



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB1999-0292

September 21, 1999

J. Michael Lunn
Forest Supervisor
Siskiyou National Forest
200 NE Greenfield Road
PO Box 440
Grants Pass, OR 97526-0242

Cary Osterhaus
District Manager
Roseburg BLM District
777 NW Garden Valley Boulevard
Roseburg, OR 97470

Jose Linares
Acting Forest Supervisor
Siuslaw National Forest
4077 SW Research Way
PO Box 1148
Corvallis, OR 97339

Ronald Kortlever
Superintendent
BIA, Siletz Agency
PO Box 569
Siletz, OR 97380

Sue Richardson
District Manager
Coos Bay BLM District
1300 Airport Lane
North Bend, OR 97459

Re: Section 7 Formal Consultation on Forest Service and BLM Actions Affecting Oregon Coast
Coho Salmon

Dear Agency Administrators:

This responds to your Biological Assessment (BA) requesting consultation on actions that may affect Oregon Coast (OC) coho salmon, OC steelhead, and OC coastal cutthroat trout (OC cutthroat trout). The BA, dated May 17, 1999, was received by the National Marine Fisheries Service (NMFS) on May 19, 1999. In response to a request for additional information on June 2, 1999, supplemental additions to the BA were submitted to NMFS on June 25, July 8, and July 29, 1999. A request by the Coos Bay District Bureau of Land Management (CBBLM), dated August 9, 1999, to withdraw two actions from the BA was the final modification to the BA. This consultation on USDA Forest Service (USFS) and Bureau of Land Management (BLM) actions is conducted under section 7(a)(2) of the Endangered Species Act (ESA) and its implementing regulations, 50 CFR Part 402.



BACKGROUND

The listing of OC coho salmon (*Oncorhynchus kisutch*) as a threatened species under the ESA became effective on October 9, 1998 (63 FR 42587). NMFS proposed critical habitat for OC coho salmon on May 10, 1999 (64 FR 24998). OC steelhead (*O. mykiss*), although classified as a

candidate species by NMFS, were determined to not warrant listing on March 19, 1998 (63 FR 13347).

With the exception of the Umpqua River cutthroat, which is listed as endangered, all populations of searun cutthroat (*O. clarki clarki*) from Washington to California were classified by NMFS as candidate species on July 14, 1997 (62 FR 37560). Coastal cutthroat trout populations (generally including resident populations above migration barriers) from the mouth of the Columbia River south to Cape Blanco were subsequently proposed to constitute the OC coastal cutthroat Evolutionarily Significant Unit (ESU) by NMFS and the U.S. Fish and Wildlife Service (FWS) on April 5, 1999 (64 FR 16397). Although NMFS concluded that the OC cutthroat trout ESU did not warrant listing at that time, NMFS considers the OC cutthroat trout a candidate for future listing and will revisit the listing determination within four years.

The Level 1 team of fish biologists from NMFS and the administrative units (i.e., the Level 1 team) for the portion of the OC coho salmon ESU from the Umpqua River south to Cape Blanco prepared this BA. The Level 1 team prepared the BA in accordance with the following interagency guidance: (1) The February 26, 1997, streamlining consultation agreement; and (2) Section 7 consultation direction dated June 5, 1998. Project descriptions and effect determinations produced by the action agencies were reviewed by the Level 1 team following procedures described by NMFS (1997a) in Attachments 2 and 3 of a biological opinion and conference opinion on USFS and BLM land management plans within the range of the northern spotted owl dated March 18, 1997 (hereafter referred to as the LRMP Opinion).

The effects of the grouped and individual actions proposed in the BA were evaluated by the Level 1 team at project¹ (or site), watershed², and subbasin³ scales using criteria based upon the biological

¹ Project sites are areas of variable size, but typically range from tens to hundreds of acres, and are where specific management activities take place (FEMAT, 1993, p.V-59). Some actions, especially timber sales, involving multiple activities at multiple sites, require assessments of combined effects over larger areas (e.g., drainages or subwatersheds, which range from hundreds to thousands of acres in size).

² A watershed is the drainage basin contributing water, organic material, dissolved nutrients, and sediments to a stream or lake. For the purposes of this consultation, watershed will refer to "fifth field" hydrologic unit code (HUC) watersheds which have been cooperatively delineated by the USFS and BLM. Watersheds are made up of smaller drainage basins known as subwatersheds. Watersheds (and some large subwatersheds or aggregates of

requirements of listed, proposed, and candidate salmonid species (Attachment 3 of the LRMP Opinion), and the Aquatic Conservation Strategy objectives of the Northwest Forest Plan (USDA and USDI 1994, p. B9-11). According to the procedural expectations of the LRMP Opinion, the Level 1 team discussed the subject actions on the Siskiyou, and Siuslaw National Forests, and the CBBLM, at meetings in Coos Bay or Roseburg, Oregon on February 9&16, March 1&29, April 13, May 4, 10&11, and August 3, 1999.

The BA proposed individual projects and categories of activities which involve multiple actions (i.e. programmatic actions). As described previously in an August 31, 1999 letter to the agencies, NMFS is unable to conclude consultation on the programmatic actions. NMFS anticipates that the ongoing efforts of the Level 1 teams from southwestern Oregon will produce a biological assessment for these programmatic actions in the near future.

The BA separated the proposed actions into two categories: (1) actions found to “may affect, but not likely to adversely affect” (NLAA) OC coho salmon; and (2) actions found to “may affect, and likely to adversely affect” (LAA) this species. A separate concurrence memo, dated September 2, 1999, completed informal consultation on the actions that NMFS concurs are NLAA OC coho salmon. This concurrence and biological opinion (Opinion), applies exclusively to actions listed below in Table 1, and will conclude consultation for the actions proposed in the BA dated May 17, 1999.

