

APPENDIX A

SELECTED RECORDS*



*Selected records include a Regional Ecosystem Office Memorandum dated 11/09/1999; a BLM Bulletin dated 11/07/2002; the PCFFA v. NMFS Court Order dated 09/30/99; a declaration from Dr. Gordon Reeves; and 9th Circuit Opinion related to the case.

Regional Ecosystem Office
333 SW 1st
P.O. Box 3623
Portland, Oregon 97208-3623
Phone: 503-808-2165 FAX: 503-808-2163

MEMORANDUM

DATE: November 9, 1999

To: Regional Interagency Executive Committee Members

Anne Badgley, U.S. Fish & Wildlife Service
Roger Blair, Western Ecology Division, Environmental Protection Agency
John D. Buffington, USGS Biological Resources Division
Mike Collopy, USGS Biological Resources Division
Col. Randall J. Butler, U.S. Army Corps of Engineers
Ken Feigner, Environmental Protection Agency
Bob Graham, Natural Resources Conservation Service
Nancy Graybeal, Forest Service
Thomas Mills, Pacific Northwest Station, Forest Service
Stan M. Speaks, Bureau of Indian Affairs
William Stelle, Jr., National Marine Fisheries Service
Rick Applegate, National Marine Fisheries Service
William C. Walters, National Park Service
Jim Shevock, National Park Service
Elaine Y. Zielinski, Bureau of Land Management

California Federal Executives

Brad Powell, Acting Regional Forester, Forest Service
Roberta Moltzen, Deputy Regional Forester, Forest Service
Michael J. Spear, Operations Office Manager, U.S. Fish and Wildlife Service
John Engbring, Operations Office, U.S. Fish and Wildlife Service
Alfred Wright, Acting State Director, Bureau of Land Management
Paul Roush, Bureau of Land Management

FROM: Curtis A. Loop, Acting Executive Director

SUBJECT: Regional Ecosystem Office Analysis and Interpretation of Three Issues
Related to Northwest Forest Plan Requirements for Aquatic Conservation Strategy Consistency
Determinations

Enclosed is the Regional Ecosystem Office (REO) final report to the Regional Interagency Executive Committee (RIEC) in response to its December 17, 1998, request for facilitation of discussions seeking interagency agreement clarifying Record of Decision (ROD) interpretation for several questions related to implementation of the Aquatic Conservation Strategy (ACS). Pursuant to direction provided during the October 6, 1998, November 5, 1998, and October 20, 1999, RIEC meetings, and in the December 17, 1998, memorandum transmitting the request, we completed discussions on three ACS interpretation issues:

☛ NFP Record of Decision (ROD) requirements for determining project consistency with ACS objectives.

☞ The role of Standards and Guidelines (S&Gs) that mitigate the effect of new road construction on aquatic resources.

☞ The role of Late-Successional Reserves and designated roadless areas as components of the ACS.

Also in response to the December 17, 1998, guidance regarding specific roles of the REO for review of these issues, we have sought to:

- ☞ Facilitate interagency and interdisciplinary discussions of the issues and questions by agency scientists, resource experts, and legal counsel.
- ☞ Summarize science, legal, and policy information and findings from these discussions.
- ☞ Apply the information and findings in seeking interagency agreement on responses to the referred questions.
- ☞ Help agencies develop methods or procedures for implementing the agreements by field units.
- ☞ Recommend appropriate follow-up actions or investigations.

Summary and Conclusions

Following is a summary of the ACS Interagency Review Managers Teams' findings. This summary does not stand alone. It is essential that you refer to the enclosed document for a more complete discussion of the Teams' efforts in development of joint agency positions on the above issues.

ISSUE: NFP Record of Decision (ROD) requirements for determining project consistency with ACS objectives.

- ☞ The *ROD* established the nine ACS objectives as S&Gs that apply across all land allocations.
- ☞ The ACS objectives serve as broad landscape management objectives, directed at the watershed-scale, to be achieved over time by maintaining and restoring natural processes through implementation of the NFP. In addition to this broad landscape role, the *ROD* also established the ACS objectives as S&Gs that apply to all actions by their inclusion in Section B of Attachment A of the *ROD*.
- ☞ When assessing the effects of actions on relevant ACS objectives, multiple analytical scales may be required, depending on the nature and scope of the action and the particular ACS objective. However, the watershed-scale (the scale of watershed analysis) is the appropriate landscape context for determining whether actions are consistent with the ACS objectives.
- ☞ The *ROD* does not explicitly establish a standard temporal scale for evaluating project consistency with ACS objectives. Selection of a temporal scale depends on existing watershed conditions and the existing watershed recovery trajectory and, regarding specific projects, must consider the temporal nature of potential impacts.
- ☞ There is no *ROD* requirement to assess cumulative effects when making ACS consistency findings. Cumulative effects are analyzed in watershed analysis, National Environmental Policy Act (NEPA) processes, and Endangered Species Act (ESA) consultations.

☞ Watershed analyses typically provide the necessary contextual information for making ACS consistency determinations. If watershed-scale information needed for making ACS consistency determinations is not available (e.g., from existing watershed analysis, NEPA analysis, ESA consultations) then new or updated watershed analysis may be required, even outside of Key Watersheds and Riparian Reserves.

ISSUE: The role of Standards and Guidelines (S&Gs) that mitigate the effect of new road construction on aquatic resources.

☞ The S&G WR-3 (Do not use mitigation or planned restoration as a substitute for preventing habitat degradation) is intended to ensure that agencies do not rely on watershed or habitat restoration projects as mitigation to allow avoidable impacts from projects planned in Riparian Reserves.

☞ This S&G does not preclude consideration of restoration projects that reduce road mileage in Key Watersheds to offset new road construction. Nor does it obviate the need to comply with the many other S&Gs designed to minimize the effects of new road construction.

☞ The scale at which the no net road mileage increase standard is applied is the Key Watershed scale.

☞ The baseline road mileage against which new road construction is compared is the mileage that existed on May 13, 1994, the effective date of the *ROD*.

☞ The term road decommissioning is not expressly defined in the *ROD*, however, the intent is to evaluate and reduce existing road related impacts to meet ACS objectives. Road mileage reductions need to occur prior to or concurrent with new road construction in Key Watersheds.

ISSUE: The role of Late-Successional Reserves and designated roadless areas as components of the ACS.

☞ LSRs are an important component of the ACS, however, there is no requirement in the *ROD* for LSR Assessments to address ACS objectives.

☞ ACS objectives are addressed in NEPA documents, supported by information from watershed analysis.

☞ Roadless areas, both in and outside Key Watersheds, have additional S&Gs designed to protect water quality because of identified concerns over unstable lands. Watershed analyses is required prior to management activities in all watersheds that contain roadless areas.

☞ Inside Key Watersheds, no new roads are to be built in remaining roadbeds areas.

This report is a product of an interagency process that would not have been possible without the expert knowledge and assistance provided by members of all staff involved. Thank you for the opportunity to work on this issue. Please let me know if we can provide any additional information or answer any questions about our review.

Enclosure: July 21, 1999 Draft 1357_ver2

**Response to the January 17, 1999 Regional Interagency Executive Committee
Request for REO Assistance in Facilitating Interagency Agreement on
Four Aquatic Conservation Strategy Issues**

Introduction

On January 17, 1999, the Regional Interagency Executive Committee (RIEC) requested that the Regional Ecosystem Office (REO) facilitate a process for reaching interagency agreement on the interpretation of four issues regarding Northwest Forest Plan (NFP) requirements for determining the consistency of proposed land management actions with the Aquatic Conservation Strategy (ACS). Three of these issues, which arose from recent efforts to complete Endangered Species Act (ESA) consultations on listed fish species, are:

1. NFP Record of Decision (*ROD*) requirements for determining project consistency with ACS objectives.
2. The role of Standards and Guidelines (S&Gs) that mitigate the effect of new road construction on aquatic resources.
3. The role of Late-Successional Reserves and designated roadless areas as components of the ACS.

In response to this request, the REO convened a team of senior agency managers who have been meeting regularly to address these issues. Since none of the issues were new, the RIEC made it clear that they intended for the interagency effort to start with a review of previous guidance and direction that had been issued on the subjects and to seek a higher level of interagency agreement on the previous interpretations. The interagency manager's team began the review by establishing teams comprised of senior technical staff to address each of the ACS issues. These technical teams in turn compiled and reviewed existing guidance and direction pertaining to the subject issues, as well as all relevant NFP *ROD* citations. Recognizing that the *ROD* established the legal direction for these issues, the technical teams also reviewed pertinent references from the FEMAT Report and FSEIS documents, which offered insight into the purpose and intent of some of the *ROD* requirements.

Each of the technical teams presented its reports to the Managers Team, and incorporated changes based on interagency discussions and agreements reached during those meetings. Each of the technical teams completed stand-alone reports, which include extensive references and discussion. What follows are condensed versions of the technical team reports, presented in question and answer format, which respond directly to the ACS issues referred by the RIEC. The responses represent full and unanimous agreement among the agencies participating in the review on the stated interpretations.

Proposed Interagency Interpretations

ISSUE: NFP Record of Decision requirements for determining project consistency with ACS objectives.

The RIEC asked the REO to facilitate interagency agreement in clarifying *ROD* requirements for determining and documenting the consistency of projects with ACS objectives. To focus this interpretation, the RIEC identified four questions.

Question #1: *What is the relationship of the nine ACS objectives (ROD, B-11) with individual or groups of land management actions? Are the ACS objectives intended to be Standards and Guidelines for individual projects? Must they be addressed individually or collectively when determining project consistency with the objectives? Are they instead broad objectives to be achieved across the landscape through the collective effect of all management actions, but not applied to individual projects?*

Based on the language in the *ROD* in both the outline to Attachment A and on pages B-9, B-10, and B-11, it is clear that the ACS objectives are considered S&Gs that apply to all management activities on Forest Service and BLM lands within the NFP area.

The *ROD* (Attachment A, page i) indicates that the six sections of Attachment A collectively comprise the complete set of S&Gs that direct how the NFP is implemented. Two of the sections are particularly relevant to the ACS. Section B is where the ACS is described, including a background discussion of the objectives and management emphases for Riparian Reserves, Key Watersheds, watershed analysis, and watershed restoration. Section C includes specific S&Gs that apply to certain types of projects and land allocation categories, including the Riparian Reserve and Key Watershed land designations. Following the guidance in both Section B and Section C is required to implement projects consistent with the ACS.

As originally developed, the ACS objectives serve as broad landscape management objectives, directed at the watershed-scale, to be achieved over time by maintaining and restoring natural processes through implementation of the NFP. In addition to this broad landscape role, the *ROD* also established the ACS objectives as S&Gs that apply to all actions by their inclusion in Section B of Attachment A. The S&Gs in Section C of the *ROD* were developed to regulate management actions in a way that promotes the attainment of these landscape-scale objectives by focusing the review of proposed management actions to determine compatibility with the ACS objectives (*ROD*, B-10). However, the S&Gs in Section C do not by themselves always guarantee that actions will be consistent with ACS objectives, in part due to the need to consider the results of watershed analysis. Thus, the *ROD* requires decision makers to confirm (i.e., make findings) that projects that comply with the S&Gs, either meet, attain, or do not retard or prevent attainment of the ACS objectives. This requirement applies to all FS and BLM management actions in the NFP, not just actions within Key Watersheds and Riparian Reserves.

The *ROD* does not explicitly address whether the nine ACS objectives should be considered individually or collectively when assessing projects. Either approach may be appropriate, depending on local circumstances. Regardless of the approach used, it must culminate in a synthesized conclusion of overall ACS consistency that considers all of the ACS objectives relevant to a given action. Consideration of the objectives individually may facilitate the decision maker's ability to differentiate and address those objectives affected by a given action. Consideration of the objectives collectively may facilitate the decision maker's ability to derive an overall conclusion of ACS consistency without the potentially difficult task of aggregating the results of individual objective assessments.

