direction is applied only to proposed projects and activities. In Alternative 4, the management direction is applied to proposed projects and activities, as well as ongoing projects and activities that pose an unacceptable risk.

The adoption of these alternatives could lead to deferring or suspending some resource management projects and activities within the Riparian Habitat Conservation Areas (RHCAs, described below) or that degrade RHCAs during the interim period. Adoption of these requirements during the interim period would not lead to the permanent removal of any project or activity from the RHCAs. The potential for permanent removal or elimination of any activity from the RHCAs is being examined in the geographically-specific environmental analyses.

RIPARIAN GOALS (GOALS)

The goals establish an expectation of the characteristics of healthy, functioning

watersheds, riparian areas, and associated fish habitats. Since the quality of water and fish habitat in aquatic systems is inseparably related to the integrity of upland and riparian areas within the watersheds, Alternatives 3 and 4 articulate several goals for watershed, riparian, and stream channel conditions. The goals are to maintain or restore:

(1) water quality to a degree that provides for stable and productive riparian and aquatic ecosystems;

(2) stream channel integrity, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed;

(3) instream flows to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route flood discharges;

(4) natural timing and variability of the water table elevation in meadows and wetlands;

(5) diversity and productivity of native and desired non-native plant communities in riparian zones;

(6) riparian vegetation to:

   (a) provide an amount and distribution of large woody debris characteristic of natural aquatic and riparian ecosystems;

   (b) provide adequate summer and winter thermal regulation within the riparian and aquatic zones; and

   (c) help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed.

(7) riparian and aquatic habitats necessary to foster the unique genetic fish stocks that evolved within the specific geo-climatic region; and

(8) habitat to support populations of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.

RIPARIAN MANAGEMENT OBJECTIVES (RMOs)

Landscape-scale interim RMOs describing good habitat for anadromous fish were

developed using stream inventory data for pool frequency, large woody debris, bank stability and lower bank angle, and width to depth ratio. Applicable published and non-published scientific literature was used to define favorable water temperatures. All of the described features may not occur in a specific segment of stream within a watershed, but all generally should occur at the watershed scale for stream systems of moderate to large size (3rd to 7th order).

Interim RMOs may be modified to better reflect conditions that are attainable in a specific watershed or stream reach based on local geology, topography, climate, and potential vegetation. Generally, RMO modifications will require completion of watershed analysis to provide the ecological basis for the change. However, RMOs may be modified in the absence of watershed analysis where watershed or stream reach specific data support the change. In all cases, RMO modifications, the rationale supporting those changes, and the effects of the changes will be documented. Within the range of listed salmon, modification of RMOs will be done in consultation with NMFS.

The interim RMOs for stream channel conditions provide the "criteria" against which attainment, or progress toward attainment, of the riparian goals is measured. Interim RMOs provide the target toward which Agency managers will be aiming as they conduct resource management activities across the landscape. However, interim RMOs are not to establish a ceiling for what constitutes good habitat conditions. Actions that reduce habitat quality, whether existing conditions are better or worse than objective values, are inconsistent with the purpose of this interim direction. Without the benchmark provided by measurable RMOs habitat suffers a continual erosion. As indicated parenthetically below, some of the objectives apply to forested ecosystems only, some to non-forested ecosystems, and some to all ecosystems regardless of whether or not they are forested. Objectives for six environmental features have been identified, including one key feature (kf) and five supporting features (sf). these features are good indicators of ecosystem health, are quantifiable, and are subject to accurate, repeatable measurements."

Interim RMOs apply to streams in watersheds with anadromous fish. Each of the interim objectives must be met or exceeded before general habitat conditions would be considered good for anadromous fish. However, application of the interim RMOs requires thorough analysis. That is, if the objective for an important feature such as pool frequency is met or exceeded, there may be some latitude in assessing the importance of the objectives for other features that contribute to good habitat conditions. For example, in headwater steelhead streams with an abundance of pools created by large boulders, fewer pieces of large wood might still constitute good habitat. The goal is to achieve a high level of habitat diversity and complexity, through a combination of habitat features, to meet the life-history requirements of the anadromous fish community inhabiting a watershed.

