



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
525 NE Oregon Street
PORTLAND, OREGON 97232-2737

November 23, 1999

Mr. James Caswell
Forest Supervisor
Clearwater National Forest
1273 Highway 12
Orofino, Idaho 83544

Re: Biological Opinion on North Lochsa Face Project, Clearwater National Forest

Dear Mr. Caswell:

This document transmits the National Marine Fisheries Service's (NMFS) biological opinion (Opinion) on the North Lochsa Face Project, proposed by the Clearwater National Forest (CNF). The Opinion applies to a set of five timber sales and associated ecosystem management activities in watersheds on the north side of the Lochsa River from Pete King Creek upstream to Fish Creek, in Idaho County, Idaho. The CNF requested Endangered Species Act (ESA) consultation with a December 17, 1998, letter and attached biological assessment (BA), which was revised and transmitted on March 24, 1999, to NMFS for consultation. As stated in the Opinion, NMFS has determined the proposed action is not likely to jeopardize the continued existence of Snake River steelhead and fall chinook salmon, or result in the destruction or adverse modification of proposed/designated critical habitat.

Given this is an expansive project with numerous mitigation measures, full implementation of mitigation measures and attached terms and conditions will be very important to ensure the amount and extent of take are not exceeded. A complete administrative record of this consultation is on file in the NMFS Snake River Branch Office, Boise, Idaho. If you have technical or procedural questions, contact Ken Troyer at (208) 378-5696.

Sincerely,

Rick Applegate,
Assistant Regional Administrator

cc: B. Bernhardt - NPNF
F. Rennebaum - BLM
R. Ruesink - USFWS
G. Servheen - IDFG



Endangered Species Act - Section 7
Consultation

BIOLOGICAL OPINION

North Lochsa Face Project

Agency: U.S. Forest Service, Clearwater National Forest

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: 11-23-1999

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I. Background

The Clearwater National Forest (CNF) began informal discussions of the North Lochsa Face Project with National Marine Fisheries Service (NMFS) in November 1997. The CNF's Endangered Species Act (ESA) consultation streamlining level 1 team discussed the proposed action in September 9, 1998, November 17, 1998, and December 15, 1998, site visits and meetings. The CNF requested ESA consultation with a December 17, 1998, letter and attached biological assessment (BA) explaining the potential impacts on ESA listed fishes under NMFS' review. The CNF subsequently conducted further analysis of sediment and water yield for the project, and transmitted a March 24, 1999, revised BA to NMFS for consultation.

The action has now been reviewed by NMFS, as provided under section 7(a)(2) of the ESA and its implementing regulations, 50 CFR Part 402. The objective of this biological opinion (Opinion) is to determine whether the North Lochsa Face Project is likely to jeopardize the continued existence of ESA listed Snake River steelhead and fall chinook salmon, or result in the destruction or adverse modification of proposed/designated critical habitat.

II. Proposed Action

The project involves primarily a set of five timber sales and associated ecosystem management activities in watersheds on the north side of the Lochsa River from Pete King Creek upstream to Fish Creek. The BA lists the watersheds as eight individual streams (Pete King, Rye Patch, Canyon, Apgar, Glade, Deadman, Bimerick, and Fish Creeks) and a compilation of smaller streams referred to as face drainages, which are interspersed among the larger streams. The BA provides a detailed description of the proposed activities (refer to BA p.4, Table 1 for a summary of activities by watershed). In brief, the action is to be implemented over five to 10 years, and includes: 1) harvest of approximately 75 million board feet of timber from 9568 acres using PACFISH Riparian Habitat Conservation Areas¹ (RHCA); 2) construction of 4.4 miles of temporary road outside of unroaded/low density roaded areas², and without stream crossings; 3) reconstruction of 12.9 miles of mostly ridge-top road; 4) obliteration of 81.7 miles³ of existing road; 5) partial obliteration of 59.8 miles of road; 6) prescribed fire (primarily low intensity understory burns) on 7832 acres; and 7) removal of four instream sediment traps during a July 15 - August 15 work window.