Question #2: *What are the appropriate temporal and spatial scales for determining project consistency with the ACS objectives?*

The *ROD* is explicit that watershed analysis will be used to establish the appropriate geographic context for assessing the baseline condition and evaluating whether actions are consistent with the ACS objectives (*ROD*, B-10, B-20, B-23, B-30). Watershed analysis has been performed on a variety of spatial scales, ranging from the 4th field USGS hydrologic unit code scale down to the 7th field subwatershed-scale. The *ROD* defined the watershed-scale as approximately 20-200 square miles, which generally corresponds with the scale of the 5th field USGS hydrologic unit code hierarchy.

In general, the ACS provides a framework for managing aquatic ecosystems primarily at watershed and landscape (i.e., multiple watershed) scales. The ACS objectives describe the attributes and distribution of aquatic ecosystems believed necessary to provide conditions for maintaining currently strong populations of fish and other aquatic and riparian dependent organisms and to recover currently degraded ecosystems. To account for the dynamic nature of conditions within watersheds, the ACS objectives also focus on maintaining aquatic ecosystems within the natural range of variability at the site, subwatershed, and watershed-scales. Please refer to Benda et al. (1998) for a discussion of landscape system dynamics.

Because the ACS was designed to maintain and restore ecosystem health at watershed and landscape scales, rather than the scale of individual projects, the *ROD* established watershed analysis at the 5th field watershed-scale as the appropriate geographic context for assessing the consistency of actions with the ACS. The results from watershed analyses completed at scales other than the 5th field watershed may also be useful when making ACS consistency findings. For instance, some 5th field watersheds may be too large or complex ecologically to be analyzed effectively. Watershed analysis, as a consequence, has been conducted in 5th field and aggregates of 6th field watersheds.

Although the 5th field watershed-scale provides the appropriate geographic context for assessing ACS consistency, it is important to note that the ecosystem functions and processes represented by the ACS objectives operate at multiple scales, including site, reach, subwatershed, watershed, river basin and population. Similarly, the effects of land management activities on these functions and processes can occur at multiple scales, depending on the scope and magnitude of the action, current baseline conditions, and the sensitivity of the affected resources. Before a decision maker can assess whether an action would retard or prevent attainment of ACS objectives, the full extent of project effects to aquatic ecosystem objectives must first be assessed. Assessments of project effects should address the spatial scales that are relevant to the proposed action and for the ACS objectives that would be affected.

In summary, determining consistency at the site scale requires understanding of the required range of variability established at watershed, provincial, or regional scales. An action that results in a degraded condition at individual sites or degraded subwatersheds cannot always be interpreted as failure to comply with the ACS. To make findings of an action's consistency with the ACS, the decision maker must take into consideration the scope and magnitude of the action's effects, both positive and negative, at scales appropriate for the relevant ACS objectives. Such findings should ensure the conservation of the natural range of variability at the watershed level. Actions with similar effects might be considered consistent with the ACS in one watershed and not in another depending on the significance of the action within each watershed context.

Temporal scales relevant to the individual ACS objectives may vary with the spatial scales embodied in the objectives. Generally, as spatial scales increase, the relevant temporal scales associated with the objectives also increase, but the frequency for iterative analyses decreases (*ROD*, B-22). For example, project or stream reach-scale effects might best be viewed using temporal scales of months to years, and justify more frequent assessment iterations, while watershed and broader landscape-scale processes and effects would likely be more relevant over longer time scales; e.g., years to decades, but generally warrant less frequent analysis.

The *ROD* does not explicitly establish a standard temporal scale for evaluating project consistency with ACS objectives. Selection of a temporal scale depends on existing watershed conditions, and the existing watershed recovery trajectory, and, regarding specific projects, must consider the temporal nature of potential impacts. For instance, in the case of restoration projects, short-term negative impacts can be significant, and should be clearly offset by long-term benefits. The *ROD* recognizes that “[b]ecause the ACS is based on natural disturbance processes, it may take decades, possibly more than a century, to accomplish all of its objectives. Some improvements in aquatic ecosystems, however, can be expected in 10 to 20 years.” (*ROD*, B-9). In evaluating consistency with ACS objectives, field units have generally recognized that adverse effects of management actions that last several years may still be consistent with ACS objectives if they do not affect the underlying processes and functions, have significant long-term benefits, and do not have short-term effects with watershed-scale significance (e.g., compromise the persistence of local species). On the other hand, effects that impact watershed-scale processes or functions or that persist for a decade or longer would impair the attainment of ACS objectives and would be inconsistent.

Question #3: *Should ACS consistency determinations address the cumulative effects of multiple management actions or groups of projects? If so, at what scale and using what methods? If individual actions are assessed individually during ACS consistency determinations, how can the cumulative effect of multiple projects be assessed?*

The *ROD* does not explicitly require that cumulative effects be considered when making ACS consistency findings. However, the requirement to use watershed analysis reports to establish the geographic context for evaluating project compliance with ACS objectives necessarily requires aquatic analysts and decision makers to consider the cumulative effect of past management activities that have, and continue to affect processes throughout the watershed, as reflected in the characterization of current conditions in the watershed, and anticipated future conditions.

By using watershed analysis reports to address cumulative effects when evaluating the consistency of actions with ACS objectives, the role of non-federal lands in the watershed is also considered. Thus, given that cumulative effects accruing on non-federal land may affect federal managers’ ability to achieve ACS consistency, existing interagency direction for conducting watershed analysis is clear on the importance of considering non-federal lands in the analysis:

“Even though the Federal watershed analysis process is in no way intended to regulate non-Federal lands, analysis teams, as guided by responsible officials, will consider the interactions of various land ownerships in the watershed. Federal land management decisions based on the results of watershed analysis need to consider conditions and activities on adjacent non-federal lands, especially to evaluate cumulative effects, as they affect public lands, pursuant to NFMA, NEPA, ESA, CWA, O&C Act, and other pertinent statutes. Consideration of these interactions is important to an overall understanding of ecological functions and processes.” (*Ecosystem Analysis at the Watershed Scale: Federal Guide for Watershed Analysis*, page 11)

The Federal Guide for Watershed Analysis also describes important considerations for how non-federal lands should be addressed in watershed analysis. Notwithstanding the fact that the interactions of various land ownerships are considered during watershed analysis, the *ROD* is clear that the ACS objectives only apply to FS and BLM lands within the range of the northern spotted owl.

Consideration of cumulative effects is not limited to watershed analysis. Cumulative effects analyses are required to meet other regulatory or statutory requirements, such as the NEPA and the ESA. Within the ESA context, for example, the agencies recognize the need to consider the effects of multiple activities within a geographic area. When making effects determinations pursuant to the ESA, the agencies use analytical tools like the NMFS/FWS “Matrix of Pathways and Indicators” to assess the potential for cumulative effects of multiple management actions proposed concurrently within the same watershed. Such analyses are necessarily focused narrowly on project effects to listed salmonids, and are intended to

evaluate the potential for actions to result in adverse effects on or incidental take of listed species. These analyses are not intended to address all aquatic resources intended to benefit from the ACS.

Question #4: *How should ACS consistency determinations be made where watershed analysis is not required or has not been completed?*

The *ROD* requires decision makers to make findings of ACS compliance for all actions in all land allocations. Decision makers are directed to use the results of watershed analysis to make such findings. Watershed analysis is required only prior to evaluating how proposed management activities in Key Watersheds, roadless areas and Riparian Reserves meet ACS objectives. Watershed analysis is not a prerequisite for all projects or all land allocations.

In land allocations where watershed analysis is required, agencies recognize the mandate and benefit of applying watershed analysis results in making ACS consistency findings. The *ROD* specifies what information from watershed analysis is important in assessing ACS consistency; e.g., a description of existing conditions and the range of natural variability of important physical and biological components of the watershed.

In recognition of the importance of watershed analysis, the *ROD* acknowledges that “ultimately, watershed analyses should be conducted in all watersheds on federal lands as a basis for ecosystem planning and management.” (*ROD*, B-20) This is consistent with the current FS and BLM approach. Many ecosystem analyses at the watershed-scale have been completed for non-Key Watersheds and the results have been used in making ACS determinations.

Team Recommendation:

Where watershed analysis is not required, the action agencies must still provide information on existing watershed conditions and the range of natural variability of important aquatic ecosystem components necessary for making ACS consistency findings. Such information may be available from sources such as NEPA analysis documents, ESA biological assessments and biological opinions, river basin or other landscape-scale assessments, field inventories, etc. There may be situations where actions are proposed for land allocations where watershed analysis is not required by the *ROD* and where there are inadequate alternative sources of watershed information necessary for making ACS consistency determinations. In these circumstances, decision makers may not be able to comply with the *ROD* requirements for assessing whether the action is consistent with ACS objectives until the necessary watershed information is available. Decision makers may find that the most expeditious process for generating the necessary information to make ACS consistency determinations in some cases may be to complete watershed analysis, notwithstanding the fact that it is not required by the *ROD*.

ISSUE: The role of S&Gs that mitigate the effect of new road construction on aquatic resources.

The RIEC asked the REO to facilitate interagency agreement on an interpretation of the following four groups of questions that address NFP S&Gs for road construction.

Question 1: *Does the standard and guideline WR-3 prevent the agencies from considering or counting planned restoration project benefits (e.g., road decommissioning) as mitigation for new road construction impacts to aquatic habitat? Conversely, must each project that entails new road construction include mitigation measures to offset the marginal road impacts, or can the agencies rely on previous, ongoing, or planned [road] restoration projects to achieve the no net increase requirement from B-19 and C-7?*

This set of questions mixes two distinct issues: (1) *ROD* requirements for roads in Riparian Reserves to meet ACS objectives, and (2) the *ROD* requirement for no net increase in road density within Key Watersheds. These issues are addressed separately below.

The *ROD* S&G WR-3 (*ROD*, C-37) is under the heading “Watershed and Habitat Restoration” for actions in Riparian Reserve land allocations and states: “Do not use mitigation or planned restoration as a substitute for preventing habitat degradation.” This S&G applies more broadly than to roads and is intended to ensure that the agencies do not rely on watershed or habitat restoration projects to serve as mitigation to allow avoidable impacts from projects planned in Riparian Reserves that are otherwise consistent with the ACS. Further, relying on restoration activities as mitigation may wrongly assume that the benefit from restoration is as likely as the negative impact of the planned activity.

The *ROD* recognized that adverse effects could result from new road construction (both short-term impacts from road construction activities and long-term effects from road management and increased road density on the landscape), yet did not prevent roads from being constructed. Instead, the *ROD* provided detailed S&Gs for roads in Riparian Reserves with the intent of minimizing both construction impacts and longer-term landscape impacts from road management. In addition to prescribing best management practices for specific road activities (RF-2 through RF-6; *ROD*, C-32), the S&Gs for roads in Riparian Reserves also call for interagency cooperation (RF-1), completion of watershed analysis and geotechnical analyses (RF-2, RF-3), and the development of Transportation Management Plans to ensure that road management activities meet ACS objectives (RF-7).

The *ROD* S&G WR-3 ensures that none of these *ROD* requirements for minimizing the effects of new roads in Riparian Reserves would be obviated by watershed or habitat restoration projects that some might construe as mitigation for avoidable impacts from new roads in Riparian Reserves.

In addition to S&Gs for roads in Riparian Reserves, the *ROD* also addresses road construction and maintenance activities in LSRs (*ROD*, C-16), and road treatments as a component of watershed restoration (*ROD*, B-31). The use of watershed analysis is required to determine the influence of roads on ACS objectives in Riparian Reserves, and could also be used to identify road-related impacts to aquatic systems in other land allocations. Watershed analysis is required in Key Watersheds and all roadless areas prior to resource management, to change default Riparian Reserve widths in all watersheds, and is recommended in all other watersheds (*ROD*, B-30). Additionally, all actions in all land allocations must comply with the ACS objectives (*ROD*, B-10).

Regarding the second issue embodied in this set of questions, the S&G WR-3 does not establish additional requirements for reducing road density in Riparian Reserves. The *ROD* requirements pertaining to road density are found in the S&Gs for Key Watershed land use allocations (*ROD*, C-7) and state:

“Inside Roadless Areas - No new roads will be built in remaining unroaded portions of inventoried (RARE II) roadless areas.”