INTERIM RIPARIAN MANAGEMENT OBJECTIVES

Habitat Feature	Interim Objectives
Pool Frequency (kf) (all systems)	Varies by channel width, see below:
wetted width in feet:	10 20 25 50 75 100 125 150 200
number pools per mile:	96 56 47 26 23 18 14 12 9
Water Temperature (sf)	No measurable increase in maximum water temperature.*
	Maximum water temperatures below 64F within migration and rearing habitats and below 60F within spawning habitats.
Large Woody Debris (sf) (forested systems)	Coastal California, Oregon, and Washington. >80 pieces per mile; >24 inch diameter; >50 foot length.
	East of Cascade Crest in Oregon, Washington, Idaho. >20 pieces per mile; >12 inch diameter; >35 foot length.
Bank Stability (sf) (non-forested systems)	>80 percent stable.
Lower Bank Angle (sf) (non-forested systems)	>75 percent of banks with <90 degree angle (i.e., undercut).
Width/Depth Ratio (sf) (all systems)	<10, mean wetted width divided by mean depth

*7-day moving average of daily maximum temperature measured as the average of the maximum daily temperature of the warmest consecutive 7-day period.

RIPARIAN HABITAT CONSERVATION AREAS (RHCAs)

Interim RHCAs will be delineated in every anadromous watershed on Agency-administered lands within the geographic range of the proposed action. RHCAs are portions of watersheds where riparian-dependent resources receive primary emphasis, and management activities are subject to specific standards and guidelines. RHCAs include traditional riparian corridors, wetlands, intermittent streams, and other areas

that help maintain the integrity of aquatic ecosystems by (1) influencing the delivery of coarse sediment, organic matter, and woody debris to streams, (2) providing root strength for channel stability, (3) shading the stream, and (4) protecting water quality (Naiman et al. 1992).

Interim RHCA widths adequate to protect streams from non-channelized sediment inputs should be sufficient to provide other riparian functions, including delivery of organic matter and woody debris, stream shading, and bank stability (Brazier and Brown 1973, Gregory et al. 1984, Steinblums et. al 1984, Beschta et al. 1987, McDade et al. 1990, Sedell and Beschta 1991, Belt et al. 1992). The effectiveness of riparian conservation areas in influencing sediment delivery from non-channelized flow is highly variable. A review by Belt et al. (1992) of studies in Idaho (Haupt 1959a and 1959b, Ketcheson and Megehan 1990. Burroughs and King (1985 and 1989) and elsewhere (Trimble and Sartz 1957, Packer 1967, Swift 1986) concluded that non-channelized sediment flow rarely travels more than 300 feet and that 200-300 foot riparian "filter strips" are generally effective at protecting streams from sediment from non-channelized flow.

The interim RHCA widths may be increased where necessary to achieve riparian management goals and objectives, or decreased where interim widths are not needed to attain RMOs or avoid adverse effects to listed salmon. Generally, RHCA modifications will require completion of Watershed Analysis to provide the ecological basis for the change. However, RHCAs may be modified in the absence of Watershed Analysis where stream reach or site-specific data support the change. In all cases, RHCA modifications, the rationale supporting those changes, and the effects of the changes will be documented. Within the range of listed salmon, modification of RHCAs will be done in consultation with NMFS.

STANDARD WIDTHS DEFINING INTERIM RHCAs

Four categories of stream or water body, and the standard widths for each are:

Category 1 - **Fish-bearing streams**: Interim RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

Category 2 - **Permanently flowing non-fish-bearing streams**: Interim RHCAs consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year flood plain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.

Category 3 - **Ponds, lakes, reservoirs, and wetlands greater than 1 acre**: Interim RHCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond or lake, whichever is greatest.

Category 4 - **Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas**: This category includes features with high variability in size and site-specific characteristics. At a minimum the interim RHCAs must include:

a. the extent of landslides and landslide-prone areas.

b. the intermittent stream channel and the area to the top of the inner gorge.

c. the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation.

d. for Key Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

e. for watersheds not identified as Key Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greatest.

In non-forested rangeland ecosystems, the interim RHCA width for permanently flowing streams in categories 1 and 2 is the extent of the 100-year flood plain.