The BA also requests NMFS to conference on the effects of the proposed actions to OC coho salmon proposed critical habitat, OC steelhead, and OC cutthroat trout. The LRMP Opinion concluded that land management actions, when considered at the watershed scale, are assumed to have similar effects upon OC coho salmon, OC steelhead, and OC cutthroat trout because similar aquatic habitat conditions are necessary for survival and recovery of these species. Likewise, the BA and the Level 1 team found effects at the site-scale for all actions in Table 1, with the exception of the Elkhorn Channel Rehabilitation Project, would be identical for OC coho salmon, OC steelhead, and OC cutthroat trout. The Elkhorn Channel Rehabilitation Project would cause temporary adverse effects to aquatic habitat and resident OC cutthroat trout found above natural barriers to the upstream passage of anadromous salmonids.

Therefore, for all projects in Table 1, NMFS expects that this Opinion will be the basis of a biological opinion if the OC steelhead or OC cutthroat trout ESUs become listed under the ESA. Likewise, for all projects in Table 1, NMFS expects that this Opinion will be the basis for critical habitat determinations if critical habitat is either designated or proposed for OC coho salmon, OC steelhead,

subwatersheds) are the proper size (20-200 square miles) for conducting Watershed Analysis and assessing many key processes and features affecting ecosystem function.

³ Subbasins are aggregations of watersheds that drain to a common water body such as a large river or the ocean. For the purposes of this consultation, subbasins refer to the “fourth field”, HUC watersheds delineated by the U.S. Geological Survey (USGS). The BA occasionally refers to these subbasins as “Section 7 Subbasins”.

or OC cutthroat trout. In addition, this Opinion’s Incidental Take Statement is expected to become effective following NMFS’ adoption of this Opinion as the biological opinion once an OC steelhead or an OC cutthroat trout listing within the action area becomes final (50 CFR 402.10(d)).

PROPOSED ACTIONS

Table 1 lists the FY 1999/2000 actions proposed by the CBBLM and the Siskiyou National Forest (SNF) that are LAA listed, proposed, or candidate salmonids. Although most actions are scheduled to begin by 2000, some (e.g., some timber sales) may not be fully implemented for up to 10 years.

Table 1. FY 1999/2000 Actions LAA OC coho salmon, OC steelhead, or OC cutthroat trout.
Coos Bay BLM District
<u>Myrtlewood Field Office</u> Big Creek Timber Sales
Siskiyou National Forest
<u>Powers Ranger District</u> Elkhorn Channel Rehabilitation Project South Fork Coquille Culvert Replacements Sixes Culvert Replacement

All actions in Table1 are bound by the following criteria: The administrative units determine that these activities are consistent with the four key components of the Northwest Forest Plan’s (NWFP) Aquatic Conservation Strategy (i.e., riparian reserves, key watersheds, watershed analysis, watershed restoration), as well as applicable land allocations and NWFP standards and guidelines (NMFS 1997a). In addition, all proposed actions are subject to the administrative unit’s requirements for implementing the appropriate National Environmental Policy Act (NEPA) planning and analysis.

The proposed actions, by subbasin and watersheds in which proposed, are described below. The project descriptions include information provided in the BA and NEPA documentation for the proposed projects.

Sixes and New Rivers Subbasin

Sixes River Watershed

Sixes River Culvert Replacement

The Powers Ranger District proposes to replace a culvert on USFS road 5201 at milepost (MP) 2.76. The culvert, which is on an intermittent channel, was identified as having a high potential for failure. An excavator will take 1 or 2 days to replace the existing 18-inch diameter culvert with one capable of passing 100-year flood events.

Coquille River Subbasin

Upper South Fork Coquille Watershed

South Fork Coquille Culvert Replacements

The Powers Ranger District proposes to replace seven undersize and/or damaged culverts located at four locations within the South Fork Coquille River Watershed. The culverts, all on intermittent channels, were identified during a culvert inventory as having a high potential for failure. Most of the existing culverts are 18 inches in diameter and would be replaced with 28- to 32-inch culverts capable of passing 100-year flood events. Although the culverts are on intermittent drainages that do not contain fish species, two of the sites are within 200 yards of fish bearing streams. Each replacement will take 1 or 2 days for an excavator to complete the excavation.

Elkhorn Channel Rehabilitation

The SNF proposes to rehabilitate a 0.25 mile reach of Elkhorn Creek that has been captured by an old road bed for about 35 years. Over time, this diverted reach of stream has become established within the road bed until once again joining its original channel. The project proposes to pull back the eroding, incised banks, re-contour the stream to a configuration resembling its historic morphology, add large woody material to the stream, and re-establish native vegetation to restore riparian and aquatic processes to about 4 acres of Riparian Reserve. The project also proposes to reconstruct 0.4 miles of temporary⁴ road in order to access the site with an excavator.

⁴ Roads that are constructed and decommissioned during the dry season of the same year (usually May 15 to October 15).

Middle Fork Coquille Watershed

Big Creek Subwatershed

The MBLM proposes the following activities associated with a group of timber sales collectively referred to as the “Big Creek Timber Sales:”

- C 349 acres (15 units) of regeneration harvest.
- C 256 acres (7 units) of commercial and density management thinning.
- C Converting 28 acres (4 units) of hardwood or brush to conifer production.
- C Approximately 2.0 miles of new, semi-permanent⁵ road construction.
- C Approximately 15.0 of road surfacing and drainage upgrade.
- C Approximately 0.2 miles of temporary road construction.
- C Approximately 5.2 miles of road decommissioning (existing roads).
- C Approximately 5.4 miles road closure.
- C Interim NWFP Riparian Reserve widths would be decreased along 14 intermittent stream channels.