“Outside Roadless Areas - Reduce existing system and nonsystem road mileage. If funding is insufficient to implement reductions, there will be no net increase in the amount of roads in Key Watersheds.”

Outside of Key Watersheds, there are no specific S&Gs addressing road density restrictions elsewhere in the NFP area.

It is incorrect to interpret the S&G WR-3 as establishing a different baseline from which to evaluate the net change in road miles in Key Watersheds. The effective date of the *ROD* is the temporal starting point for evaluating changes in road miles in Key Watersheds. All road decommissioning activities within Key Watersheds, regardless of how they were funded, count towards the net change calculation. Similarly, all new roads are considered in this accounting. A recent report by the Research and Monitoring Group used this approach to evaluate and report the net change in road miles within all 164 Key Watersheds since the *ROD* effective date (April 1, 1999 memorandum from the Research and Monitoring Group to the RIEC).

The timing for road decommissioning to count towards the no net increase requirements in Key Watersheds is addressed in Question #4.

It should be noted that the March 18, 1997 land and resource management plan biological opinion (pages 70-72) issued by NMFS expanded the requirements of the *ROD* to reduce the potential impacts of road construction to minimize the level of incidental take of listed salmon. The opinion recognized that high road densities are correlated with impaired aquatic system functions in all watersheds, and that *ROD* S&Gs may not be specific enough to prevent incidental take at the site scale. Accordingly, the incidental take statement established additional mitigation for site specific road impacts (timing and location of construction), as well as requiring no net increase in road impacts outside of Key Watersheds. These requirements to comply with the ESA should not be confused with interpretations of *ROD* S&Gs.

Question 2: *What is the appropriate analytic scale for applying the “no net increase” standard (e.g., 6th field watershed, Key Watershed, administrative unit, etc.)? What are the baseline road mileages within the appropriate analytic unit from which to assess the “no net increase” in roads requirement?*

As explicitly stated in the *ROD*, B-19 the scale at which the no net increase standard is applied is at the Key Watershed scale. Key Watersheds vary in size, but commonly correspond with the “5th field” watershed-scale (20-200 square miles). The baseline road mileage against which new road construction is compared is the mileage that existed on May 13, 1994, the effective date of the *ROD*.

Question 3: *What specific restoration actions or mitigation measures are necessary for “decommissioning” road segments in order to remove them from the baseline inventory? Can decommissioning “skid trails” offset new road construction when meeting the “no net increase” standard?*

There are no expressly stated definitions for road decommissioning in the *ROD*, however, it does state that “[r]oad closures with gates or barriers do not qualify as decommissioning or a reduction in road mileage” (*ROD*, B-19). The *ROD* directs the land management agencies to determine the influence of roads in Riparian Reserves on ACS objectives through watershed analysis and to obliterate roads based on ongoing and potential effects to ACS objectives (*ROD*, C-32, C-33). The FEMAT Report defines decommissioning as “closing and stabilizing a road to eliminate potential for storm damage and need for maintenance” (FEMAT V-57). NMFS’ March 18, 1997 plan-level biological opinion defines road decommissioning as whatever measures are “necessary to restore pre-road hydrologic functions and...minimize the risk of road-related sediment delivery to streams.”

All of these references make it clear that the intent is to evaluate and reduce road related *impacts* to meet ACS objectives. Because skid trails are not constructed to the same standards as roads and generally do not cause the same types of long-term hydrologic effects as roads, their obliteration cannot be used to offset construction of new roads to meet the no net increase standard.

Question 4: *In order to meet the intent of the ACS objectives and the referenced S&Gs, what is the temporal requirement for mitigating road construction effects? For example, can new roads be constructed in Key Watersheds now, when offsetting road decommissioning cannot occur until sometime in the future? Must offsetting road decommissioning occur prior to the construction of new roads or can they occur concurrently?*

The *ROD* is clear in its intent for Key Watersheds to be managed to reduce overall road¹ densities over time to restore impaired aquatic ecosystem functions and processes. The NMFS March 18 opinion extends this intent to all watersheds with listed salmon species to minimize incidental take. The *ROD*, B-19 states that if funding for implementing reductions in road mileage in Key Watersheds is insufficient, then there will be no net increase in road miles. Because existing conditions in many managed watersheds may already be degraded, road mileage reductions need to occur prior to, or concurrent with, new road construction. This timing is necessary to meet ACS objectives which strive to maintain or restore aquatic processes and functions that may be affected by new road construction.

Policies developed following the *ROD* support the requirement for road mileage reductions to occur prior to or concurrent with new road construction in Key Watersheds. However, the agencies also recognize that road decommissioning often entails significant environmental planning, analysis, and review requirements, and decommissioning activities may extend beyond the completion of the new roads in Key Watersheds. This is reflected in the previous interagency policy on road access under the NFP (April 7, 1995 Memorandum from the Regional Interagency Executive Committee) which requires at least one mile of federal road to be decommissioned “prior to, during, or within a reasonable timeframe following construction” of each mile of new road constructed in Key Watersheds. Similarly NMFS’ March 18 opinion (page 72) states that the identification of mitigation actions (including those for road density) must occur concurrent with road construction, and must be implemented within a reasonable timeframe following construction of the new road.

The requirement to decommission roads prior to or concurrent with constructing new roads in Key Watersheds would also apply to semi-permanent roads that are in place for one or more operating period (construction season), but eventually removed at the completion of the timber sale or other management action. Even though such roads may be seasonally closed to traffic during the wet season, they may impair hydrologic functions, contribute sediment or cause other adverse effects for the time they are temporarily on the landscape, and therefore must have offsetting road decommissioning to meet the intent of the *ROD* requirements.

Based on this logic, only temporary roads; i.e., those that are constructed and completely obliterated during the same construction season, would not be subject to the requirement to decommission a like mileage of roads prior to or concurrent with the new road miles in Key Watersheds.

¹Efforts to interpret and implement road-related provisions of the NFP *ROD* have highlighted the need for a consistent definition of roads, which presently does not exist. We recommend that the work group involved with this issue be re-convened to address it further. Several definitions currently in use are applicable to this clarification of the timing for road decommissioning:

✦ According to the final Forest Service Roads Analysis procedures (June 10, 1999), a road is a vehicle travel-way more than 50 inches wide.

✦ The NMFS March 18, 1997 plan-level biological opinion defines several types of roads based on length of activity: “temporary roads” are roads that are installed and decommissioned during the dry season of the same year (usually May 15-October 15); “semi-permanent roads”- are roads that are used for longer than one dry season, but are decommissioned at the end of the contract; “permanent roads” are roads that remain in use after a contract is completed.

✦ The team assumes that the term “open” means that a “road” is accessible to traffic; “closed” means that the road still exists, but is not accessible to traffic.

✦ The definition of road decommissioning is addressed in the response to question #3 above.

The interagency review team noted that much of the confusion that initially lead to questions #1 and #4 for the road issue stem from differences in the analytical baseline for the *ROD* and for ESA Section 7 consultation. As stated above, *ROD* requirements are met by ensuring that there is a gradual decline (or if funding is insufficient, no net increase) in road miles within Key Watersheds from the temporal baseline of the *ROD* effective date. For example, if 10 miles of roads were decommissioned in a Key Watershed in 1995 as part of a restoration project, the construction of 5 new miles of road in the same Key Watershed in 1996, and 3 additional miles in 1997 would technically be consistent with the *ROD* requirements, as long as the net effect is a reduction from the 1994 *ROD* baseline. In contrast, the Section 7 consultation regulations redefine the environmental baseline with each subsequent consultation, and all actions previously consulted upon are included in the environmental baseline for each new action. That is, when an action is identified for consultation in a biological assessment, all actions which have occurred prior to the consultation are accounted for in the analysis of the environmental baseline. Impacts of new activities are measured by their effect on the existing environmental baseline.

Some have erroneously mixed these two concepts of baseline and suggested that in order to meet the *ROD* requirements, each proposal for new road construction in Key Watersheds must be accompanied by a concurrent, equivalent amount of road decommissioning regardless of previous road mileage reductions, so that there is a net reduction in the pre-project road density (ESA definition of environmental baseline). This approach does not account for previous decommissioning actions, regardless of their timing or magnitude, and creates an institutional disincentive to proactively decommission roads prior to any action which may propose new road construction. This creates cost inefficiencies by piecemealing decommissioning projects, as well as postponing or forgoing larger-scale road restoration opportunities that would accelerate ecosystem recovery.

Team Recommendation:

The team identified a process that could provide an accounting procedure for tracking *ROD* compliance and ACS consistency and for addressing road-related impacts under Section 7. Since both the *ROD* and NMFS' March 18 plan-level biological opinion infer the need to systematically evaluate roads for their intended long-term use (and subsequent disposition), the Transportation Management Planning (TMP) process can provide an avenue for resolving this dilemma. Road management planning processes of both the FS and BLM, along with watershed analysis, can provide an analytic framework for setting road impact reduction objectives and can be used to establish both a spatial and temporal framework for road management within each 5th field watershed. The results of this process can be identified in each consultation, and tracked through the interagency restoration database, so that all actions, including past, present and foreseeable future can be evaluated in the ESA environmental baseline. So, as new roads are proposed as part of actions under consultation, potential impacts can be evaluated (or counted) against road impact reductions achieved through implementing the TMP.

This requires each TMP to include an assessment of past road impacts already addressed through restoration since the issuance of the *ROD*. The TMP establishes both long-term objectives for reducing road related impacts, and the restoration database provides an accounting process for all restoration actions. As new roads are proposed in a watershed, they will be evaluated against the TMP objectives. As long as new construction is consistent with the TMP, ACS, and is covered by previous or ongoing actions reducing road impacts, it would not degrade the environmental baseline at the time of consultation, and would be fully consistent with *ROD* requirements for managing road mileage in Key Watersheds.

ISSUE: The role of Late-Successional Reserves and designated roadless areas as components of the ACS.

The RIEC asked the REO to facilitate interagency agreement on what, if any, further clarification is needed to document the expected role of Late-Successional Reserves and inventoried roadless areas in meeting ACS objectives.

The interagency review team identified and answered a number of specific questions to provide the requested clarification:

Question 1: *Are LSRs an important component of the ACS?*

Yes, LSRs are an important component of the ACS (*ROD*, B-12).

Question 2: *Are LSR Assessments required to address ACS objectives?*

No, LSR Assessments, as described on *ROD*, C-11, are not required to address ACS objectives. ACS objectives are addressed in NEPA documents linked to watershed analysis as appropriate to the issues raised by the proposed activity and the situation.

Question 3: *Do different S&Gs apply to roadless areas inside and outside of Key Watersheds?*

Yes. While roadless areas both in and outside Key Watersheds have additional S&Gs designed to protect water quality because of identified concerns over unstable lands, the S&Gs are not the same. Watershed analysis is required prior to management activities in all watersheds that contain roadless areas. However, inside Key Watersheds, no new roads are to be built in remaining roadless areas (*ROD*, B-19).

Question 4: *What further points of clarification can be provided regarding the role of LSRs and roadless areas as components of the ACS?*

- The ACS objectives and aquatic S&Gs apply in LSRs.
- LSR Assessments, Watershed Analysis, NEPA, and other information must be used together to guide final management decisions in LSRs. LSR Assessments may contain recommendations that are not appropriate when viewed in the larger context of this additional information.
- Key Watersheds are intended to play an important role in the recovery of fish stocks listed under the ESA, and 38 percent of LSRs are in Key Watersheds.
- Roadless Area means all RARE II areas not roaded as of 5/13/94, regardless of release language, management direction, changes in roadless definition, etc.
- There is a correlation between roadless areas and at-risk fish stocks, and management decisions in roadless areas must consider those stocks. However, there are no specific restrictions on management activities in roadless areas other than watershed analysis and, inside Key Watersheds, the requirement that no new roads are to be built in remaining roadless areas.
- Maps of remaining roadless areas included in the FEMAT Report are likely adequate for plan-level consultation, and any changes to roadless areas between the FEMAT mapping and the signing of the *ROD* can be examined at the project level during individual ESA Section 7 consultations.