STANDARDS AND GUIDELINES

Project and site-specific standards and guidelines listed below will apply to all RHCAs and to projects and activities in areas outside RHCAs that would degrade them. The combination of the standards and guidelines for RHCAs specified below with the standards and guidelines of existing forest plans and LUPs will provide a benchmark for management actions that reflects increased sensitivities and a commitment to ecosystem management.

Under Alternative 3, the standards and guidelines would be applied only to proposed projects and activities. Ongoing projects and activities would continue during the interim period in accordance with management direction in current forest plans and LUPs.

Under Alternative 4, the standards and guidelines listed below would be applied to proposed projects and activities, as well as ongoing projects and activities that pose unacceptable risk to anadromous fish. Due to the short-term duration of this interim direction, provisions for development and implementation of road/transportation management plans and the relocation, elimination, or reconstruction of existing roads, facilities, and other improvements (i.e., RF-2 c, RF-3 a and c, RF-4, RF-5, GM-2, RM-1, and MM-2) will be initiated but are unlikely to be completed during the interim period. Where existing roads, facilities, and other improvements found to be causing an unacceptable risk cannot be relocated, eliminated, or reconstructed, those improvements will be closed. The option of relocation, elimination, or reconstruction of existing improvements will be explored as part of the long-term strategy being developed in the geographically-specific environmental analyses. Also, due to the short-term duration of this direction, adjustments to management not within the sole discretion of the Agencies (i.e., RF-1, LH-3, RA-1, WR-2, FW-3, and FW-4) will be initiated but are unlikely to be completed during the interim period.

Timber Management

TM-1. Prohibit timber harvest, including fuelwood cutting, in Riparian Habitat Conservation Areas, except as described below. Do not include Riparian Habitat Conservation Areas in the land base used to determine the Allowable Sale Quantity, but any volume harvested can contribute to the timber sale program.

a. Where catastrophic events such as fire, flooding, volcanic, wind, or insect damage result in degraded riparian conditions, allow salvage and fuelwood cutting in Riparian Habitat Conservation Areas only where present and future woody debris needs are met, where cutting would not retard or prevent attainment of other Riparian Management Objectives, and where adverse effects on listed anadromous fish can be avoided. For watersheds with listed salmon or designated critical habitat, complete Watershed Analysis prior to salvage cutting in RHCAs.

b. Apply silvicultural practices for Riparian Habitat Conservation Areas to acquire desired vegetation characteristics where needed to attain Riparian Management Objectives. Apply silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on listed anadromous fish.

Roads Management

RF-1. Cooperate with Federal, Tribal, State, and county agencies, and cost-share partners to achieve consistency in road design, operation, and maintenance necessary to attain Riparian Management Objectives.

RF-2. For each existing or planned road, meet the Riparian Management Objectives and avoid adverse effects on listed anadromous fish by:

a. completing Watershed Analyses prior to construction of new roads or landings in Riparian Habitat Conservation Areas.

b. minimizing road and landing locations in Riparian Habitat Conservation Areas.

c. initiating development and implementation of a Road Management Plan or a Transportation Management Plan. At a minimum, address the following items in the plan:

1. Road design criteria, elements, and standards that govern construction

and reconstruction.

2. Road management objectives for each road.

3. Criteria that govern road operation, maintenance, and management.

4. Requirements for pre-, during-, and post-storm inspections and maintenance.

5. Regulation of traffic during wet periods to minimize erosion and sediment delivery and accomplish other objectives.

6. Implementation and effectiveness monitoring plans for road stability, drainage, and erosion control.

7. Mitigation plans for road failures.

d. avoiding sediment delivery to streams from the road surface.

1. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe.

2. Route road drainage away from potentially unstable stream channels, fills, and hillslopes.

e. avoiding disruption of natural hydrologic flow paths.

f. avoiding sidecasting of soils or snow. Sidecasting of road material is prohibited on road segments within or abutting RHCAs in watersheds containing designated critical habitat for listed anadromous fish.