All harvest units would be yarded by skyline cable with the exception of 6 acres of hardwood conversion. Approximately 90 acres of the commercial thinning would occur within Riparian Reserves. About 150 feet of the proposed semi-permanent road and 400 feet of the temporary road construction would occur within Riparian Reserves.

NMFS APPROACH TO DETERMINING JEOPARDY

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by the consultation regulations, 50 CFR 402. When NMFS issues a conference or biological opinion, it uses the best scientific and commercial data available to separately determine whether a proposed Federal action is likely to: (1) Jeopardize the continued existence of a proposed, listed, or candidate species, and/or (2) destroy or adversely modify a proposed or listed species’ critical habitat.

⁵ Roads that will be decommissioned within one year after completion of activities associated with the proposed action. Decommissioning includes those measures necessary to restore pre-road hydrologic functions and to minimize the risk of road-related sediment delivery to streams (e.g., culvert removal, decompaction of road surfaces, outsloping, waterbarring, fill removal, revegetating with native species, and barricading to prevent vehicular traffic).

Attachment 2 of the LRMP Opinion describes the four stages of analysis NMFS uses to determine jeopardy: (1) Define the biological requirements of the species; (2) Evaluate the relevance of the environmental baseline to the species' current status; (3) Determine the effects of the ongoing or proposed actions on the species; and (4) Determine whether the species can be expected to survive (with an adequate potential for recovery) under the effects of the proposed or continuing action, the environmental baseline, and any other cumulative effects.

Attachment 2 of the LRMP Opinion (1997a) also describes the criteria NMFS uses for determining whether USFS and BLM actions within the range of the NWFP provide for the survival and recovery of anadromous salmonids. In summary, NMFS considers two steps: (1) Is the proposed project in compliance with the standards and guidelines for the relevant land allocations, and (2) does the proposed project meet all pertinent Aquatic Conservation Strategy (ACS) objectives as evaluated by the NMFS' Matrix of Pathways and Indicators (NMFS 1996). Actions meeting these conditions will result in improved habitat conditions, and thereby increase freshwater survival of OC coho salmon, OC steelhead, and OC cutthroat trout.

NMFS also uses the Matrix of Pathways and Indicators (MPI) evaluation to determine whether actions destroy or modify critical habitat (i.e., habitat alterations that appreciably diminish the value of critical habitat for both the survival and recovery of a listed species). Activities that are likely to destroy or adversely modify critical habitat would also be likely to jeopardize the species.

Define the Biological Requirements of the Species.

The status and biological requirements for OC coho salmon are well described in the final and proposed rules from the Federal Register (60 FR 38011, 62 FR 24588), the LRMP Opinion, and Biological Review Team findings (Weitkamp et al. 1995:113-119, 128-129).

Similarly, the status and biological requirements for OC steelhead are described in 63 FR 13347, and Busby *et al.* (1996:15-35, 121-124). The LRMP opinion, the proposed rule (64 FR 16397), the NMFS status review of coastal cutthroat (Johnson *et al.* 1999:38-50) and Hall *et al.* (1997) provide the best compilations of coastal cutthroat biology that currently exist.

The NMFS proposed critical habitat for OC coho salmon on May 10, 1999 (64 FR 24998). Essential features of coho salmon critical habitat include adequate (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions. NMFS defines critical habitat based upon the following key riparian functions: shade, sediment, nutrient or chemical regulation, streambank stability, and input of large woody debris or organic matter.

Evaluate the Relevance of the Environmental Baseline to the Species' Current Status.

Action Area

The action area is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved by the action” (50 C.F.R. § 402.02). The action area for this consultation thus includes all of the lands within the following watersheds: (1) Sixes River; (2) Upper South Fork Coquille; and (3) Middle Fork Coquille. These watersheds, which collectively total approximately 375,000 acres, are located within two subbasins (Sixes-New River and Coquille River).

The action agencies administer approximately 40% of the action area. Therefore, Federal actions are just one of the management influences contributing to the condition of the aquatic habitat within and downstream of the proposed actions.

The southern half of the action area is within the Klamath/Siskiyou physiographic province, while the northern portions are primarily within the Tyee Sandstone province. The majority of the Federally-administered lands in the Middle Fork Coquille Watershed are a checkerboard of alternating, 640-acre blocks of CBBLM and private lands. Although no Federal lands within the Middle Fork Coquille are designated as Key Watersheds⁶, the Big Creek subwatershed is an Oregon Department of Fish and Wildlife (ODFW) coho core area⁷.

The lands managed by the Siskiyou National Forest within the action area are primarily a contiguous block within the headwaters of the Upper South Fork Coquille and the Sixes Rivers. The entire Upper South Fork Coquille Watershed is a Key Watershed. The South Fork Coquille OC coho salmon population is quite depressed, most likely as a result of habitat losses, over utilization, and past hatchery practices. The South Fork Coquille remains an important stream for the spawning and rearing of winter steelhead as well as an important source of wild broodstock for a hatchery program (SNF 1995:A21-24).

Only small chunks of CBBLM administered lands are located in the Sixes River Watershed. The Dry Creek subwatershed, which is primarily managed by the SNF has been designated as a Key Watershed. In addition to being designated as a coho core area for its spawning and rearing habitat, Dry Creek also supports winter steelhead, cutthroat trout, fall chinook salmon, and even a few chum salmon (SNF 1997: A30-32).

⁶ Key Watersheds are to be managed to provide high quality habitat and to act as refugia for at-risk anadromous salmonids (USDA and USDI 1994, p. B-18). Although Key Watersheds vary greatly in size, they are recognized by the federal agencies for their importance to 3 or 4 salmonids in the action area, including winter steelhead, and coho, fall and spring chinook, and chum salmon.