Team Recommendation:

The presence of roadless areas, LSRs, and status of known bull trout populations should be identified and addressed in watershed analysis documents. Analyses that do not include this information should be updated at the earliest opportunity.

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Oregon State Office
P.O. Box 2965
Portland, OR 97208

In Reply Refer to:
5400 (OR-931) P

November 7, 2002

EMS TRANSMISSION 11/08/2002
Information Bulletin No. OR-2003-026

To: District Managers: Lakeview, Salem, Eugene, Roseburg, Medford, and Coos Bay

From: Deputy State Director for Resource Planning, Use and Protection

Subject: FY 2003 Timber Sale Strategy and Data Call

DD: 11/27/2002
01/15/2003

FY 2003 Timber Sale Strategy

Legal, administrative, and Northwest Forest Plan (NFP) implementation challenges are continuing into FY 2003. The primary challenges include: (1) resolution of Endangered Species Act (ESA) consultation issues associated with the Pacific Coast Federation of Fishermen's Associations et al. v. National Marine Fisheries Service lawsuits and Aquatic Conservation Strategy interpretation; (2) implementation of the Survey and Manage (S&M) Supplemental Environmental Impact Statement; and (3) the Ninth Circuit Court of Appeals ruling in Hugh Kern, et al. v. Bureau of Land Management regarding Port Orford Cedar and the spread of *Phytophthora lateralis*.

The nature of the situation dictates the development of a FY 2003 Timber Sale Plan that continues to place interim emphasis on partial cuts, i.e., sales for which either a "No Effect" (NE) or "Not Likely to Adversely Affect" (NLAA) biological determination can be made for listed anadromous fish, and timber sales that do not influence the spread of *Phytophthora lateralis* within the range of Port Orford cedar. This emphasis (a continuing interim strategy) is driven by circumstances in an attempt to effectively utilize appropriated funds and implement the Allowable Sale Quantity (ASQ) and socioeconomic objectives of the NFP to the maximum extent possible. It is anticipated that as the current challenges are resolved, the emphasis for balanced NFP implementation, i.e., partial cuts, regeneration cuts, restoration as a requirement of timber sale contracts, etc., will resume. However, if regeneration harvest sales can be designed to receive NLAA determinations, this should be pursued at levels consistent with the district

Resource Management Plan.

The following guidelines and assumptions shall also apply to district timber sale plans for FY 2003:

1. The following volumes are to be offered in support of Performance Measure accomplishment:

| <u>District</u> | <u>FY03 Targets (MMBF)</u> |
|-----------------|----------------------------|
| Lakeview | 9 |
| Salem | 30 |
| Eugene | 29 |
| Roseburg | 15 |
| Medford | 52 |
| Coos Bay | <u>15</u> |
| | 150 |

2. Chargeable and nonchargeable volume will count towards the annual sale targets.
3. All needed Letters of Concurrence or Biological Opinions must be received prior to sale advertisement.
4. Districts are encouraged to accelerate the balanced implementation of the Resource Management Plans and NFP, utilizing timber sales as a treatment tool, where identified, as an appropriate treatment necessary to accomplish Aquatic Conservation Strategy and Late-Successional Reserve (LSR) objectives as identified in Watershed Analysis and LSR Assessments.
5. Until Annual Work Plan directives are issued, assume the funding levels in the FY 2003 Planning Target Allocations plus any carryover funds from FY 2002, and assume comparable 6310, 5810, and 5900 directives from FY 2002. In addition, employ the following excerpts from the 5810 and 5900 subactivity definitions from the fund coding handbook:
 - a. For 5810 – To qualify for the deposit of receipts: (1) the timber sale layout, volume measurement and appraisal, and contract preparation must be funded by the Pipeline Restoration Fund (PRF); and (2) a minimum of most (51 percent or more) of the timber sale preparation costs must be funded by the PRF.
 - b. For 5900 – A minimum of most (51 percent or more) of the treatment costs must be funded by the Forest Ecosystem Health and Recovery Fund (FEHRF) for the receipts to be deposited into the FEHRF.

All Districts are to complete the attached table (Table 6) and e-mail it to Lyndon Werner (OR-931) by close of business (COB), November 27, 2002. For each sale apply a hierarchy of

funding source, land use allocation, and cutting method to display the distinct acres and volume on a separate line. Then display the total acreage and volume figures for each sale.

Documentation of Timber Sale Preparation Effort

We have experienced four years (FYs 1999-2002) of offering less than the full ASQ. Concerns persist which prompt us to explain what we have been accomplishing with the funding that has been allocated from the lesser volume that has been offered. It is understood that, in some cases, it has been more costly than “normal” to prepare the sales that have been offered; in some cases sale preparation effort has resulted in nonviable sales. In an attempt to document sale preparation effort that has resulted in nonviable sales or sales that have been put on-the-shelf in various stages of completion, Table 5 has been developed. In addition, this data is useful in demonstrating progress in meeting the PRF goal of one year’s lead time, i.e., one ASQ’s worth of volume on the shelf.

All districts are to complete the attached table (Table 5) and e-mail it to Lyndon Werner (OR-931) by COB, January 15, 2003. Additional rows should be inserted into the table as needed. The population of sales still includes all unoffered sales intended for sale in FYs 1999-2002 and their status as of the end of FY 2002. Each individual sale should be displayed once only in the highest possible numbered gate.

Additional Table 5 Explanation:

1. Gates
 - a. Gate 1: Sale is ready for ID Team to begin their analysis and deliberations. Initial reconnaissance is complete.
 - b. Gate 2: S&M, Threatened and Endangered, cultural, etc., surveys; ID team; Environmental Assessment; and public review complete.
 - c. Gate 3: Layout and cruise complete. Sale is nearly ready to advertise, pending appraisal and final contract preparation.
 - d. Gate 4: ESA consultation complete.

2. Columns
 - a. Sale Name: Use most current name; use Remarks column to explain sale combinations.
 - b. Acreage and Volume: Use current figures as of the completion of the gate.
 - c. Viability Status: No-Off = Sale no longer viable; it is off the shelf. Yes-On = Sale viable but on-the-shelf at this gate; not appropriate to proceed at this time on work under next gate. Yes-Go = Sale viable; proceed with effort under next gate.
 - d. Remarks: Use for additional explanation or to cross reference a separate document with more detailed explanation.

Timber Sale Pipeline Fund Project Submissions

To credibly utilize PRF funds (5810) and develop the data necessary for the annual report to Congress, this Information Bulletin is requesting the closeout of FY 2002 project

accomplishments and submission of proposed FY 2003 projects. Refer to the FY 2002 Annual Work Plan Subactivity Specific Directives, pages 92-94, for additional information on project development.

All districts are to complete the attached Table 1 for all FY 2002 projects and e-mail them to Lyndon Werner (OR-931) by COB, November 27, 2002. All districts are to complete the attached Table 2 and e-mail them to Lyndon Werner (OR-931) three weeks following the issuance date of the FY 2003 Oregon/Washington Annual Work Plan Directives. All districts are to complete the attached Tables 3 and 4 and e-mail them to Lyndon Werner (OR-931) by COB, January 15, 2003. Specific feedback requirements are as follows:

1. Be specific regarding the units of accomplishment. The tables should be submitted (electronically) as a single document from each district. Insert additional rows into the tables as necessary to display additional accomplishments or projected timber sales.
2. Cruised and “on-the-shelf” volume is comprised of sales which were complete at the end of FY 2002 (Table 1) or are anticipated to be complete at the end of FY 2003 (Table 2). “Complete” is defined as cruised and on-the-shelf with the assumption that, at a certain designated time (in this case, at the end of FYs 2002 or 2003, respectively), all field work was complete.
3. **Table 1:**
 - a. The dollar figures (at the bottom of the table) for all projects must add up to the total amount spent by the district.
 - b. Use the same project names established or perpetuated in FY 2002. Use the remarks section to explain the “flow” (pathway) of a project from year to year. Use the remarks section to explain if preliminary project development effort has resulted in decreased or no projected accomplishment (less or no timber volume).
4. **Table 2:**
 - a. The dollar figures at the bottom of the table (for all projects) must add up to the district’s tentative 5810 allocation plus anticipated carryover, unless that level of spending would be inconsistent with the directives. Identified project cost must be specific to that project’s identified accomplishments.
 - b. Use the same project names established or perpetuated in FY 2002 unless a FY 2002 general project (i.e., stand exams) in a watershed is now becoming more than one FY 2003 specific project (i.e., with different project names). Use the remarks section to explain the “flow” of a project from year to year or the “flow” of a project into multiple projects.
5. **Tables 3 and 4:**

- a. Make a reasonable and conservative determination as to whether operations will proceed and generate revenue in FY 2003.
- b. The total projected revenue in FY 2003 from new sales in Table 3 (right most column) should equal the sum of the value of sale-by-sale revenue projections in Table 4.

If you have any questions, please contact Lyndon Werner (OR-931) at 503-808-6071 or Alan Wood (OR-931) at 503-808-6072.

Districts with Unions are reminded to notify their unions of this Information Bulletin and satisfy any bargaining obligations before implementation. Your servicing Human Resources Office or Labor Relations Specialist can provide you assistance in this matter.

Signed by
Denis M. Williamson
(Acting)

Authenticated by
Mary O'Leary
Management Assistant

5 Attachments

- 1 – [Table 1](#): FY 2002 5810 Actual Accomplishments (1p)
- 2 – [Table 2](#): FY 2003 5810 Proposed Projects (1p)
- 3 – [Table 3](#) and [Table 4](#): Planned FY 2003 Timber Sale Pipeline Restoration Work and Projected Revenue (1p)
- 4 – [Table 5](#): On-the-Shelf/Unoffered Timber Sale Volume - end of FY 2002 (2pp)
- 5 – [Table 6](#): FY 2003 Timber Sale Plan (1p)

Distribution

WO-230 (Room 204LS) - 1
OR-014 (Mel Crockett) - 1
OR-082 (Jeffrey Gordon) - 1
OR-090 (Dave DeMoss) - 1
OR-100 (Steven Niles) - 1
OR-110 (Dave D. Reed) - 1
OR-120 (Jon Menten) - 1

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

CLERK OF COURT
DEPUTY CLERK OF COURT

SEP 30 1999

AT SEATTLE
CLERK U.S. DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
BY DEPUTY

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATION;
INSTITUTE FOR FISHERIES
RESOURCES; OREGON NATURAL
RESOURCES COUNCIL; UMPQUA
WATERSHEDS, INC.; COAST RANGE
ASSOCIATION; and HEADWATERS,

Plaintiffs,

v.

NATIONAL MARINE FISHERIES
SERVICE,

Defendant,

and

DOUGLAS TIMBER OPERATORS, INC.
and NORTHWEST FORESTRY
ASSOCIATION,

Defendant-Intervenors.

NO. C99-67R

ORDER GRANTING PLAINTIFFS'
MOTION FOR SUMMARY JUDGMENT,
DENYING DEFENDANTS' MOTIONS
FOR SUMMARY JUDGMENT AND
DISMISSAL AND GRANTING
CROSS-MOTIONS TO STRIKE
IN PART

THIS MATTER comes before the court on the parties' cross-
motions for summary judgment, and cross-motions to strike evidence

ORDER
Page - 1 -

1 filed in support of summary judgment, and defendant-intervenors'
2 motion for summary judgment and motion to dismiss.¹ The court has
3 considered the pleadings and documents filed in support of and in
4 opposition to the motions and the relevant administrative record.
5 Being fully advised, the court grants plaintiffs' motion for
6 summary judgment, denies defendants' motions for summary judgment
7 and to dismiss and grants the cross-motions to strike in part.
8

9 10 I. BACKGROUND²

11 Plaintiffs are six Oregon-based organizations representing
12 the interests of commercial fishermen and/or environmental causes.
13 They have sued the National Marine Fisheries Service (NMFS) under
14 the Endangered Species Act (ESA), 16 U.S.C. § 1536. The State of
15 Oregon, Douglas Timber Operators, Herbert Lumber and Superior
16

17 ¹Defendant-intervenors move to dismiss on the grounds that the
18 court lacks subject matter jurisdiction and that plaintiffs have
19 failed to join indispensable parties. The court rejected these
20 arguments in a previous suit between these parties, Pacific Coast
21 Federation of Fishermen's Associations, et al. v. National Marine
22 Fisheries Service, No. 97-775R (PCFEA I), and they are not repeated
23 here. Defendant-intervenors also move to dismiss on the ground
24 that the court lacks a complete administrative record. Defendant-
25 intervenors, however, have submitted the documents they contend are
26 necessary to complete the record by way of declaration.