RF-3. Determine the influence of each road on the Riparian Management Objectives. Meet Riparian Management Objectives and avoid adverse effects on listed anadromous fish by:

a. reconstructing road and drainage features that do not meet design criteria or operation and maintenance standards, or that have been shown to be less effective than designed for controlling sediment delivery, or that retard attainment of Riparian Management Objectives, or do not protect designated critical habitat for listed anadromous fish from increased sedimentation.

b. prioritizing reconstruction based on the current and potential damage to listed anadromous fish and their designated critical habitat, the ecological value of the riparian resources affected, and the feasibility of options such as helicopter logging and road relocation out of Riparian Habitat Conservation Areas.

c. closing and stabilizing or obliterating, and stabilizing roads not needed for future management activities. Prioritize these actions based on the current and potential damage to listed anadromous fish and their designated critical habitat, and the ecological value of the riparian resources affected.

RF-4. Construct new, and improve existing, culverts, bridges, and other stream crossings to accommodate a 100-year flood, including associated bedload and debris, where those improvements would/do pose a substantial risk to riparian conditions. Substantial risk improvements include those that do not meet design and operation maintenance criteria, or that have been shown to be less effective than designed for controlling erosion, or that retard attainment of Riparian Management Objectives, or that do not protect designated critical habitat from increased sedimentation. Base priority for upgrading on risks to listed anadromous fish and their designated critical habitat and the ecological value of the riparian resources affected. Construct and maintain crossings to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.

RF-5. Provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams.

Grazing Management

GM-1. Modify grazing practices (e.g., accessibility of riparian areas to livestock, length of grazing season, stocking levels, timing of grazing, etc.) that retard or prevent attainment of Riparian Management Objectives or are likely to adversely affect listed anadromous fish. Suspend grazing if adjusting practices is not effective in meeting Riparian Management Objectives and avoiding adverse effects on listed anadromous fish.

GM-2. Locate new livestock handling and/or management facilities outside of Riparian Habitat Conservation Areas. For existing livestock handling facilities inside the Riparian Habitat Conservation Areas, assure that facilities do not prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish. Relocate or close facilities where these objectives cannot be met.

GM-3. Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that will not retard or prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish.

GM-4. Adjust wild horse and burro management to avoid impacts that prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish.

Recreation Management

RM-1. Design, construct, and operate recreation facilities, including trails and dispersed sites, in a manner that does not retard or prevent attainment of the Riparian Management Objectives and avoids adverse effects on listed anadromous fish. Complete Watershed Analysis prior to construction of new recreation facilities in Riparian Habitat Conservation Areas. For existing recreation facilities inside Riparian Habitat Conservation Areas, assure that the facilities or use of the facilities will not prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish. Relocate or close recreation facilities where Riparian Management Objectives cannot be met or adverse effects on listed anadromous fish avoided.

RM-2. Adjust dispersed and developed recreation practices that retard or prevent attainment of Riparian Management Objectives or adversely affect listed anadromous fish. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in meeting Riparian Management Objectives and avoiding adverse effects on listed anadromous fish, eliminate the practice or occupancy.

RM-3. Address attainment of Riparian Management Objectives and potential effect on listed anadromous fish and designated critical habitat in Wild and Scenic Rivers, Wilderness, and other Recreation Management plans.

Minerals Management

MM-1. Avoid adverse effects to listed species and designated critical habitat from mineral operations. If the Notice of Intent indicates a mineral operation would be located in a Riparian Habitat Conservation Area, or could affect attainment of Riparian Management Objectives, or adversely affect listed anadromous fish, require a reclamation plan, approved Plan of Operations (or other such governing document), and reclamation bond. For effects that

cannot be avoided, such plans and bonds must address the costs of removing facilities, equipment, and materials; recontouring disturbed areas to near pre-mining topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvage and replacement of topsoil; and seedbed preparation and revegetation to attain Riparian Management Objectives and avoid adverse effects on listed anadromous fish. Ensure Reclamation Plans contain measurable attainment and bond release criteria for each reclamation activity.

MM-2. Locate structures, support facilities, and roads outside Riparian Habitat Conservation Areas. Where no alternative to siting facilities in Riparian Habitat Conservation Areas exists, locate and construct the facilities in ways that avoid impacts to Riparian Habitat Conservation Areas and streams and adverse effects on listed anadromous fish. Where no alternative to road construction exists, keep roads to the minimum necessary for the approved mineral activity. Close, obliterate and revegetate roads no longer required for mineral or land management activities.