⁷ Core Areas are drainages or stream reaches recognized by the State of Oregon as being critical to the persistence of salmon populations that inhabit those basins.

Environmental Baseline of Watershed Relevant Indicators

Table 2 summarizes the conditions found within the action area. The environmental baselines for the 5th field watersheds indicate most relevant indicators are “at-risk” or “not properly functioning.”

Attachment 3 of the LRMP Opinion describes how the MPI and the Checklist for Documenting Environmental Baseline and Effects of Proposed Action(s) on Relevant Indicators (Checklist) are used to characterize the environmental baseline in terms of current functional conditions of instream, riparian, and watershed elements that reflect local geologic and climatic conditions in the action area. The Level 1 team utilized the applicable Physiographic Area MPI (either Klamath Province/Siskiyou Mountains or Southwest Province Tye Sandstone) and Checklist to characterize the environmental baseline for each 5th field Hydrologic Unit Code (HUC) watershed and subbasin in which the agencies propose projects.

Table 2. Summary of habitat indicator environmental baselines for watersheds within the action area: Sixes River (SR); Upper South Fork Coquille (USFC); and Middle Fork Coquille (MFC). Note: Because of physiographic differences, some indicators were not used in every watershed.			
Habitat Indicator	Properly Functioning	At-Risk	Not Properly Functioning
<u>Water Quality</u> Temperature	-	-	SR, USFC, MFC
Turbidity	-	USFC	MFC
Chemicals/Nutrients	USFC	SR	MFC
<u>Access</u> Physical Barriers	-	-	SR, USFC, MFC
<u>Habitat Elements</u> Substrate	-	USFC, MFC	SR
Large Wood	-	-	SR, USFC, MFC
Pool Area	-	SR, USFC, MFC	
Pool Character/Quality	-	USFC, MFC	SR
Off-channel Habitat	-	USFC	SR, MFC
<u>Channel Conditions</u> Width/Depth Ratios	-	USFC	SR, MFC
Streambank Condition	-	USFC	SR, MFC

**Table 2. Summary of habitat indicator environmental baselines for watersheds within the action area: Sixes River (SR); Upper South Fork Coquille (USFC); and Middle Fork Coquille (MFC).
Note: Because of physiographic differences, some indicators were not used in every watershed.**

Habitat Indicator	Properly Functioning	At-Risk	Not Properly Functioning
<u>Water Quality</u> Temperature	-	-	SR, USFC, MFC
Turbidity	-	USFC	MFC
Chemicals/Nutrients	USFC	SR	MFC
Floodplain Connectivity	-	SR, USFC	MFC
<u>Flow/Hydrology</u> Peak Flows	-	SR	-
<u>Watershed Condition</u> Road Density/Location	-	-	SR, USFC, MFC
Disturbance History	-	USFC, MFC	SR
Riparian Reserves	-	-	SR, USFC, MFC
Landslides/Erosion	-	USFC	SR, MFC

Determine the Effects of the Ongoing or Proposed Action(s) on the Species.

The effects of the proposed actions upon OC coho salmon, OC steelhead, and OC cutthroat trout are evaluated at site, watershed, and subbasin scales in the BA. The effects determinations are supported by the following: (1) Site scale MPI and Checklist determinations, which predict the effects of the individual actions in Table 1 upon instream, riparian, and upslope indicators; (2) rationale for effect determinations at both the site and watershed scales; and (3) checklists evaluating the combined effects of all previous, ongoing, and proposed actions upon the MPI indicators within each watershed and subbasin.

In addition, the BA contains ACS consistency findings completed by interdisciplinary teams from the administrative units for each proposed individual action. The Level 1 team reviewed and concurred upon the ACS consistency findings that are relevant to listed, proposed, and candidate salmonids. The Level 1 team also found the proposed actions consistent with the following relevant to the listed, proposed, and candidate salmonids: NWFP land allocations, NWFP standards and guidelines, and the four essential components of the ACS (riparian reserves, key watersheds, watershed analysis, and watershed restoration).

SITE SCALE EFFECTS OF THE PROPOSED ACTIONS

Table 3 below summarizes the number and type of MPI habitat indicators that the BA predicts will be degraded or restored at the site-scale by the proposed actions.

Table 3. Summary of MPI habitat indicators affected at the site or project scale by the proposed actions.		
Habitat Indicator	Number of Site “Degrades”	Number of Site “Restores”
Turbidity	2 (short-term, localized from instream excavation)	1 (long-term from channel rehabilitation)
Substrate (sediment)	2 (short-term, localized from culvert replacements)	2 (2 long-term from culvert upgrades)
Riparian Reserve	1 (short-term from channel rehabilitation)	1 (long-term from channel and riparian rehabilitation)

At the site scale, the BA indicates that the indicator “degrades” listed in Table 3 represent minor, short-term effects of inconsequential importance to the attainment of properly functioning habitat. The Level 1 team concurred that these effects, because of their location and limited extent, will not hinder attainment of the ACS objectives nor destroy or modify essential features of salmonid habitat at either the site or the watershed scale of assessment. In each case, the Level 1 team concurred that no additional measures other than the project design features, are needed to avoid or minimize adverse effects to listed, proposed, or candidate salmonids on USFS or BLM administered lands.

In most cases, the BA predicts that long-term benefits of reducing the potential delivery of large amounts of sediment during future flood events would offset the short-term impacts from implementation of the proposed actions. Several other minor improvements to stream habitat indicators (e.g., substrate, large wood, and pool quality) that the SNF anticipates from the channel restoration project are not listed in Table 3.