²The procedural and factual background of this controversy are
set out in the court's March 25, 1999, order granting plaintiffs'
motion for a preliminary injunction and in the court's May 29,
1998, amended order granting defendants' motion for summary
judgment in part. The court only recites here those facts
necessary to understand its holding.

ORDER
Page - 2 -

1 Lumber have joined the suit as defendant-intervenors.³ Plaintiffs
2 challenge four biological opinions issued by NMFS on the impacts
3 of 24 federal timber sales in the Umpqua River Basin on the Umpqua
4 cutthroat trout and the Oregon coastal coho salmon, fish species
5 that have been listed as threatened or endangered under the
6 Endangered Species Act. Plaintiffs ask the court to vacate the
7 four opinions.

8
9 In a previous suit between these parties, plaintiffs chal-
10 lenged a Programmatic Biological Opinion (BO)⁴ NMFS issued on March
11 18, 1997. In the Programmatic Biological Opinion, NMFS concluded
12 that the continued management of public land in the Umpqua River
13 Basin in Oregon under the United States Forest Service's (USFS)
14 existing Land and Resource Management Plans (LRMPs) and the Bureau
15 of Land Management's (BLM) existing Resource Management Plans
16 (RMPs) would not jeopardize the survival of the Umpqua cutthroat
17 trout. In that suit, plaintiffs contended that NMFS failed to use
18 the best available scientific information in reaching its "no
19 jeopardy" conclusion as required by the ESA, that it did not
20 consider enough evidence in reaching its "no jeopardy" conclusion,
21

22
23 ³In discussing the defendants' substantive arguments, the
24 court refers to the defendants collectively as "NMFS" unless
otherwise indicated.

25 ⁴The parties also refer to the Programmatic Biological Opinion
26 as the "Plan BO," "Northwest Forest Plan BO," or "NFP BO." For
consistency the court uses "Programmatic Biological Opinion."

1 that the conclusion conflicted with evidence before the action
2 agencies and that the Programmatic Biological Opinion authorized
3 site-specific actions without adequate consultation as required by
4 the ESA. Plaintiffs asked the court to invalidate the March 18,
5 1997 Programmatic Biological Opinion and order the government
6 defendants to reconsult on the continued implementation of USFS
7 and BLM's Umpqua River Basin management plans. Plaintiffs also
8 sought an order prohibiting USFS and BLM from "tiering to" (rely-
9 ing on) the Programmatic Biological Opinion to authorize any site-
10 specific projects or management actions that may affect the listed
11 fish. A central contention in that suit was whether NMFS had
12 ensured compliance with the Aquatic Conservation Strategy (ACS),
13 a component of the Northwest Forest Plan. The Northwest Forest
14 Plan adopted standards and guidelines for forest management within
15 the range of the northern spotted owl. The ACS addresses the
16 habitat needs of salmonids on federal lands within the range of
17 the northern spotted owl.

19 The court upheld the Programmatic Biological Opinion. And it
20 held that USFS and BLM could properly tier to the Programmatic
21 Biological Opinion in their respective management plans. The
22 court found that NMFS did not act arbitrarily or capriciously in
23 assuming that the USFS and BLM would implement the LRMPs and RMPs
24 in a manner consistent with the ACS. The court held, however,
25 that NMFS could not rationally reach a "no jeopardy" conclusion in
26

ORDER

Page - 4 -

1 reviewing the agencies' site-specific biological opinions without
2 analyzing whether the proposed projects did, in fact, comply with
3 the ACS. Thus, the court held that NMFS could properly assume on
4 the programmatic level that the agencies' proposed actions would
5 comply with the ACS, but found that it had failed to ensure or
6 verify ACS compliance on the site-specific or project level.

7 Following the court's decision in PCFFA I, the government
8 defendants consulted on 24 timber sales covered by the biological
9 opinions at issue in this litigation. In November and December
10 1998, NMFS issued four biological opinions concluding that the
11 proposed timber sales would not jeopardize coho or cutthroat
12 survival and recovery.⁵ AR 1 at 14, 1s-3s. In the instant suit,
13 plaintiffs challenge NMFS's new biological opinions. They contend
14 that the new opinions suffer from the same flaw in that they are
15 inadequate to ensure or verify the action agencies' compliance
16 with the ACS.

17
18 / / /

19 / / /

20 / / /

21 _____
22 ⁵Twelve of the timber sales at issue in PCFFA I are at issue
23 here because they were submitted for reconsultation following the
24 court's order: Little River DEMO, Final Curtain, Dream Weaver,
25 Buck Fever, Sweet Pea, Buck Creek Commercial Thin, E-mile, Red Top
26 Salvage II, Lower Conley, Foghorn Cleghorn Commercial Thin, Sugar
Pine Density Management and Diamond Back. The remaining timber
sales were proposed since the court's order and have, therefore,
not been reviewed by the court.

ORDER
Page - 5 -

1 II. DISCUSSION

2 A. Motions to strike

3 Both sides have filed extra-record evidence in the form of
4 declarations. Both sides move to strike the other sides' extra-
5 record evidence.⁶ Specifically, plaintiffs seek to strike portions
6 of Michael P. Tehan's declaration and all of Daniel R. Kenney's
7 declaration because they are either not proper extra-record sub-
8 missions or because they are impermissible expert opinions.
9 Defendant seeks to strike Christopher Frissell and Mark Powell's
10 declarations on the same basis.
11

12 Extra-record evidence is admissible to show the agency has
13 not considered all relevant factors and to explain technical
14 matters:

15 If the reviewing court finds it necessary to go outside
16 the administrative record, it should consider evidence
17 relative to the substantive merits of the agency action
18 only for background information, . . . or for the lim-
19 ited purposes of ascertaining whether the agency consid-
20 ered all the relevant factors or fully explicated its
21 course of conduct or grounds of decision . . . Consider-
22 ation of the evidence to determine the correctness or
23 wisdom of the agency's decision is not permitted, even
24 if the court has also examined the administrative re-
25 cord.

21 ASARCO, Inc. v. United States Env'tl Protection Agency, 616 F.2d
22 1153, 1158 (9th Cir. 1980). The court will consider the challenged
23

24 ⁶Plaintiffs move, in the alternative, for leave to file a
25 surreply brief on the summary judgment motions. The court finds
26 that the summary judgment motions have been adequately briefed and
the motion is denied on that basis.

ORDER

Page - 6 -

1 evidence only for background information and hereby grants the
2 cross-motions to strike to the extent the challenged declarations
3 contain opinion evidence or evidence pertaining to the correctness
4 of the challenged agency action.

5 B. Summary judgment motions

6 1. Standard of review

7
8 Summary judgment is appropriate where there is no genuine
9 issue of material fact and the moving party is entitled to judg-
10 ment as a matter of law. Fed. R. Civ. P. 56. A biological opin-
11 ion is a final agency action that may be set aside under the
12 Administrative Procedure Act⁷ if the court finds it is "arbitrary,
13 capricious, an abuse of discretion, or not otherwise in accordance
14 with law." Bennett v. Spear, 520 U.S. 154, 174 (1997). A bio-
15 logical opinion is arbitrary and capricious if the agency has
16 "entirely failed to consider an important aspect of the problem,
17 offered an explanation for its decision that runs counter to the
18 evidence before the agency, or is so implausible that it could not
19 be ascribed to a difference in view or the product of agency
20 expertise." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto.
21 Ins. Co., 463 U.S. 29, 43 (1983). A biological opinion is also
22 invalid if it does not employ the best available scientific infor-
23 mation as required by 16 U.S.C. § 1536(a)(2). Greenpeace Action

24
25
26 ⁷5 U.S.C. § 706(2)(A).

1 v. Franklin, 14 F.3d 1324 (9th Cir. 1992).

2 2. ACS consultation procedure

3 The ACS has nine stated objectives aimed at maintaining or
4 restoring the salmonid's aquatic habitat. The objectives provide
5 a framework for managing aquatic ecosystems. The objectives
6 describe the attributes and distribution of aquatic ecosystems
7 believed necessary to provide conditions for maintaining currently
8 strong populations of fish and other aquatic and riparian depend-
9 ent organisms and to allow for recovery of currently degraded
10 ecosystems. See Reeves Decl. at 5, ¶ 9. The ACS has four
11 essential features designed to accomplish the nine objectives:
12 1) establish riparian reserves (an allocation of land associated
13 with riparian areas with special standards and guidelines that
14 restrict management activities in those areas); 2) designate key
15 watersheds (watersheds important to the at-risk fish stocks);
16 3) utilize watershed analysis procedures for evaluating biologic
17 processes in specific watersheds; and 4) provide for watershed
18 restoration. AR 21 at B-9.

19
20 As part of the Northwest Forest Plan consultation, the Pro-
21 grammatic Biological Opinion endorsed a streamlined consultation
22 process. Under the streamlined consultation process, interagency
23 teams meet to evaluate specific forest management activities.
24 When USFS or BLM proposes to take an action that may affect a
25 threatened or endangered species covered by the Programmatic
26

1 Biological Opinion, a "Level 1" team (an interagency team that
2 includes a NMFS biologist), conducts an analysis to determine
3 whether the project is likely to adversely affect the species.
4 The Level 1 team records information regarding a specific project
5 using a "matrix of pathways and indicators" set forth in the
6 Programmatic Biological Opinion and a checklist.

7
8 If the Level 1 team cannot reach unanimous agreement on a
9 project's impacts and consistency with the ACS, the action is
10 elevated to the Level 2 team, an interagency team of scientific
11 professionals. The project can also be elevated to the Level 3
12 team to resolve differences. Once there is consensus on project
13 effects and consistency with the ACS, the project is forwarded to
14 NMFS for formal consultation if necessary. With the exception of
15 the proposed Little River DEMO sale, which was the subject of the
16 court's preliminary injunction, none of the other timber sales at
17 issue in this litigation was elevated by the Level 1 team.

18 The matrix and checklists reflect information needed to
19 implement and attain the ACS objectives. It is divided into
20 "pathways," which indicate water quality, habitat access, habitat
21 elements, flow/hydrology, channel conditions and dynamics and
22 watershed conditions. The pathways are broken down into "indica-
23 tors" addressing specific components of each habitat characteris-
24 tic. The matrix provides three possible characterizations of the
25 existing condition of each habitat indicator that correspond to
26

1 a statement about the habitat condition: 1) poorly functioning,
2 2) at risk or 3) not properly functioning. For each habitat
3 indicator, the checklist provides columns corresponding to the
4 three characterizations. It also provides columns to indicate
5 whether the proposed action will restore, maintain, or degrade
6 the habitat condition for each indicator.

7
8 3. ACS compliance

9 In the earlier suit, there was evidence in the record, as
10 evidenced by the matrixes and checklists for the proposed sales,
11 that the proposed sales would degrade the habitat conditions at
12 the project or site-specific level. Many of the checklists, for
13 example, documented poorly functioning or at-risk habitat condi-
14 tions. Following the court's decision, the action agencies re-
15 initiated consultation for twelve of the sales at issue in PCFFA I⁸
16 in order to document ACS compliance and implementation and initi-
17 ated consultation for the other sales before the court. Plain-
18 tiffs contend that during the reconsultation process, the agencies
19 refocused their criteria for assessing ACS compliance in a manner
20 that gave the appearance that ACS compliance was being achieved,
21 rather than engaging in a meaningful analysis of ACS compliance
22 at the project scale. By refocusing their criteria, plaintiffs
23 argue, the action agencies masked or ignored evidence that the
24

25
26 ⁸See note 5, supra.