MM-3. Prohibit solid and sanitary waste facilities in Riparian Habitat Conservation Areas. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in Riparian Habitat Conservation Areas exists, and releases can be prevented and stability can be ensured, then:

a. analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.

b. locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in Riparian Habitat Conservation Areas.

c. monitor waste and waste facilities to confirm predictions of chemical and physical stability, and make adjustments to operations as needed to avoid adverse effects to listed anadromous fish and to attain Riparian Management Objectives.

d. reclaim and monitor waste facilities to assure chemical and physical stability and revegetation to avoid adverse effects to listed anadromous fish, and to attain the Riparian Management Objectives.

e. require reclamation bonds adequate to ensure long-term chemical and physical stability and successful revegetation of mine waste facilities.

MM-4. For leasable minerals, prohibit surface occupancy within Riparian Habitat Conservation Areas for oil, gas, and geothermal exploration and development activities where contracts and leases do not already exist, unless there are no other options for location and Riparian Management Objectives can be attained and adverse effects to listed anadromous fish can be avoided. Adjust the operating plans of existing contracts to (1) eliminate impacts that prevent attainment of Riparian Management Objectives and (2) avoid adverse effects to listed anadromous fish.

MM-5. Permit sand and gravel mining and extraction within Riparian Habitat Conservation Areas only if no alternatives exist, if the action(s) will not retard or prevent attainment of Riparian Management Objectives, and adverse effects to listed anadromous fish can be avoided.

MM-6. Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of Riparian Management Objectives and avoid adverse effects on listed anadromous fish.

Fire/Fuels Management

FM-1. Design fuel treatment and fire suppression strategies, practices, and actions so as not to prevent attainment of Riparian Management Objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management actions could perpetuate or be damaging to long-term ecosystem function, listed anadromous fish, or designated critical habitat.

FM-2. Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of Riparian Habitat Conservation Areas. If the only suitable location for such activities is within the Riparian Habitat Conservation Area, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to listed anadromous fish a primary goal. Use an interdisciplinary team, including a fishery biologist, to predetermine incident base and helibase locations during presuppression planning, with avoidance of potential adverse effects to listed anadromous fish a primary goal.

FM-3. Avoid delivery of chemical retardant, foam, or additives to surface waters. An exception may be warranted in situations where overriding immediate

safety imperatives exist, or, following a review and recommendation by a resource advisor and a fishery biologist, when the action agency determines an escape fire would cause more long-term damage to anadromous fish habitats than chemical delivery to surface waters.

FM-4. Design prescribed burn projects and prescriptions to contribute to the attainment of the Riparian Management Objectives.

FM-5. Immediately establish an emergency team to develop a rehabilitation treatment plan to attain Riparian Management Objectives and avoid adverse effects on listed anadromous fish whenever Riparian Habitat Conservation Areas are significantly damaged by a wildfire or a prescribed fire burning out of prescription.

Lands

LH-1. Require instream flows and habitat conditions for hydroelectric and other surface water development proposals that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction, and growth. Coordinate this process with the appropriate State agencies. During relicensing of hydroelectric projects, provide written and timely license conditions to the Federal Energy Regulatory Commission (FERC) that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate relicensing projects with the appropriate State agencies.

LH-2. Locate new hydroelectric ancillary facilities outside Riparian Habitat Conservation Areas. For existing ancillary facilities inside the RHCA that are essential to proper management, provide recommendations to FERC to assure that the facilities will not prevent attainment of the Riparian Management Objectives and that adverse effects on listed anadromous fish are avoided. Where these objectives cannot be met, provide recommendations to FERC that such ancillary facilities should be relocated. Locate, operate, and maintain hydroelectric facilities that must be located in Riparian Habitat Conservation Areas to avoid effects that would retard or prevent attainment of the Riparian Management Objectives and avoid adverse effects on listed anadromous fish.