¹ The RHCAs for key watersheds apply. Those minimum widths on each side of the streams are: 300 feet for fish-bearing streams, 150 feet for non fish-bearing perennial streams, and 100 feet for intermittent streams, landslide-prone areas, etc. (PACFISH p. C-9 and C-10). The action does include partial harvest on steep landtypes within some units; however, wet and unstable areas at risk of landslides will be avoided (refer to BA p. 8-9) and buffered as required by PACFISH.

² Unroaded/low density roaded areas and the requirement to avoid road construction in these areas during an interim period are defined in NMFS' 1998 biological opinion on Land and Resource Management Plans (LRMPs) in the Snake and upper Columbia River basins (p. 87).

³ The BA notes a total of 97 miles of road obliteration, 16 miles of which was completed during 1996-1998.

The project includes other miscellaneous activities and various mitigation measures which are described in the BA. Mitigation measures include, for instance: 1) for road obliteration, a series of erosion control measures and timing to minimize/eliminate impacts on spawning and incubating listed fish; 2) for prescribed fire, ground/vegetation moisture requirements to control fire intensity, implementation of a subset of burns to evaluate effectiveness of mitigation measures and make needed adjustments prior to full implementation of the burn program, and ignition not proposed in RHCAs; and 3) for handling of helicopter fuel and other toxic materials, a fuel spill prevention/containment plan based on the plan developed in the CNF consultation with NMFS on Goat Roost Road (June 7, 1994, letter from NMFS to CNF; plan summarized in BA Appendix J).

The action also includes two helicopter landings within RHCAs, due to lack of other landing options. A landing in Pete King Creek would be 130 feet from Nut Creek and 200 feet from Pete King Creek for helicopter fueling, and 200 feet from Nut Creek and 280 feet from Pete King Creek for log yarding/loading. Another log yarding/loading landing is proposed at a site along highway 12 approximately 150 feet from the Lochsa River.

III. Biological Information and Critical Habitat

Snake River steelhead and fall chinook salmon are listed under the ESA, and occur within the action area of the North Lochsa Face Project. The action area is defined (50 CFR 402.02) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The proposed activities have the potential primarily to add sediment, and possibly increase water temperature or add toxins (fuel), in the tributary streams where the activities are located. Those effects may also be translated downstream into the Lochsa River, Middle Fork Clearwater and mainstem Clearwater Rivers. Designated critical habitat for fall chinook salmon (58 FR 68543; December 28, 1993) occurs in the Clearwater River below Lolo Creek, approximately 45 miles downstream from the proposed action. Critical habitat has been proposed for Snake River steelhead (FR 64, No. 24; February 5, 1999) and would include accessible stream reaches in the Lochsa River tributaries as well as downstream areas.

Detailed biological information for Snake River steelhead is provided in NMFS’ status review of west coast steelhead (Busby et al. 1996). The CNF BA provides additional biological information for the species in the action area. Briefly, migrating adult Snake River steelhead arrive in the upper mainstem Clearwater River in September and October, and overwinter in the upper mainstem and Middle Fork Clearwater River. Spawning and incubation occurs during March through July in various tributaries within the action area, but is not known to occur in the section of the mainstem Lochsa River within the action area. Steelhead juveniles then typically rear for two to three years in the tributaries and larger rivers before beginning a seaward migration during February - May. Steelhead then usually spend two years in the ocean before beginning their spawning migration. Wild and naturally-reproducing stocks of steelhead have declined dramatically to currently low levels in the interior Columbia River Basin, due to a

variety of factors including habitat degradation (Busby et al. 1996; Lee et al. 1997; Meehan and Bjornn 1991; NMFS 1991; NMFS 1996; and *U.S. v Oregon* Technical Advisory Committee 1998).

Detailed biological information on Snake River fall chinook salmon is provided in NMFS' status review. Adult fall chinook salmon migrate into and spawn in the mainstem Clearwater River, primarily below Lolo Creek, during September through November. Fry emerge in March and April, and typically smoltify and outmigrate during May - September. These fish usually return after three to four years in the ocean. Fall chinook salmon populations have remained at very low levels for many years, with estimates of natural-origin fish at Lower Granite Dam ranging from 78 to 797 fish per year over the last 20 years.