1 proposed timber sales would not "maintain or restore" habitat
2 conditions, as mandated by the ACS.

3 Plaintiffs advance a number of arguments: First, that NMFS
4 backed away from ensuring ACS consistency at the project level and
5 instead directed that ACS consistency and jeopardy be determined
6 at the 5th field⁹ watershed, which can span 20-200 square miles.
7 Second, that few if any timber sales will produce measurable
8 impacts on such a large scale. Third, that by determining ACS
9 consistency on a 10-20 year frame, the agencies ignored the sales'
10 near-term impacts on fish survival and recovery. Fourth, that
11 the agencies ignored conditions on non-federal lands in assessing
12 the cumulative watershed effects of additional logging. Fifth,
13 that the agencies ignored watershed analysis and riparian reserve
14 violations.¹⁰

15
16 In PCFFA I, the court held that NMFS could properly assume
17 in the Programmatic Biological Opinion that the action agencies'
18 implementation of the ten LRMPS and RMPs at issue in a manner

19 _____
20 ⁹Aquatic ecosystems are described as fields. The size of
21 watershed determines its category. Fifth field ranges from 20-200
22 square miles and are referred to as watersheds. Sixth field ranges
from 2-50 square miles and are referred to as subwatersheds.
Reeves Decl. at 3, ¶ 5, n. 1.

23 ¹⁰Plaintiffs also make several arguments that appear to
24 overlap with issues already raised and ruled on in PCFFA I. To the
25 extent plaintiffs seek to challenge elements of the Programmatic
26 Biological Opinion that the court upheld, such as NMFS's reliance
on FEMAT's habitat-based analysis, the court will not address those
arguments.

1 consistent with the ACS would not likely jeopardize the continued
2 existence of the Umpqua cutthroat trout. PCFEA I at 24. At issue
3 here is whether NMFS adequately evaluated the action agencies'
4 compliance with the ACS in reaching its "no jeopardy" conclusion.

5 a. Project scale degradation and short term impacts

6 i. scale of ACS measurement

7
8 It is undisputed that the proposed timber sales before the
9 court will result in some site-specific degradation: NMFS's four
10 biological opinions issued in November and December 1998 document
11 degrading effects at the subwatershed scale on sediment, flows,
12 substrate, disturbance history, pool quality, large woody debris,
13 and riparian reserves. In evaluating the actions for ACS compli-
14 ance, NMFS concluded that only actions that would adversely affect
15 the environmental baseline over an entire watershed over a long
16 period would be inconsistent with ACS objectives. AR 1s at 10-13;
17 see also AR 1 at 11-13; AR 2s at 12-16; AR 3s at 14-21. Under
18 this analysis, which looks at the long term net effect of all
19 management actions at the watershed scale, NMFS concluded that
20 although the proposed timber sales would cause degradation at the
21 site level, they were not inconsistent with the ACS because the
22 effects were short term and localized.

23
24 Plaintiffs challenge NMFS's long term/watershed scale ap-
25 proach. At the outset, they argue, NMFS's approach is entirely
26

1 new and they suggest it was designed in response to the court's
2 earlier summary judgment order. Substantively, they contend that
3 focusing on so large a landscape masks each sales' impacts. They
4 also argue that by focusing on the watershed level, NMFS has
5 ensured that no project will ever result in a jeopardy finding
6 because few if any projects will create sufficient degradation at
7 the watershed level to be deemed inconsistent with the ACS. They
8 argue that ACS consistency and implementation must be determined
9 and measured at the site-specific or project level.
10

11 NMFS argues that determining ACS compliance on the watershed
12 scale is proper. It argues that ACS compliance was never intended
13 to be measured at the project scale. Rather, it is intended to
14 measure cumulative degradation across the watershed. Under NMFS's
15 approach, there would be no ACS violation until the culminated
16 degradation caused by individual projects is measurable at the
17 watershed level. NMFS argues that plaintiffs' project level
18 approach wrongly equates evidence of project level degradation
19 recorded in the matrixes and checklists with ACS noncompliance.
20 This approach, it contends, has no support in the Northwest Forest
21 Plan, the ACS, the Programmatic Biological Opinion, the scientific
22 evidence or elsewhere. NMFS also challenges plaintiffs' assertion
23 that it has employed an entirely new approach following PCFFA I.¹¹
24

25 ¹¹NMFS does not, however, cite to documentation in the PCFFA I
26 record that it employed a long term/watershed approach before the

1 NMFS maintains that it is clear that the watershed scale is
2 the appropriate scale for making consistency findings. In support
3 of this interpretation it cites to the Northwest Forest Plan which
4 states:

5 The Aquatic Conservation Strategy was developed to re-
6 store and maintain the ecological health of watersheds
7 and aquatic ecosystems contained within them on public
8 lands The approach seeks to prevent further
degradations and restore habitat over broad landscapes
as opposed to individual projects or small watersheds.

9 AR 16, p. B-9. NMFS argues that the focus on the "ecological
10 health of watersheds" and prevention of further degradations "over
11 broad landscapes" demonstrates that the proper emphasis in ACS
12 compliance is the watershed scale. This argument is misplaced.
13 NMFS is correct that the ACS seeks to prevent degradation at the
14 landscape level. The section of the Northwest Forest Plan quoted
15 above, however, merely states that it is no longer appropriate to
16 evaluate ecosystem degradation and restoration on a project by
17 project basis. Rather, it reflects a new approach adopted in the
18 Northwest Forest Plan, which requires the government defendants to
19 consider the health of aquatic habitats over entire watersheds.
20 NMFS' reliance on this mandate, thus, begs the question of what
21 level it is supposed to measure or verify ACS compliance to ade-
22 quately protect the watershed.

24 The FEMAT report, which the court, at least implicitly, held
25 _____
26 court issued that opinion.

ORDER
Page - 14 -

1 in PCFFA I represents the best scientific information, is the
2 scientific underpinning of the ACS. AR 15a. In its report, FEMAT
3 stressed (and indeed this court held in its prior decision) that
4 the ACS strategy must be implemented at all four spatial scales:
5 regional, province (river basin), watershed, and site (or pro-
6 ject). The Programmatic Biological Opinion, in reliance on FEMAT,
7 also requires ACS compliance at these four spatial scales. Thus,
8 not only must the ACS objectives be met at the watershed scale (as
9 NMFS argues), each *project* must also be consistent with ACS objec-
10 tives, i.e. it must maintain the existing condition or move it
11 within the range of natural variability.¹²

13 Notwithstanding the fact that ACS compliance is required at
14 all four spatial scales, NMFS is correct that the Programmatic
15 Biological Opinion does anticipate some harmful activities under
16 the Northwest Forest Plan. BO at 26. NMFS is also correct that
17 evidence in the checklists and matrixes that a project will result
18 in some degradation does not, standing alone, constitute ACS
19 noncompliance. NMFS, however, provides no basis for its shift to
20 a broad watershed scale of analysis and away from the multi-scale
21 approach contained in the Programmatic Biological Opinion.

22
23
24 ¹²The "range of variability" at the watershed or subwatershed
25 scale is the distribution of conditions of smaller subwatersheds
26 that support acceptable populations of anadromous salmonids and
other aquatic and riparian dependent organisms. Reeves Decl. at
8, ¶ 15.

1 tree regrowth) and assumes that if more portions of the watershed
2 cross the ten year regrowth threshold than are being cut, the
3 logging will not have long term impacts. Plaintiffs argue that
4 NMFS ignored short term impacts even where the watershed analysis
5 stressed the need to avoid short term degradation. And, they
6 argue, by looking so far ahead to determine when clearcut forests
7 will be fully recovered, the agencies are essentially assuming
8 away the sales' adverse hydrologic effects.

9
10 The court agrees with plaintiffs that NMFS has failed to
11 adequately assess the short term impacts of the timber sales and
12 that it has failed to adequately explain its assumption that
13 passive restoration will adequately mitigate the adverse impacts
14 of logging. The problem with NMFS's approach, as plaintiffs point
15 out, is that NMFS is analyzing the sales' effects based on pre-
16 dicted conditions ten years after the sale. Because more trees
17 are predicted to grow back over ten years than are being cut in
18 the sale, every sale under consultation could ultimately result in
19 a "no jeopardy" analysis. The court further finds that in order
20 to fully ensure the action agencies' compliance with the ACS, NMFS
21 would have to assess the conditions immediately after the sale
22 instead of relying on tree regrowth as passive mitigation to com-
23 pensate for the logging. The court concludes that its failure to
24 do so was arbitrary and capricious.

25
26 / / /

ORDER
Page - 17 -

1 b. Private land conditions

2 In the Roseburg BLM district, where most of the proposed sale
3 sites are located, there is a checkerboard pattern of federal and
4 non-federal land ownership. Plaintiffs contend NMFS ignored the
5 conditions on non-federal lands in making its "no jeopardy" deter-
6 mination.

7 It is undisputed that conditions on non-federal lands in the
8 range of the Umpqua cutthroat trout have contributed significantly
9 to the degradation of the specie's habitat:
10

11 Within the range of the UR cutthroat trout (the Umpqua
12 River Basin), approximately 47% of the land is Federally
13 managed. The remaining 53% is made up of private,
14 county, and State land consisting primarily of agricul-
15 tural and forest land. Historically, agriculture, live-
16 stock grazing, forestry and other activities on non-
17 Federal land in the Umpqua River Basin have contributed
18 substantially to temperature and sediment problems in
19 the Umpqua River Basin. Conditions on and activities
20 within the non-Federal riparian areas along stream
21 reaches downstream of the USFS and BLM land presently
22 exert a greater influence on river temperatures and
23 probably contribute more sediment to the habitat of
24 UR cutthroat trout and other Pacific salmonids in the
25 Umpqua River Basin than USFS and BLM land.

19 Programmatic Biological Opinion, AR 14 at 41. In PCFFA I, plain-
20 tiffs challenged the Programmatic Biological Opinion on the ground
21 that it did not take into account activity on non-federal land.
22 The court rejected this argument, finding it "clear from the
23 record that NMFS did consider the effects of the activities on
24 non-federal lands in reaching its "no jeopardy" conclusion."
25 PCFFA I at 22. The court declines to address this issue further
26

1 since it was resolved in the earlier litigation.

2 c. Watershed analysis violations

3 Under the Northwest Forest Plan, USFS and BLM are directed to
4 use the results of watershed analysis to determine whether each
5 project is consistent with the ACS objectives. The finding must
6 include a description of the existing condition, a description of
7 the range of natural variability of the important physical and
8 biological components of a given watershed, and how the proposed
9 project or management action maintains the existing condition or
10 moves it within the range of natural variability. Plaintiffs
11 contend that although the agencies drew some information from the
12 watershed analysis in the site-specific consultations, they did
13 not incorporate the watershed analysis recommendations or desired
14 future conditions in the ACS consistency determination. NMFS
15 contends that the site-specific biological opinions before the
16 court adhere to the findings and recommendations in the watershed
17 analysis relevant to the particular project.

18
19 As examples of the action agencies' failure to adhere to the
20 watershed analysis, plaintiffs point to the Little River Watershed
21 Analysis, which identifies the Upper Little River as a high prior-
22 ity for restoration and protection. AR 17 at Recs-14, 16-17. The
23 Little River Demo sale,¹³ they argue, collides with these recom-
24

25 ¹³This is the sale the court preliminarily enjoined on March
26 25, 1999.

1 mendations by allowing logging in riparian reserves in the Willow
2 Flats area and Upper Little River drainage. They contend, and
3 NMFS does not persuasively dispute, that the biological opinion
4 does not mention the watershed analysis recommendations or provide
5 any rationale for concluding that the sale is consistent with ACS
6 objectives. NMFS argues instead that to the extent there is a
7 conflict between recommendations, the DEMO project is permissible
8 because it "clearly falls within the research exception to harvest
9 in riparian reserves because no significant risk to watershed
10 values or to ACS objectives exists."¹⁴ The court, however, re-
11 jected the argument that the sale clearly fell within the research
12 exception in ruling on plaintiffs' preliminary injunction motion.