LH-3. Issue leases, permits, rights-of-way, and easements to avoid effects that would retard or prevent attainment of the Riparian Management Objectives and avoid adverse effects on listed anadromous fish. Where the authority to do so was retained, adjust existing leases, permits, rights-of-way, and easements to eliminate effects that would retard or prevent attainment of the

Riparian Management Objectives or adversely affect listed anadromous fish. If adjustments are not effective, eliminate the activity. Where the authority to adjust was not retained, negotiate to make changes in existing leases, permits, rights-of-way, and easements to eliminate effects that would prevent attainment of the Riparian Management Objectives or adversely affect listed anadromous fish. Priority for modifying existing leases, permits, rights-of-way, and easements will be based on the current and potential adverse effects on listed anadromous fish and the ecological value of the riparian resources affected.

LH-4. Use land acquisition, exchange, and conservation easements to meet Riparian Management Objectives and facilitate restoration of fish stocks and other species at risk of extinction.

General Riparian Area Management

RA-1. Identify and cooperate with Federal, Tribal, State and local governments to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.

RA-2. Trees may be felled in Riparian Habitat Conservation Areas when they pose a safety risk. Keep felled trees on site when needed to meet woody debris objectives.

RA-3. Apply herbicides, pesticides, and other toxicants, and other chemicals in a manner that does not retard or prevent attainment of Riparian Management Objectives and avoids adverse effects on listed anadromous fish.

RA-4 Prohibit storage of fuels and other toxicants within Riparian Habitat Conservation Areas. Prohibit refueling within Riparian Habitat Conservation Areas unless there are no other alternatives. Refueling sites within a Riparian Habitat Conservation Area must be approved by the Forest Service or Bureau of Land Management and have an approved spill containment plan.

RA-5. Locate water drafting sites to avoid adverse effects to listed anadromous fish and instream flows, and in a manner that does not retard or prevent attainment of Riparian Management Objectives.

Watershed and Habitat Restoration

WR-1. Design and implement watershed restoration projects in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of native species, and contributes to attainment of Riparian Management Objectives.

WR-2. Cooperate with Federal, State, local, and Tribal agencies, and private landowners to develop watershed-based Coordinated Resource Management Plans (CRMPs) or other cooperative agreements to meet Riparian Management Objectives.

WR-3. Do not use planned restoration as a substitute for preventing habitat degradation (i.e., use planned restoration only to mitigate existing problems, not to mitigate the effects of proposed activities).

Fisheries and Wildlife Restoration

FW-1. Design and implement fish and wildlife habitat restoration and enhancement actions in a manner that contributes to attainment of the Riparian Management Objectives.

FW-2. Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of the Riparian Management Objectives or adversely affect listed anadromous fish. For existing fish and wildlife interpretive and other user-enhancement facilities inside Riparian Habitat Conservation Areas, assure that Riparian Management Objectives are met and adverse effects on listed anadromous fish are avoided. Where Riparian Management Objectives cannot be met or adverse effects on listed anadromous fish avoided, relocate or close such facilities.

FW-3. Cooperate with Federal, Tribal, and State wildlife management agencies to identify and eliminate wild ungulate impacts that prevent attainment of the Riparian Management Objectives or adversely affect listed anadromous fish.

FW-4. Cooperate with Federal, Tribal, and State fish management agencies to identify and eliminate adverse effects on native anadromous fish associated with habitat manipulation, fish stocking, fish harvest, and poaching.

KEY WATERSHEDS

Key Watersheds already have been designated in California, Oregon, and Washington within areas implementing the Northern Spotted Owl Record of Decision (ROD). Similar criteria will be considered to designate Key Watersheds in the 15 national forests and 7 BLM districts:

(1) watersheds with stocks listed pursuant to the Endangered Species Act, or stocks identified in the 1991 American Fisheries Society report as "at risk" or subsequent scientific stock status reviews; or

(2) watersheds that contain excellent habitat for mixed salmonid assemblages; or

(3) degraded watersheds with a high restoration potential.