IV. Environmental Baseline

To determine the effects of the proposed action, NMFS first examines the environmental baseline conditions (i.e., existing conditions), particularly the instream and riparian elements which could be affected by the action and which provide key habitat components for listed steelhead and fall chinook salmon. The NMFS focuses primarily on the existing conditions in the Lochsa River and its tributaries streams where the proposed activities would likely have their greatest effect. The BA summarized both the environmental baseline and effects within tributary streams using the NMFS "matrix" for determining effects of actions at the watershed scale (NMFS 1996b; with local revisions for CNF and adjacent management units, March 12, 1998). The BA did not include a matrix for the Lochsa River mainstem, but instead provided a written discussion of baseline conditions and effects in the Lochsa River within the action area.

Detailed information on environmental baseline conditions is found in the matrices (BA Appendix A). The matrices catalogue existing conditions for 25 habitat indicators, and three indicators of existing potential for direct take (e.g., access to spawning steelhead and redds which could result in direct harm to individual listed fish) in each watershed. The Pete King, Canyon, Deadman, and Fish Creek watersheds are of particular interest because they have been designated as priority watersheds for steelhead through a previous Land and Resource Management Plan (LRMP) consultation (NMFS 1998 LRMP Opinion; January 15, 1999, letter from Gordon Haugen, USFS, to Ted Meyers, NMFS). Among the watersheds in the action area, those four priority watersheds provide the most important spawning habitat for steelhead.

Briefly, the matrices for the four priority watersheds and others in the action area show stream conditions shaped by natural and anthropogenic disturbances, most notably a 1934 wildfire, timber harvest/roading from the 1950s through the early 1990s, and flooding/landslides in 1995 and 1996. Watershed road densities in the four priority watersheds vary from high in Pete King and Canyon Creeks (5.2 and 5.4 miles per square, respectively) to moderate in Deadman Creek (1.9 miles per square mile) to low in Fish Creek (0.4 miles per square mile). Cobble embeddedness and surface fines in the priority watersheds are considered low to moderate condition compared to the target values in the matrix. For example, a target value for high

condition substrate is less than 20% cobble embeddedness, whereas the measured values range from 32% in Pete King Creek to 54% in Deadman Creek. Further, water temperatures for steelhead spawning and rearing are assessed as low to moderate condition, and instream large wood levels are assessed as low condition in each of the four priority watersheds.

In contrast to the tributaries, substrate in the Lochsa River is assessed as high condition, with an average of less than 10% surface fine sediment in riffles (Dick Jones, CNF Hydrologist, June 1, 1999, personal communication). Available data on substrate conditions farther downstream, in the lower mainstem Clearwater River, indicate good conditions for salmonid spawning and rearing (Arnsberg and Connor 1992). Comparable substrate data were not available, however, from the period after the 1995 and 1996 flood/landslide events, which are known to have caused substantial sediment input into the Clearwater River (CNF 1996; McClelland et al. 1997). Summer water temperatures in these bigger river environments are estimated as providing only low to moderate conditions for steelhead rearing (Arnsberg and Connor 1992).

V. Analysis of Effects

A. Effects of Proposed Action

The methods NMFS uses for analyzing effects and determining if proposed actions will likely jeopardize the continued existence of the species or destroy/adversely modify designated critical habitat are described in attachment 1. Briefly, NMFS evaluates the effects of proposed actions on listed salmon and steelhead in the context of the status of the species and their habitats. For individual or grouped actions which may affect the species' habitat, NMFS uses the matrix (NMFS 1996b) described above to evaluate effects on specific habitat elements within a watershed. To avoid jeopardy and destruction/adverse modification of critical habitat for listed Snake River steelhead and salmon, actions generally must cause no more than minimal amounts of take of the species, and also must restore, maintain, or at least not appreciably interfere with the recovery of the properly functioning condition (PFC) of the various fish habitat elements within a watershed (NMFS 1996b).