13
14 In response to plaintiffs' criticisms of other projects'
15 failure to adhere to the relevant watershed analysis or recommen-
16 dations (e.g. the E-mile timber sale's failure to mention slope
17 stability and the Upper South Myrtle Harvest Plan's failure to
18 adhere to watershed analysis), NMFS offers the somewhat conclusory
19 (and circular) response that there is no evidence that any of the
20 projects criticized by plaintiffs will jeopardize the continued
21 existence of the listed species.

22 The court finds that in the challenged biological opinions,
23 NMFS failed to use watershed analysis to determine whether the
24

25
26 ¹⁴Defendant's memorandum in support of summary judgment at 25.

1 watersheds at issue are within the acceptable range of vari-
2 ability. There is no discussion of the watershed analyses' de-
3 scriptions of desired future conditions or incorporation of the
4 watershed analyses recommendations to attain those conditions.
5 For these reasons, the court finds that NMFS has not fully or
6 sufficiently incorporated watershed recommendations into its ACS
7 analysis.

8 d. Riparian reserve violations

9 The ACS standards prohibit logging in riparian reserves with
10 narrow exceptions for salvage logging and thinning where needed to
11 accelerate the development of mature forests in riparian areas or
12 to otherwise attain the ACS objectives. Plaintiffs contend that
13 in the second round of timber sale consultations, NMFS has not
14 insisted on strict compliance with the Northwest Forest Plan's
15 riparian reserve standards, despite its heavy reliance on invio-
16 late reserves to mitigate the sales' degrading effects. The
17 Little River Demo sale, for example, would log designated riparian
18 reserves. The applicable biological opinion, however, states that
19 the sale falls within a research exception. The court rejected
20 this research exception rationale when it granted plaintiffs'
21 motion for a preliminary injunction.
22

23 Similarly, Sugar Pine Density Management will log a 35-40
24 foot radius around designated sugar pines in a Tier 1 Key Water-
25 shed, and in riparian reserves. NMFS acknowledged in the biologi-
26

1 cal opinion that it was unclear whether this logging would promote
2 attainment of any ACS objectives or meet an exception for timber-
3 ing in a riparian reserve. AR 3s 12. NMFS found that the Sugar
4 Pine action was justified in order to increase the survival of
5 individual sugar pines. In the Red Top Salvage II action BLM
6 proposes to salvage approximately 132 acres of blown-down timber.
7 Twenty-three of those acres are in a riparian reserve. NMFS found
8 the action justified to reduce the potential for insect infesta-
9 tion and to reduce fuel loads and the associated risk of cata-
10 strophic fire. NMFS has also approved several sales that will log
11 in riparian reserves as part of commercial thins or salvage log-
12 ging, including three sales in Key Watersheds. Plaintiffs contend
13 that many of these sales have riparian buffers as small as 20
14 feet.¹⁵

16 NMFS acknowledges that logging in riparian reserves violates
17 the ACS standards unless it will accelerate the development of
18 mature forests or otherwise attain the ACS objectives. AR 3s at
19 2. In nearly identical language for each sale in a riparian
20 reserve, the biological opinions state that the thinning will have
21 beneficial effects on the rate of tree growth and riparian reserve
22 recovery, even though there is evidence in the record to the
23

24 ¹⁵NMFS contends that plaintiffs do not offer a citation to the
25 record to support this figure. This is incorrect. In the site-
26 specific biological opinions some sales have proposed "no-cut
buffers" of as little as 20 feet. See AR 1s at 3.

1 contrary. See AR 1s at 9; AR 3s at 12-14.¹⁶

2 Logging in riparian reserves is prohibited for salvage sales
3 unless "watershed analysis determines that present and future
4 coarse woody debris needs are met and other ACS objectives are not
5 adversely affected." Northwest Forest Plan Standard TM-1. The
6 problem with NMFS's explanation for allowing violations of ACS
7 riparian reserve standards is that it has no real relation to the
8 sales' aquatic impacts. It is approving projects that serve some
9 non-aquatic function (i.e. reduction of insect infestation) in
10 violation of ACS riparian standards although there is nothing in
11 the record that demonstrates that those projects have an aquatic
12 benefit. The court finds that, at a minimum, NMFS must require
13 some relation between the benefits used to justify projects in
14 riparian reserves and an aquatic function. By permitting viola-
15 tions of ACS riparian reserve standards where there is no evidence
16 of a rational connection between the proposed action and the
17 attainment of ACS objectives, NMFS acted arbitrarily and capri-
18 ciously.
19

20 / / /

21 / / /

22 _____
23 ¹⁶The Red Top II biological opinion, for example, notes that
24 the watershed analysis found that large woody debris is not well-
25 distributed or abundant in this area, that the subwatersheds where
26 the logging will occur are not properly functioning for large woody
debris, and that the sale violates the riparian reserve logging
standard. AR 3s at 11.

ORDER
Page - 23 -

1 4. Conclusion re: ACS compliance

2 The court finds that NMFS is required by the Northwest Forest
3 Plan and the Programmatic Biological Opinion to ensure ACS compli-
4 ance at all four spatial scales. Its decision to measure ACS
5 compliance only at the watershed level and its failure to evaluate
6 ACS compliance at the project or site level, therefore, was arbi-
7 trary and capricious. The court further concludes that NMFS could
8 not rationally conclude, based on the evidence before it, that
9 evaluating only long term impacts of agency activities satisfied
10 its mandate to ensure ACS compliance. Its failure, therefore, to
11 evaluate the short term impacts, (i.e. impacts that would manifest
12 in less than a ten year period) was also arbitrary and capricious.
13 Finally, the court finds that NMFS has not fully incorporated
14 watershed recommendations into its ACS analysis. Its failure to
15 do so was arbitrary and capricious in light of the fact that the
16 watershed analysis undoubtedly represents the best available
17 scientific information available.

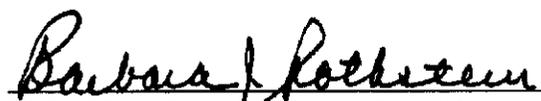
18
19 By employing a long term/watershed approach in making jeop-
20 ardy determinations, NMFS has virtually guaranteed that no timber
21 sale will ever be found to jeopardize the continued existence of
22 the Oregon coastal coho or Umpqua River cutthroat trout. By
23 failing to require the action agencies to rely on and adequately
24 incorporate watershed analysis into their biological opinions,
25 NMFS has allowed the agencies to ignore the best scientific infor-
26

1 mation available. In light of the overwhelming evidence of the
2 ongoing degradation to the habitat of the endangered aquatic
3 species in the Umqua River Basin, the court finds that NMFS's
4 approach is not rationally calculated to achieve the goals of the
5 ACS. The court, therefore, finds that NMFS acted arbitrarily and
6 capriciously in approving biological opinions that run counter to
7 the evidence before it¹⁷ and that fail to employ the best available
8 scientific information as required by 16 U.S.C. § 1536(a)(2).¹⁸
9

10
11 III. CONCLUSION

12 The court GRANTS plaintiffs' motion for summary judgment
13 [docket 60-1]; DENIES defendants' motions for summary judgment and
14 dismissal [docket 77-1, 81-1]; GRANTS the parties' cross-motions
15 to strike [docket 88-1, 97-1]; and DISMISSES this action.

16 DATED at Seattle, Washington this 29th day of September, 1999.

17
18 
19 BARBARA JACOBS ROTHSTEIN
UNITED STATES DISTRICT JUDGE
20
21
22
23

24 _____
25 ¹⁷See Bennett v. Spear, 520 U.S. 154.

26 ¹⁸See Greenpeace Action v. Franklin, 14 F.3d 1324.

1
2
3 THE HONORABLE BARBARA J. ROTHSTEIN
4
5
6
7

8 UNITED STATES DISTRICT COURT
9 WESTERN DISTRICT OF WASHINGTON
10 AT SEATTLE

11 PACIFIC COAST FEDERATION OF) Civil No. C 99-0067 R
12 FISHERMEN'S ASSOCIATION;)
13 INSTITUTE FOR FISHERIES) DECLARATION OF
14 RESOURCES; OREGON NATURAL) GORDON REEVES, Ph.D.
15 RESOURCES COUNCIL; UMPQUA)
16 WATERSHEDS, INC.; COAST RANGE)
17 ASSOCIATION; and HEADWATERS,)
18)
19 Plaintiffs,)
20 v.)
21 NATIONAL MARINE FISHERIES)
22 SERVICE,)
23)
24 Defendant.)

25 I, Gordon Reeves, depose and say:

26 1. I am a fish and aquatic ecologist with expertise in the assessment of the
impact of human activities and natural processes on aquatic ecosystems and the
associated biota. I also have expertise in natural resource management, watershed
restoration, and conservation biology of anadromous salmonids. I have a degree
in Biology from the State University of New York, College at Oswego, a M.Sc. in
fisheries science from Humboldt State University, and a Ph.D. in fisheries science
from Oregon State University. I am currently a research fish biologist with the USDA

1 Forest Service, Pacific Northwest Research Station, Corvallis, OR. I have been
2 employed in that capacity since 1985. A copy of my curriculum vitae is attached as
3 Exhibit 1.

4 2. I have conducted extensive field research in watersheds on federal lands
5 throughout western Oregon and southeast Alaska. I have published numerous
6 peer-reviewed articles and book chapters on the ecology of anadromous salmonids,
7 the impact of human activities and natural processes on their freshwater habitats,
8 and watershed restorations. I was a member of the Panel on Late Successional
9 Forests commissioned by the U.S. House of Representatives (a.k.a. The Gang of
10 Four), the team that developed the PacFish recommendations for riparian areas on
11 federal lands in the Pacific Northwest, Idaho, and Alaska, the Scientific Assessment
12 Team (SAT), and co-leader of the Aquatic Team of the Forest Ecosystem
13 Management Assessment Team (FEMAT) that developed the Aquatic Conservation
14 Strategy (ACS) that was adopted as part of the Northwest Forest Plan (NWFP). I
15 also assisted with the aquatic component of the Tongass Land Management Plan
16 revision for southeast Alaska and the Interior Columbia Basin Assessment.

17 3. I have reviewed the brief of the Plaintiffs and the declaration of Dr. C.
18 Frissell. I make the following statements based on my personal knowledge and
19 experience.

20 The Aquatic Conservation Strategy - Components

21 4. The ACS articulated by the FEMAT (Exhibit 2; AR 15a) was designed to
22 maintain currently properly functioning aquatic ecosystems and to restore degraded
23 ecosystems. The ACS was designed to provide a scientific basis for protecting
24 aquatic ecosystems and planning for sustainable resource management. It was
25 based on strategies developed previously in the "Gang of Four", PacFish, and SAT.
26

1 The ACS was more comprehensive than these earlier strategies. In the short term
2 (i.e., 10-20 years), the ACS was designed to afford protection to watersheds that
3 currently had good habitat and fish populations. The long-term goal (i.e., 100+
4 years) was to develop watersheds that functioned properly ecologically and
5 supported acceptable populations of fish and other aquatic and riparian dependent
6 organisms across the region covered by NWFP.

7 5. The ACS has four major components: (1) key watersheds; (2) riparian
8 reserves; (3) watershed analysis; and (4) watershed restoration. Each has a specific
9 purpose. Key watersheds (V-46) were watersheds (5th to larger 6th field)¹ that either
10 were: (1) considered to be ecologically intact and had favorable habitat for fish
11 populations and other aquatic and riparian dependent organisms, or (2) were
12 currently in a degraded states but were judged to have the greatest potential in the
13 short term to be restored with an active watershed restoration program. These
14 watersheds were distributed throughout the area covered by the NWFP. Key
15 watersheds that were ecologically intact were assumed to have the best remaining
16 fish habitats and populations and their protection was the short-term focus of the
17 ACS. Populations in these watersheds would presumably provide sources of
18 individuals to recolonize degraded watersheds as they recovered. Key watersheds
19 that are currently degraded had less productive habitat for fish. Ecological
20 processes that create and maintain habitat over time are altered in these systems.
21 It was believed that these watersheds would recover relatively quickly under a
22

23 ¹ FEMAT specified that aquatic ecosystems were of third to fifth order (Exhibit 2, V-
24 13; AR 15a), and described the attributes of such systems. Since then, aquatic
25 ecosystems are described as fields. The size of the watershed determinates the category.
26 Third to fifth order watershed are now classified as fifth or sixth field depending on size.
Fifth field ranges from 20-200 square miles and are referred to as watersheds. (Id.,
Appendix V-1) Sixth field ranges from 2-50 square miles and are referred to as
subwatersheds.