Key Watersheds will be identified through broad scale ecological assessments and addressed in the geographically-specific environmental analyses. During the period of interim direction, all watersheds that contain designated critical habitat for listed anadromous fish will be treated as Key Watersheds. The intent of designating Key Watersheds is to provide a pattern of protection across the landscape where habitat for anadromous fish would receive special attention and treatment. Priority within these watersheds would be to protect or restore habitat for listed stocks, stocks of special interest or concern, or salmonid assemblages of critical value for productivity or biodiversity. Areas in good condition would serve as anchors for the potential recovery of depressed stocks, and also would provide colonists for adjacent areas where habitat had been degraded by land management or natural events. Those areas of lower quality habitat with high potential for restoration would become future sources of good habitat with the implementation of a comprehensive restoration program.

WATERSHED ANALYSIS

Watershed Analysis is a systematic procedure for determining how a watershed functions in relation to its physical and biological components. This is accomplished through consideration of history, processes, landform, and condition. Because management direction applies only to proposed projects and activities under Alternative 3, it is not anticipated that extensive Watershed Analysis would be initiated under this alternative. Generally, under Alternative 3 Watershed Analysis would be initiated where the interim RMOs and the interim RHCA widths do not adequately reflect specific watershed capabilities. Under Alternative 4, the guidelines and procedural manuals being developed by the Interagency Watershed Analysis Coordination Team and other potentially relevant procedures (e.g., the Cumulative Watershed Effects Process for Idaho, etc.) will be considered and used, where

appropriate, in development of a Watershed Analysis protocol. As per consultation with the National Marine Fisheries Service (NMFS), during the period of interim direction, the Agencies will complete at least four or five prototype Watershed Analyses within the Snake River Basin.

Watershed Analysis is a prerequisite for determining which processes and parts of the landscape affect fish and riparian habitat, and is essential for defining watershed-specific boundaries for Riparian Habitat Conservation Areas and for Riparian Management Objectives. Watershed Analysis forms the basis for evaluating cumulative watershed effects; defining watershed restoration needs, goals and objectives; implementing restoration strategies; and monitoring the effectiveness of watershed protection measures. Watershed Analysis employs the perspectives and tools of multiple disciplines, especially geomorphology, hydrology, geology, aquatic and terrestrial ecology, and soil science. It is the framework for understanding and carrying out land use activities within a geomorphic context, and is a major component of the evolving science of ecosystem analysis. Watershed Analysis is an iterative process which includes monitoring, evaluation, and adjustment to incorporate detected changes.

Watershed Analysis consists of a sequence of activities designed to identify and interpret the processes operating in a specific landscape. The components and intensity of the analysis will vary depending on level of activity and significance of issues involved. The overall goals of Watershed Analysis are to:

1. Screen current watershed condition:

   a. Characterize the geomorphic, ecologic, and hydrologic context of a watershed, and identify the uses in the watershed.

   b. Determine the type, extent, frequency, and intensity of watershed processes, including mass soil movements, fire, peak and low streamflows, surface erosion, and other processes affecting the flow of water, sediment, organic material, and nutrients through a watershed.

   c. Determine the distribution, abundance, life histories, habitat requirements, and limiting factors for fish and other aquatic and riparian dependent species.

   d. Identify parts of the landscape, including hill slopes and channels, that are either sensitive to specific disturbance processes or are critical to beneficial uses, key anadromous fish stocks or other species.

2. Interpret watershed history, including the effects of previous natural disturbances and land use activities on watershed processes.

3. Provide information necessary to establish ecologically and geomorphically appropriate boundaries of Riparian Habitat Conservation Areas.

4. Provide information necessary to establish ecologically and geomorphically appropriate Riparian Management Objectives.

5. Identify potentially necessary adjustments to resource output projections (e.g., board-feet, animal unit months, and recreation visitor days projected in forest plans, LUPs and other planning documents).

6. Identify appropriate watershed restoration objectives, strategies, and priorities.

7. Provide information necessary to design approaches to evaluate and monitor the effectiveness of standards and guidelines for mitigating impacts of current uses and contributing to the attainment of Riparian Management Objectives, and the effectiveness of restoration efforts in correcting past degradation.

8. Monitor and identify appropriate modifications to projects and activities to improve or maintain watershed condition.

To provide accountability, Watershed Analysis includes a process by which the Agencies certify the analysis has been conducted and completed according to the expected scientific standards. The certification process will be addressed in the geographically-specific environmental analyses.