The BA provides a detailed analysis of the effects of the proposed action on steelhead, salmon, and their habitat in the action area. The analysis is centered around application of NMFS' matrices for eight individual Lochsa River tributaries and one group of tributaries (the "face drainages"). In reviewing these matrices and accompanying narratives in the BA, NMFS focuses particularly on the elements of the proposed action which have the potential to affect the fish or specific components of their habitat.

The matrices and narratives in the BA provide rationale for CNF's prediction that North Lochsa Face Project activities will reduce existing levels of sediment delivery over the long term. The long-term reduction in sediment delivery would be particularly evident in Pete King and Canyon Creeks, where the majority of the road obliteration will occur (77 miles and 35 miles respectively), and to a lesser extent in the other tributary streams, with 0-13 miles of road

obliteration per tributary. According to the BA, the roads proposed for obliteration currently are both sources of and routing mechanisms for sediment. The BA notes that eliminating these roads would curtail sediment delivery associated with surface erosion, would eliminate many sections of road which may eventually trigger landslides, and eliminate the periodic wash-outs of roads at stream crossings from high water events. The BA did not quantify the reduction in sediment delivery associated with each of those road-related mechanisms, but did provide an estimate of the total road prism fill volume at the stream crossings (157,000 cubic yards). Without the proposed road obliteration, some portion of that volume of material would eventually be delivered to the streams in the action area.

While the action appears to contribute to restoring PFC in Pete King Creek, Canyon Creek, and other streams in the long term, NMFS is also concerned about potential for the proposed action to increase sediment delivery to streams in the action area in the short term. As noted in the Environmental Baseline (section IV, above), cobble embeddedness within the four priority watersheds in the action area ranges from 32% to 50%. The few data available for fine sediment in these watersheds show fines-by-depth values of 30%-35%. Fine sediment deposited in stream substrates is directly related to chinook salmon egg-to-fry survival. As fine sediment increases above approximately 19%, chinook salmon egg-to-fry survival starts to decline (Stowell et al. 1983). As fine sediment reaches 30%, egg-to-fry survival declines rapidly (Tappel and Bjornn 1983; Chapman and McLeod 1987; Burton et al. 1993). As sediment becomes deposited in interstitial spaces, rearing habitat for juvenile salmonids is also reduced.

Aspects of the proposed action which may cause sediment delivery to streams include: (1) timber harvest, particularly activities on steep terrain and activities which contribute to Equivalent Clearcut Area (ECA) greater than 15% in priority watersheds for listed fish (threshold of concern outlined in McCammon 1993 and guideline in NMFS' 1995 LRMP Opinion); (2) construction of 4.4 miles of temporary road, reconstruction of 12.9 miles of road, and obliteration or partial obliteration of 142 miles of road; (3) removal of four instream sediment traps in Pete King Creek; and (4) prescribed fire. The proposed action includes measures (described in the three paragraphs below) to minimize sediment delivery from each of the activities listed above.

Sedimentation from timber harvest should generally be minimized by applying interim PACFISH RHCAs. Some timber harvest is proposed on steep landtypes; however, the harvest is selective, avoids landslide-prone areas (verified in the field; and buffered with interim RHCAs), and is designed to minimize slope instability in the short term and increase stability in the long term. The proposed action would increase ECA from 17% to 21% in Canyon Creek. While this exceeds a general threshold of concern at 15% ECA, the BA predicts negligible increase in stream channel scour and sediment delivery from the ECA-related increases in peak flow. This prediction is based on peak flow modeling and specific information on stream channel types, including past responses of specific stream reaches to peak flow increases in Canyon Creek and its tributaries (BA p.45).

Temporary road construction and reconstruction is almost entirely on or near ridge tops, on stable land types, and does not involve stream crossings (except for graveling and blading near stream crossings on a section of the Bimerick Creek road). In comparison to the road construction/reconstruction activities, the extensive road obliteration proposal (142 miles) involves substantially more ground disturbance and potential for sediment delivery to streams in the short term. As noted above, however, road obliteration is also predicted to improve stream conditions in the long term. The short-term impacts of road obliteration would be minimized by the proposed suite of erosion control measures (summarized BA p.9), mid-summer work window, and stage-wise implementation schedule. That is, road obliteration would occur over a three to four year period, and within any one year, stream crossings and other sections of road potentially affecting fish-bearing streams would be removed only during the mid-summer work window, and only a few at a time to minimize sediment delivery to any one stream. The BA (p.16) cites two studies, by CNF and Nez Perce National Forest (NPNF), of sediment delivery from road obliteration near streams which show the techniques they propose have worked well in the past to reduce sediment delivery to negligible levels.