The NMFS and the Level 1 team concur with the site-scale effects determinations. NMFS’ concerns about potential indirect effects from regeneration harvest in the Big Creek Subwatershed, which were expressed in a June 4, 1999, biological opinion on the effects of USFS, BLM, and Bureau of Indian Affairs/Coquille Indian Tribe actions on OC coho salmon, will be discussed in the following assessment of effects at the watershed scale.

WATERSHED SCALE EFFECTS OF THE PROPOSED ACTIONS

Taking the environmental baseline for each watershed into account, the Level 1 team assessed the combined effect of all proposed and ongoing actions upon each of the habitat indicators within the action area. An ACS consistency assessment developed for each proposed individual action assisted

the Level 1 team review.

The BA indicates that in each case, due to the location, project design, and the limited spatial and temporal extent of site-specific effects, the Level 1 team concluded that the combined effect of all ongoing and proposed actions would neither degrade nor retard the recovery of any relevant habitat indicators important to anadromous salmonids when considering processes operating at the watershed or subbasin scales.

Detailed descriptions of the potential effects of timber harvest and associated activities on salmonid habitat are presented by FEMAT (1993, chapter V), Spence *et al.* (1996, p.105-119, 160-166), as well as a NMFS document entitled *Potential Effects of Timber Harvest and Associated Activities on Salmonid Habitat and Measures to Minimize Those Effects* (NMFS, 1997b). These are incorporated by reference into this Opinion. NMFS is not aware of any other special characteristics of the particular sales that would cause greater or materially different effects on the subject salmonid species and their habitat than is discussed in these references.

The NMFS has considered the applicability of the above analyses to each of the timber sales identified in the BA and in Table 1 of this Opinion. Similarly, NMFS is not aware of any newly available information that would materially change these previous effects analyses.

The following descriptions summarize information provided in the BA and supporting documentation. Although the combined effects of all ongoing and proposed activities were evaluated by the Level 1 team and NMFS, the discussion below emphasizes the effects of the proposed actions listed in Table 1.

Sixes River Watershed

- C 85,936 acres - approximately 28% administered by the Siskiyou National Forest (SNF) and CBBLM.
- C Sixes River Watershed Analysis (SNF 1997).
- C Dry Creek subwatershed (approximately 10,000 acres) is a Tier 1 Key Watershed.

Sixes Culvert Replacement

The BA indicates the Sixes Culvert Replacement proposed by the SNF has the potential to temporarily deliver minor amounts of fine sediments to the adjacent mainstem of the Sixes River. Although the proposed action would disturb a small, previously impacted area within the Riparian Reserves for 1-2 days, the repairs would not affect habitat critical to riparian and watershed functions at the site or watershed scale. By upgrading a culvert which has been identified as at-risk of failure, the action is anticipated to reduce the likelihood of a large sediment delivery in the future. Project design and mitigation measures, which include a seasonally restricted instream work period, are expected to limit the adverse effects from fine sediments to within 300 feet of each project area. No new roads are proposed and no degradation of key riparian reserve functions or essential features of fish habitat are anticipated.

Since approximately 98% of the 22,000 acres the SNF manages are designated as wilderness, Key Watershed, riparian reserve, late successional habitat (LSR), or special wildlife areas (SNF 1995: O-5), these repairs to roads outside of the Key Watershed are not expected to hinder recovery of aquatic habitat or ecosystem processes in the watershed. NWFP standards and guidelines for Road Maintenance are addressed by upgrading the culvert to withstand a 100-year flood (RF-4) and the repair would be consistent with watershed analysis recommendations (SNF 1997:A-38).

In summary, the minor, short term impacts resulting from the proposed project will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale. Although the SNF lands are consolidated and should slowly recover given the current land allocations, aquatic and riparian conditions on private lands will also influence the watershed's rate of recovery. Private holdings, primarily industrial timber land or ranches, account for approximately 70% of the watershed.

Upper South Fork Coquille Watershed

- C 91,993 acres - approximately 67% administered by the SNF.
- C South Fork Coquille Watershed Analysis (SNF 1995).
- C The entire watershed is a Tier 1 Key Watershed.

South Fork Coquille Culvert Replacements

The BA indicates the objectives and anticipated effects of these repairs are very similar to those described previously for the Sixes River road and flood repair. Although the South Fork Coquille Road Repair Project includes 7 culverts at four sites in the watershed, only short term pulses of fine sediment to streams adjacent to the repair sites are anticipated. Although localized disturbance within the surrounding Riparian Reserves at each site is anticipated, the adverse impacts are limited to previously impacted sites on an existing road system. The repairs, which are expected to take 1-2 days per culvert, would not individually or cumulatively affect habitat critical to riparian and watershed functions. Project design and mitigation measures, which include a seasonally restricted instream work period, are expected to limit the delivery of any fine sediments to the stream network and make potential sediment delivery sites less susceptible to failure. The NWFP standards and guidelines for Road Maintenance are addressed by upgrading the culverts to withstand a 100-year flood (RF-4) and the repairs are consistent with watershed analysis recommendations (SNF 1995:A43).

Elkhorn Channel Rehabilitation

The rehabilitation of Elkhorn Creek requires excavation that would result in temporary adverse impacts to riparian vegetation and turbidity. Because the project site is located about 10 miles above waterfalls that are long-standing natural barriers to upstream fish passage, adverse effects to OC coho salmon are

extremely unlikely to occur. Although resident OC cutthroat trout could be temporarily affected by the project for 1 to 2 years, the SNF anticipates that the project would reduce long term deliveries of sediment by re-contouring eroding streambanks. The excavation is expected to take two weeks and would be completed during the summer months. Native grass seed and hay mulch are to be spread on the disturbed sites along the access routes immediately following completion of the project while conifers would be planted the following spring.