WATERSHED RESTORATION

Watershed restoration comprises actions taken to improve the current conditions of watersheds to restore degraded habitat, and to provide long-term protection to natural resources, including riparian and aquatic resources. Alternatives 3 and 4 assume that no additional funds will be available for watershed restoration during the interim period, but that some existing funds will be retargeted, as necessary, to establish a watershed restoration management program that includes:

1) A regional strategy that looks across landscapes and ownerships within the watershed to identify where restoration efforts are likely to be most effective.

2) Use of Watershed Analysis to adapt restoration strategies to specific landscapes, taking into account unique watershed histories, conditions, and resources.

3) Use of Watershed Analysis to establish a specific set of habitat objectives for each watershed.

4) Restoration/mitigation practices based on the results of Watershed Analysis, which are designed to ameliorate the impacts of human activities within the watershed.

5) Monitoring and evaluation to define and refine restoration objectives and track the effectiveness of restoration efforts.

Priority in conducting watershed restoration will be given to Key Watersheds.

MONITORING

Monitoring is an important component of the proposed interim direction. It will be used to verify that the standards and guidelines were applied during the project implementation (i.e., implementation monitoring) and to assess whether those protective measures are adequate to attain Riparian Goals and Management Objectives (i.e., effectiveness monitoring).

Those national forests and BLM districts adopting interim direction will be required to conduct implementation monitoring as outlined in the Section 7 Monitoring Protocol for the Upper Columbia River Basin (USDA Forest Service 1994) for each project. Implementation monitoring will entail onsite verification and written/photographic documentation that standards and guidelines were applied. The format provided in the Section 7 protocol, which serves as a basic outline for implementation monitoring, will be refined and used for monitoring implementation of the interim direction.

Assessing effectiveness is logistically more complex and difficult than implementation monitoring, and in many cases will require a time period greater than that of the interim direction. Individual national forests and/or BLM districts will focus their efforts and combine resources to address the most important effectiveness issues. Stratification based on eco-regions, watershed characteristics, and the presence of listed or at-risk anadromous fish will be used to identify specific monitoring sites and priorities. Study designs with clear objectives, statistically valid sampling techniques, replication, and comparisons with "reference" conditions will direct effectiveness monitoring efforts.

The Section 7 monitoring protocol provides detailed descriptions of how each RMO element is to be monitored. This document is to be used as a guide. Individual monitoring efforts will be coordinated by the Interagency Implementation Team to make every effort to ensure applicable effectiveness issues are addressed. Monitoring results will be summarized annually, with conclusions drawn in regard to how effective

standards and guidelines are in contributing to meeting Riparian Goals and Management Objectives. Complex ecological processes and long time frames are inherent in the RMOs, and it is unrealistic to expect that the planned monitoring will generate conclusive results within 18 months. Nevertheless, it is critical to begin monitoring to establish a baseline against which effectiveness can be assessed through time.

A third type of monitoring (i.e., validation monitoring) is intended to ascertain the validity of the assumptions used in developing the interim direction. Because of the short-term nature of the management direction, no specific requirements are included for validation monitoring. The geographically-specific environmental analyses will address longer-term validation monitoring and research needs.

ALTERNATIVE 5

Alternative 5 applies the same riparian goals, interim Riparian Management Objectives, Riparian Habitat Conservation Areas, and standards and guidelines; uses the same protocol for Key Watershed identification and Watershed Analysis; and applies the same criteria for watershed restoration as Alternatives 3 and 4, with the following exceptions. In Alternative 5:

1. Interim RHCA widths are the same as in Alternatives 3 and 4, except that for category four (seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas). Alternative 5 does not distinguish between Key and non-Key Watersheds. For category four areas in all watersheds, Alternative 5 specifies that the interim RHCAs must include:

   a. the extent of landslides and landslide-prone areas;

   b. the intermittent stream channel and the area to the top of the inner gorge;

   c. the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation; and

   d. the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

2. Watershed Analysis, although conducted as described for Alternatives 3 and 4, must be completed in Key Watersheds prior to initiation of any new projects and activities therein.

3. The management direction is applied to all proposed and all ongoing projects and activities.