Instream sediment trap removal would occur during a one-month mid-summer work window to minimize turbidity and siltation below these sites and avoid effects on spawning steelhead or incubating steelhead eggs. The prescribed fire program involves primarily low intensity fire, includes a suite of measures to protect RHCAs⁴ (BA p.8), and includes monitoring/adaptive management trial burns, particularly for mixed intensity fires, to minimize the incidence and magnitude of effects on RHCAs from the fires. The BA does not provide details on the trial burns, how they would be monitored, and how management would be adapted.

The NMFS was also concerned about the location of two helicopter landings in RHCAs, and the potential for erosion and fuel spills from these sites directly into fish bearing streams. Field review of these sites by the CNF level 1 team (included NMFS) showed low gradient, stable terrain sufficiently distant from streams that fuel spills and erosion can be readily avoided/contained with the mitigation measures CNF proposes. The NMFS, therefore, determined the activities at these two sites would have a negligible likelihood of affecting listed fish or their habitat.

In summary, CNF analyzed potential mechanisms of effect on listed steelhead and salmon and proposed/designated critical habitat using NMFS' matrix, and applied mitigation measures accordingly to minimize those effects. Though the action is thoroughly mitigated in each component, the number of these components and their broad implementation indicate sediment delivery will increase in the short term in some stream reaches in the action area. Short-term increases in sediment yield were predicted primarily in the non-priority watersheds, but also may occur at low levels in the four priority watersheds, mainly because of road obliteration and prescribed fire activities (refer to sediment yield discussion following each of the nine matrices in the BA, Appendix A). It is possible that sediment delivery from individual or multiple

⁴Along with mitigating sediment delivery, protection of RHCAs also contributes to avoiding stream temperature increases from loss of shade.

activities may reduce habitat quality at particular sites and thereby adversely affect listed steelhead or salmon; however, the available information, including full implementation of mitigation measures, indicates that these effects would be infrequent and of small magnitude. Further, primarily because of the road obliteration activities, the action is expected to improve habitat for listed fish within the action area over the long term (BA, p.15-17).

B. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as “those effects of future state and private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation.” The area in which the North Lochsa Face Project will occur is essentially entirely under the administration of the CNF. The BA notes, however, that private timber harvest activities are foreseeable in the upper Lochsa River (30-50 miles upstream from the North Lochsa Face Project) that have the potential to affect the mainstem Lochsa River and areas downstream, which are within the action area of the North Lochsa Face Project. According to the BA, the magnitude and timing of these non-Federal activities is unknown. The NMFS assumes, conservatively, that these foreseeable activities will perpetuate and perhaps add to the existing, above-natural sediment yields in those mainstem reaches. It is notable that, as discussed in the Environmental Baseline (section IV, above), while sediment delivery to these mainstem reaches is currently above natural levels, the limited available information indicates substrate condition may be good (i.e., functional for spawning and rearing salmonids) overall.

VI. Conclusion

The NMFS has determined that, based on the available information, the North Lochsa Face Project is not likely to jeopardize the continued existence of Snake River steelhead or fall chinook, or result in the destruction or adverse modification of proposed/designated critical habitat. This conclusion is based primarily on the following components of the action (as well as others described in the BA) which are expected to ensure the action has no more than a very low incidence of adverse effects in the short term and neutral or beneficial effects in the long term:

- 1) timber harvest with interim PACFISH RHCAs, including avoidance of landslide-prone areas;
- 2) timber harvest and prescribed fire which maintain ECAs below 15% in almost all watersheds, with one exception which has been carefully analyzed to show effects are expected to be negligible;
- 3) road construction and reconstruction located on stable areas with negligible impact on streams;

- 4) obliteration/partial obliteration of 142 miles of road over several years, and removal of four instream sediment traps, using mid-summer work windows and numerous erosion control measures;
- 5) prescribed fire conducted with a suite of mitigation measures, including monitoring/adaptive management designed to ensure RHCAs and their functions are maintained; and
- 6) fuel handling and spill prevention/containment measures designed to greatly minimize the risk of introducing toxins to proposed/designated critical habitat.