By pulling back the eroding, incised banks that currently exist, re-contouring the stream to a configuration resembling its historic morphology, adding large woody material, and re-establishing native vegetation, this project is designed to restore riparian and aquatic processes to about 4 acres of Riparian Reserve in the upper watershed.

Summary

In summary, NMFS concurs with the above findings. Any associated adverse effects to anadromous salmonids or their habitat are expected to be minor in magnitude and short-lived in duration. Although there may be short-term adverse impacts from the proposed culvert upgrades, no long-term degradation of key riparian reserve functions or features of habitat essential to listed or candidate salmonids are anticipated because of the limited scope of the proposed work. Recovery of degraded riparian and watershed conditions within the federally administered portion of the watershed should continue unabated because 75% of the SNF lands are managed as LSR and riparian reserves (SNF 1995: C5). The minor impacts resulting from the projects are consistent with NWFP guidelines and will not prevent or impede long term recovery of habitat indicators at either the site or watershed scale.

Middle Fork Coquille Watershed

- C 197,069 acres - approximately 33% administered by the BLM, SNF, and BIA/Coquille Indian Tribe.
- C Watershed Analyses completed by CBBLM include the Middle Fork Coquille (BLM 1994) and Big Creek (BLM 1997).
- C No Key Watersheds.
- C Approximately 87% of BLM lands in the Middle Fork Coquille watershed are NWFP matrix allocations (BLM 1994: 9).

Due to the watershed's large size, the discussion below emphasizes the effects of proposed actions in the context of the 16,661-acre Big Creek Subwatershed.

Big Creek Subwatershed

Big Creek Timber Sales

Road Work. The BA indicates that all of the proposed road construction (2 miles of semi-permanent

and 0.2 mile temporary) would be limited to stable areas or ridgetops. Approximately 150 feet of the semi-permanent road and 400 feet of the temporary road construction would occur within Riparian Reserves but would not involve any stream crossings. The proposed construction is consistent with watershed analysis recommendations for minimizing the effect of road construction within Riparian Reserves (BLM 1997:192) and is therefore consistent with LRMP Opinion terms and conditions 8.a. and 8.b. for road construction. The semi-permanent and temporary road to be constructed would subsequently be decommissioned per LRMP Opinion terms and conditions 8.b. and 8.c.

Decompaction and instream excavation associated with decommissioning of 5.2 miles of existing road would also result in temporary ground disturbance. Because most of the road decommissioning is outside of Riparian Reserves and only one culvert would be removed, the MBLM anticipates only minor and temporary delivery of sediment to the stream network. Although much less ground disturbance would be associated with the proposed closure of an additional 5.4 miles of road, the realignment of one culvert is likely to temporarily increase sediment delivery downstream 200 feet to an anadromous reach of Brownson Creek. The road density on Federal lands in the subwatershed would be reduced from 4.04 miles per square mile to about 3.63 miles per square mile. The project soil specialist found that the proposed road decommissioning and renovation should reduce the sediment delivery potential in the analysis area (BLM 1999: Section F)

Ground disturbance would also occur during the approximately 15 miles of road resurfacing and drainage upgrading proposed. There are no stream crossings in the stretch of road to be renovated and little resultant sedimentation anticipated.

Timber Harvest. The proposed action would result in 349 acres of regeneration harvest, 28 acres of brush/hardwood conversion, and 256 acres of commercial thinning harvest. The regeneration harvest would retain 7-13 trees per acre, while the commercial thinning would retain 70-135 trees per acre, while the brush/hardwood conversion treatments may not retain any standing trees other than mature hardwoods according the watershed analysis recommendations (BLM 1997:177-178). The need for burning or other site preparation treatments for each regeneration harvest unit would be determined post-harvest but could include prescribed fire. No harvest would occur in unstable areas.

Only minimal ground disturbance is anticipated in the thinning harvest units because (1) full-suspension would be required for any yarding over stream channels, and (2) skyline yarding with one-end suspension would be required elsewhere.

The only regeneration harvest that would occur within the transient snow zone (TSZ) is limited to 83 acres in the Swamp Creek drainage. However, the project hydrologist anticipates that the additional openings, which represents 3% of Swamp Creek's TSZ, would have little measurable effect on flood discharges should a rain-on-snow event occur (BLM 1999: Section M). Although the percentage of forest stands in the watershed from 0-20 years of age would increase slightly (from 30 to 32%), the project hydrologist anticipates that there would be little risk to aquatic resources because (1) extreme peak and minimum flows are dependent on climatic patterns rather than vegetation manipulation; (2) field surveys indicate that potentially affected channels are stable and not eroding, and (3) interim NWFP Riparian Reserve buffers (440 feet and 220 feet wide), would be provided for nearly all streams adjacent to proposed regeneration harvest units.

Ground disturbance or soil compaction in the harvest units would be minimized by the use of skyline yarding in all but one 6 acre unit of hardwood conversion. The proposed riparian buffers are anticipated to minimize any sediment deliveries resulting from harvest, yarding, or post-harvest treatments.

Riparian Reserve Timber Harvest and Adjustments

The CBBLM proposes 90 acres of commercial thinning and 4 acres of brush/alder conversion within Riparian Reserves. In addition, the action proposes to convert 22 acres of interim NWFP Riparian Reserve to matrix allocation by adjusting the Riparian Reserve boundaries along 14 intermittent streams.