VII. Conservation Recommendations

Section 7 (a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS believes the conservation recommendations listed below are consistent with these obligations, and therefore should be implemented by the CNF.

- 1) The CNF should coordinate with the NPNF to develop a technical summary of ECA/peak flow criteria appropriate for the geographic area, based on available data and with identification of data gaps. This summary should address at least the interim ESA objective of applying criteria appropriate to ensure negligible alteration in stream channel form and function compared to an undisturbed condition.
- 2) The CNF should coordinate with the NPNF to summarize results of various prescribed fires specifically to evaluate effectiveness in protecting/maintaining full functions of RHCAs, and to identify any needed additional mitigation measures.
- 3) The CNF should develop a technical summary based on further monitoring of its road obliteration program to better quantify sediment delivery from various applications of this activity.

VIII. Reinitiation of Consultation

Consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals that the action may affect listed species in a manner or to an extent not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16).

IX. References

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion.

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U.S. v Oregon Technical Advisory Committee. 1998. Updated tables for the biological assessment of the impacts of anticipated 1996-1998 fall season Columbia River mainstem and tributary fisheries on Snake River salmon species listed under the Endangered Species Act. March 19. Portland, Oregon.

X. 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 where it actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering. (50 CFR Part 222, November 8, 1999). 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.

The measures described below are non-discretionary; they must be implemented by the CNF so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The CNF has a continuing duty to regulate the activity covered in this incidental take statement. If the CNF (1) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

An incidental take statement 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 action agency must comply in order to implement the reasonable and prudent measures.

A. Amount or Extent of the Take

The NMFS finds the proposed action has a very low risk of causing take of listed salmon or steelhead. The NMFS cannot quantify the take which may occur from the proposed action. The NMFS does, however, with this Opinion authorize a very low level of take which may occur. To ensure that take, if it does occur, is kept to a very low level, NMFS developed the reasonable and prudent measures and terms and conditions described below.

B. Reasonable and Prudent Measures

The NMFS determines that the following reasonable and prudent measures are necessary and appropriate to minimizing take of listed salmon and steelhead:

1) The CNF will monitor sediment delivery from road obliteration to better quantify the effects of this activity; and

2) The CNF will further describe planned implementation of, and include NMFS in reviewing the results of the trial prescribed fires which are designed to identify and correct problems in protecting RHCAs from the mixed intensity prescribed fires.

C. Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the CNF must comply with the terms and conditions listed below, which implement the reasonable and prudent measures. These terms and conditions are non-discretionary.

1) The CNF will monitor sediment delivery from road obliteration to better quantify the effects of this activity. To add to quantitative sediment delivery information on road obliteration which CNF gathered in 1998, during the first two years of implementation of the proposed action, the CNF will monitor a subset of the road obliteration activities which have the potential to deliver sediment to streams. This monitoring will be designed to quantify sediment delivery, and to the extent possible, allow inference to the application of this activity in other areas. The results shall be submitted to NMFS each March following the field season data were collected. Per the Reinitiation of Consultation (section VIII, above) requirements, the CNF will reinitiate consultation on this action if the monitoring shows effects of a greater extent than predicted in the BA or this Opinion.

2) Prior to implementing the proposed action, CNF will provide NMFS with a specific description (where, when, acreage, methods of evaluating effects on RHCAs, etc.) of the trial prescribed fires described briefly in the BA (p. 8, item 5). Prior to initiating subsequent prescribed fires for this action, CNF will submit for NMFS concurrence the results of these evaluations, and any added mitigation measures CNF proposes based on these results and other information.