The BA indicates the action is consistent with NWFP standard and guideline TM-1.c. because the Riparian Reserve thinning is designed to accelerate development of large conifers and understory vegetation by treating young stands of dense conifers. All perennial streams adjacent to riparian treatments would be protected by 50- to 200-foot wide no-cut buffers. No-cut buffers from 25-100 feet wide are proposed for 14 intermittent stream segments, while 6 intermittent reaches would receive no minimum buffer. Based upon site conditions, a CBBLM interdisciplinary team (IDT) prescribed the buffer widths felt necessary to maintain stream habitat, coarse wood recruitment, and water quality. Project features designed to minimize adverse effects include (1) felling of trees away from stream channels, (2) skyline yarding, and (3) full suspension over stream channels and one-end suspension elsewhere.

The CBBLM concludes that the conversion of 22 acres of interim Riparian Reserves along 14 intermittent streams to matrix would not adversely affect riparian dependent species. The BA indicates that the proposed alteration to NWFP interim Riparian Reserves is based upon the *Riparian Reserve Evaluation Techniques and Synthesis; Supplement to Section II of Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis - Version 2.2*, and is consistent with watershed analysis (BLM 1997:141-163). Further, the NWFP guidelines for adjusting interim widths of Riparian Reserves are met (i.e., watershed analysis completed, site-specific analysis conducted, and the rationale presented through the appropriate NEPA process)(USDA and USDI 1994:B-13). The reduction in Riparian Reserve widths (from 220 feet to 90-175 feet) were determined by a CBBLM IDT to be sufficient to maintain and restore the physical and biological processes provided by riparian areas.

Summary

Most adverse effects from the proposed action are likely to result from the proposed road renovation and decommissioning. Although NMFS finds that the harvest activities proposed within the Riparian Reserves of intermittent streams may also result in minor, short-term sediment deliveries to the stream network, the project design should minimize the potential for adverse effects to salmonids. The Level 1 team also concurred that project design criteria describe in the project's Environmental Analysis (EA)

(BLM 1999:Appendix 1) would minimize adverse effects. The proposed activities are consistent with NWFP standards and guidelines, watershed analysis, and LRMP Opinion terms and conditions. The temporary increases in sediment deliveries are anticipated to have only minor, localized effects that will not impair the attainment of properly functioning habitat or influence watershed processes in the long-term.

Attainment of properly functioning habitat indicators throughout the watershed will require time and improved management throughout the watershed. For example, although approximately 39% of Riparian Reserve stands are currently greater than 80 years of age, it will take 40 years for 50% of the stands to reach that age (BLM 1997:154).

As noted previously, NMFS remains concerned about indirect effects of land management in the watershed given that (1) approximately 56% of the entire Big Creek subwatershed (46% of BLM lands) are in stands less than or equal to 40 years of age (BLM 1997: 75), (2) eight of 16 subwatershed habitat indicators are not properly functioning, (3) approximately 49% of Federal riparian reserves are in the 0-40 year age class (BLM 1997: 147), and (4) Big Creek is an ODFW coho salmon core area and likely to be the most valuable subwatershed for anadromous salmonids within the Middle Fork Coquille Watershed (BLM 1997: 123-124). However, NMFS finds that this project should minimize or avoid adverse effects to OC coho salmon and proposed OC coho salmon critical habitat because (1) the CBBLM addressed Conservation Recommendations made by NMFS in the LRMP Opinion and in an Opinion dated June 4, 1999, (2) unstable areas would be avoided, (3) road densities would be reduced, and (4) minimizing Riparian Reserve disturbance should allow damaged riparian areas to recover.

CUMULATIVE EFFECTS

Cumulative effects (as defined in 50 CFR § 402.02) are discussed on pages 40-43 of the LRMP Opinion. The respective analyses of the biological requirements, environmental baseline or cumulative effects described above are incorporated herein by this reference. The NMFS is not aware of any newly available information that would materially change these previous analyses. The final rules for listing OC coho salmon (63 FR 42587), OC steelhead (63 FR 13347), and OC coastal cutthroat trout (64 FR 16397) discuss at length the influences that state and private actions have on these species and their survival.

The importance of management practices on private land in determining the rate and magnitude of improvement in Pacific salmonid production in the action area is in large part a reflection of the land ownership pattern. About 60% of the action area, including most reaches of major mainstem rivers and other low gradient valley bottom streams, likely have the greatest potential for reestablishing off-channel rearing habitat critical to OC coho salmon and are under private or state ownership.

CONCLUSIONS

At a regional scale, the biological requirements for freshwater life stages of most anadromous salmonids within the action area are not being met under the current environmental baseline (NMFS 1997a:15). Similarly, the LRMP Opinion also concluded that any further degradation of these conditions is

expected to have a significant impact due to the level of risk that listed, proposed, and candidate salmonids presently face.

Full implementation of the NWFP is expected to result in improved habitat conditions for OC coho salmon, OC steelhead, and OC cutthroat trout on Federal lands. This, in turn, is expected to provide increased survival of various life stages of these fish and an increased probability of restoring and maintaining viable populations (NMFS 1997a: 27).

Therefore, a Not Likely to Jeopardize determination for OC coho salmon, OC steelhead, or OC cutthroat trout has two requirements: (1) The proposed project is in compliance with the standard and guidelines for the relevant land allocations (e.g., Key Watersheds, Late Successional Reserves, and Riparian Reserves), and (2) the action meets all pertinent ACS objectives as evaluated by the NMFS' Matrix of Pathways and Indicators (LRMP Opinion, Attachment 2).

The NMFS concurs with the USFS, the BLM, and the Level 1 team that the proposed projects are consistent with the NWFP's land allocations, standards and guidelines, and the four essential components of the ACS, i.e., riparian reserves, key watersheds, watershed analysis, and watershed restoration. NMFS also concurs with the Level 1 team's review finding the projects are consistent with the ACS objectives relevant to listed, proposed, and candidate salmonids.

Using the MPI and Checklist, as described in the LRMP Opinion, NMFS concludes that the proposed actions meet all pertinent ACS objectives since the net effect of implementation maintains watershed habitat indicators and ecological processes generally defining biological requirements of Pacific salmonids. Notwithstanding the potential for minor, short-term adverse effects, NMFS expects that actions fully consistent with the NWFP's ACS objectives, land allocations, and standards and guidelines are expected to maintain or restore essential aquatic habitat functions, and therefore should not impede recovery of Pacific salmonid habitat (NMFS 1997a: 39).

Ecosystem recovery is expected to continue on federal lands as a result of riparian reserves, key watersheds, watershed analysis, and watershed restoration (FEMAT 1993, p.V-75). Because the ACS is based upon natural disturbance processes, it may take decades to over a century to accomplish its objectives, although some improvements in aquatic ecosystems may occur in 10 to 20 years (FEMAT 1993: V-30).

Section 7(a)(2) Determinations

NMFS concludes that implementation of the proposed actions in Table 1 are not likely to jeopardize the continued existence of OC coho salmon, OC steelhead, or OC cutthroat trout. In addition, NMFS concludes that the ongoing and proposed actions will not result in the destruction or adverse modification of proposed critical habitat for OC coho salmon. In reaching these conclusions, NMFS has utilized the best scientific and commercial data available as documented herein and by the BA and documents incorporated by reference. Additional basis for this determination is given in the LRMP Opinion (NMFS 1997a: 44-46).

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering (May 1, 1998, 63 FR 24148). Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement (ITS).

An ITS specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the agency must comply in order to implement the reasonable and prudent measures. An ITS does not apply to candidate or proposed species. While effects on OC steelhead and OC cutthroat trout were considered in this Opinion, the terms and conditions and reasonable and prudent measures set forth in this ITS do not apply to OC steelhead or OC cutthroat trout. Should one or both of these species become listed in the future, this ITS would become effective for these species upon adoption of this Conference Opinion as a biological opinion.

The measures described below are non-discretionary. They must be implemented by the USFS and BLM. They are binding conditions necessary in order for the exemption in section 7(o)(2) to apply. The USFS and BLM have a continuing duty to adhere to the terms and conditions of the ITS, and if the USFS or BLM fail to adhere to the terms and conditions of the ITS and/or fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(c) may lapse.

Amount or Extent of the Take

The NMFS anticipates that some actions which are fully consistent with the NWFP standards and guidelines may still have more than a negligible likelihood to result in incidental take of listed OC coho salmon.

Sedimentation resulting from road construction, road maintenance, and road or culvert decommissioning is expected to be the primary source of incidental take associated with the proposed actions listed in Table 1. Incidental take from this sedimentation is expected from detrimental effects on habitat parameters including substrate quality, turbidity, and suspended sediment levels, all of which may directly affect the life history of these fish. Because of the limited amount of new road construction and the constraints on constructing new road, sediment impacts are expected to be minimized. Long-term sediment inputs should be reduced through continued road decommissioning or repair of high risk sites.

Effects of timber harvesting in riparian reserves are also expected to be minimized because of location, landform, and harvest method. NMFS expects that the incidental take associated with the other activities associated with the proposed actions discussed in this opinion will also be minimal.

Adverse effects resulting from management actions such as these are largely unquantifiable in the short-term and may not be measurable as long-term effects on the species' habitat or population levels. Therefore, even though NMFS expects some low level of incidental take to occur due to these actions, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species themselves. In these instances, the NMFS designates the expected level of take as unquantifiable.

Reasonable and Prudent Measures/Terms and Conditions

The ITS in the LRMP Opinion, p. 59-75, provided reasonable and prudent measures and terms and conditions to avoid or minimize the take of listed salmonids from implementation of the administrative unit's land management plans, instream habitat enhancement, culvert upgrades, road decommissioning, and road construction that shall be applied to each site specific action.

The ITS in the LRMP Opinion, p. 61, also provided for the Level 1 team to incorporate adequate measures into the proposed actions to minimize the likelihood of incidental take. Accordingly, Level 1 team review found that compliance with the NWFP's standards and guidelines for the relevant land allocations, as well as all reasonable and prudent measures and corresponding terms and conditions in the LRMP Opinion are appropriate for the actions covered by this letter, as listed in Table 1. For the activities not covered by the LRMP Opinion (e.g., timber harvest and channel rehabilitation) which are associated with the actions listed in Table 1, the Level 1 team found that adverse effects to anadromous salmonids have been adequately minimized by project design. Thus, NMFS concludes that no reasonable and prudent measures in addition to project requirements are necessary in this Opinion for these activities.

The NMFS hereby applies the findings, reasonable and prudent measures, and terms and conditions set forth in the ITS of the LRMP Opinion to these actions. Therefore, NMFS further authorizes such minimal incidental take provided the USFS, the BLM, and their applicants comply with those measures, terms and conditions.

REINITIATION OF CONSULTATION

To ensure protection for a species assigned an unquantifiable level of take, this consultation (or conference in the case of OC steelhead and OC cutthroat trout), must be reinitiated if: (1) The amount or extent of taking specified in the incidental take statement is exceeded or is expected to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR § 402.16).

The LRMP Opinion (NMFS 1997a: 51) lists examples of situations or findings which require reinitiation of consultation. Questions regarding the consultation or conferencing on these actions should be directed to Craig Burns of my staff at (541) 957-3355.

Sincerely,



William Stelle, Jr.
Regional Administrator

cc: Mike Clady, Siuslaw National Forest
Dan Delany, Siskiyou National Forest
Bill Hudson, Coos Bay BLM District
Travis Hunt, BIS
Jon Raby, Roseburg BLM District

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