1 restoration focus and provide the best opportunities for population expansion in the
2 short term. Management actions were precluded from all parts of key watersheds
3 until a watershed analysis was completed in order to reduce the risk from
4 management activities.

5 6. A riparian reserve (Exhibit 2, V-32; AR 15a) was the portion of the
6 watershed that had direct influence on the aquatic ecosystem. This included the
7 area around fish bearing and non-fish bearing streams. Riparian reserves provided
8 the suite of ecological processes and functions required that influence the
9 productivity and integrity of aquatic ecosystems. Activities in all riparian reserves
10 were prohibited until a watershed analysis was completed.

11 7. Watershed analysis (Exhibit 2, V-53; AR 15a) was the procedure to
12 identify and evaluate the geomorphic and ecological processes operating in a
13 watershed. This formed the basis for planning and conducting activities within a
14 watershed and evaluating their impacts. The size of the watershed was originally
15 specified as 20-200 square miles, approximately a 5th field watershed. However,
16 this size has not been strictly adhered to. Some 5th field watersheds were too
17 large or too complex ecologically to be analyzed effectively. Watershed analysis, as
18 a consequence, has been conducted in 5th field and aggregates of 6th field
19 subwatersheds. The watershed analysis is supposed to guide planning that
20 achieves the ACS within the watershed.

21 8. Watershed restoration (Exhibit 2, V-59; AR 15a) was intended to restore
22 degraded ecosystems at the watershed scale. It was to be a comprehensive
23 program that restored the ecological processes and functions that created and
24 maintained habitat conditions for fish and other aquatic and riparian organisms.

1 9. The ACS objectives provide a framework for managing aquatic
2 ecosystems primarily at watershed and landscape (i.e., multiple watershed) scales.
3 They describe the attributes and distribution of aquatic ecosystems believed
4 necessary to provide conditions for maintaining currently strong populations of fish
5 and other aquatic and riparian dependent organisms and to recover currently
6 degraded ecosystems. They are not intended to be a hard set of criteria that could
7 or can be applied equally at all spatial scales of concern (i.e., site, watershed,
8 province, and region).

9 Ecosystem Dynamics and the Range of Variability

10 10. FEMAT emphasized the dynamic nature of aquatic ecosystems in the
11 region of the NWFP and the need to maintain the processes that create and
12 maintain habitat through time (Exhibit 2, V-28; AR 15a). Aquatic ecosystems in the
13 NWFP region are dynamic as a result of the physical characteristics, natural
14 disturbance events, and climatic features of the region [Naiman et al. 1992 (Exhibit
15 3); Benda et al. 1997 (Exhibit 4)]. Watersheds in the NWFP region are generally
16 in steep, mountainous terrain that is inherently unstable and receives large amounts
17 of precipitation. Much of the region was historically subjected to periodic natural
18 disturbances such as wildfire and large wind storms. The unstable terrain coupled
19 with the stochastic nature of storm and disturbance events resulted in pulses of
20 materials (i.e., sediment and wood) being delivered to stream channels.
21 Consequently, there was a wide variation in conditions at the site and watershed
22 scale over time (Naiman et al. 1992, Benda et al. 1997).

23 11. Understanding the implications of the focus on ecosystems and
24 ecosystem dynamics that were emphasized by the FEMAT is required in order to
25 understand how the ACS is to be applied at the various spatial scales. An
26 important, but not well understood, implication of employing an ecosystem level

1 strategy based on disturbance is that all parts of a watershed or subwatershed or
2 all subwatersheds may not be in "good" condition at every point in time [Naiman et
3 al. 1992, Reeves et al. 1995 (Exhibit 5)]. As described in the previous paragraph,
4 disturbance events, such as wildfire, landslides, and floods, maintained the
5 long-term productivity of aquatic ecosystems in the area covered by the NWFP.
6 These events would periodically deliver large amounts of materials (i.e., sediment
7 and wood) to valley bottoms and streams, often resulting in periods of "degraded"
8 conditions. Over time, several years to decades, systems would develop conditions
9 more favorable to fish. As a result, the historic landscape, and watersheds within it,
10 were a mosaic of patches of good habitat or subwatersheds in "good" condition
11 interspersed with patches in less favorable conditions. Reeves et al. (1995)
12 described the range of these conditions for streams in subwatersheds with little or
13 no impacts from human activities in the sandstone geology of the central Oregon
14 coast. Subwatersheds with degraded physical conditions supported fish
15 communities with low diversity and biomass. These were characterized by channels
16 with either deep deposits of gravel and few pieces of large wood or channels with
17 bedrock and many pieces of large wood. In contrast, subwatersheds in good
18 condition were those that had intermediate amounts of gravel, cobble, and large
19 wood. These conditions supported a fish community that had a high diversity and
20 biomass. Conditions within a subwatershed were not static but changed through
21 time, much as vegetation did; systems that were in less productive conditions
22 became more productive and productive systems may have become less
23 productive. The result was a mosaic of conditions in watersheds and
24 subwatersheds that shifted across the landscape with time. Reeves et al. (1995)
25 argued that Pacific salmon (*Oncorhynchus* spp.) had life-history attributes that
26 allowed them to persist in such an environment.

1 12. The ACS represents a major change in management of aquatic
2 ecosystems. It requires consideration of large spatial (i.e., watershed to landscapes)
3 and temporal scales (i.e., ≥ 100 years) and of the dynamic processes operating in
4 aquatic ecosystems in the area covered by the NWFP. The ACS is supposed to
5 maintain aquatic ecosystems within the range of variability at the site² and small
6 subwatershed scale and the larger subwatershed and watershed scale to provide
7 for acceptable populations of anadromous salmonids and other targeted organisms.

8 13. At the site or smaller subwatershed the range of variability includes
9 conditions that were immediately favorable to fish to those that were not very
10 productive (Reeves et al. 1995, Benda et al. 1997). Such large variability in
11 conditions at small spatial scales has been observed in terrestrial systems by
12 researchers in coastal Oregon (Wimberly et al. in press) and other areas (Turner et
13 al. 1993). Time from the last disturbance event determined the condition at the
14 small subwatershed to a large extent. More recently disturbed sites or
15 subwatersheds were less productive and those several years to decades away from
16 disturbance were more favorable for fish. Variability in the pattern of conditions
17 would be expected to differ among sites in a watershed based on geomorphology.
18 Sites in unconstrained reaches (i.e., wide valley, low gradient sites of natural
19 deposition) had a greater range of natural variability than did sites in constrained
20 reaches (i.e., higher gradient, narrow valley reaches).

21 Application of the ACS at Different Spatial Scales

22 14. Determining consistency with the ACS at the site or small subwatershed
23 is not as simple as assuming that all sites or small subwatersheds need to be in
24 "good" condition at all times and that any actions that may "degrade" a site or small
25

26 ² The site ranges in size from 0.1 to 1 square mile (Exhibit 2, Appendix V-I; AR 15a).

1 subwatershed violates the ACS. As described in the previous paragraph, conditions
2 at the small subwatershed may range from very favorable to unfavorable for fish
3 over time. The ACS aims to allow for the expression of these variable conditions
4 at a site or small subwatershed. However, it is not possible to evaluate consistency
5 with the ACS at the sites scale by simply looking at the individual sites alone.

6 15. Consistency at the small subwatershed is determined by the range of
7 variability established at the watershed or subwatershed. The range of variability
8 at the watershed or sub watershed scale is the distribution of conditions of smaller
9 subwatersheds that support acceptable populations of anadromous salmonids and
10 other aquatic and riparian dependent organisms. It may be expressed as the
11 frequency distribution of productive and non-productive sites and subwatersheds
12 in a subwatershed or watershed, respectively (Benda et al. 1997). The ACS was
13 designed to maintain and restore this variability or some desired range of variability
14 similar to the natural range of watersheds that will support acceptable levels of fish
15 populations.

16 16. Watershed analysis as proposed by FEMAT should identify this range
17 of variability at the watershed level. This was then expected to guide management
18 actions in the watershed and establish the criteria for determining consistency with
19 the ACS at the watershed or subwatershed level. If the current distribution of
20 conditions was determined to be within the acceptable range of variability for the
21 watershed or subwatershed, then presumably sites are in compliance with the ACS.
22 If the distribution of conditions was outside the acceptable range of variability then
23 the watershed or subwatershed was out of compliance with the ACS. Management
24 actions that would degrade a site or small subwatershed were not expected to
25 proceed under such circumstances unless it was established that the actions would
26 bring the system back within the acceptable level of variability in the long-term and

1 this outweighed any short-term negative impacts. Management activities are
2 focused on restoration in such cases. The potential impact of the aggregate of
3 proposed activities should be evaluated and the potential impact of this aggregate
4 on the range of variability determined. Actions that alter the distribution outside of
5 the desired range should be modified or eliminated.

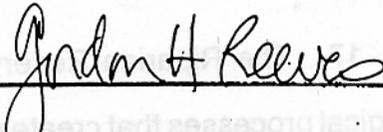
6 17. The Riparian Reserve network was to provide opportunities for the
7 ecological processes that create and maintain habitat through time to be expressed
8 (e.g., delivery of wood sediment and water, input of nutrients, etc.). Management
9 was to insure that Riparian Reserves continued to function properly. Watershed
10 restoration was to restore the necessary ecological processes where they were lost
11 or altered as a result of past management activities.

12 18. In summary, aquatic ecosystems in the range of the NWFP are dynamic
13 and experience a wide range of conditions. All systems or parts of systems are not
14 necessarily in good condition at every point in time. The ACS was designed to
15 maintain this pattern so to provide for an acceptable number and distribution of
16 watershed and subwatersheds that support acceptable populations of aquatic
17 organisms. Determining consistency at the site scale requires understanding of the
18 required range of variability established at the watershed/subwatershed scale. The
19 presence of degraded conditions at individual sites or degraded subwatersheds can
20 not be always be interpreted as failure to comply with the ACS.

21 // // // //
22 // // // //
23 // // // //
24 // // // //
25 // // // //
26 // // // //

1 I declare under penalty of perjury that the foregoing is true and complete.

2 DATED this 27 day of May, 1999.

3
4
5
6
7 

8 **Gordon Reeves**

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

DECLARATION OF GORDON REEVES - 11

Jean E. Williams
Janice M. Schneider
U.S. Department of Justice
Benjamin Franklin Station, P.O. Box 7389
Washington, D.C. 20044-7389

FOR PUBLICATION

UNITED STATES COURT OF APPEALS

FOR THE NINTH CIRCUIT

PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATIONS, INC.;
INSTITUTE FOR FISHERIES RESOURCES;
OREGON NATURAL RESOURCES
COUNCIL; UMPQUA WATERSHEDS;
COAST RANGE ASSOCIATION;
HEADWATERS,
Plaintiffs-Appellees,

v.

NATIONAL MARINE FISHERIES

SERVICE,
Defendant,

and

DOUGLAS TIMBER OPERATORS;
NORTHWEST FORESTRY ASSOCIATION,
Defendants-Intervenors-
Appellants.

6689

PACIFIC COAST FEDERATION OF
FISHERMEN'S ASSOCIATIONS, INC.;
INSTITUTE FOR FISHERIES RESOURCES;
OREGON NATURAL RESOURCES
COUNCIL; UMPQUA WATERSHEDS;
COAST RANGE ASSOCIATION;
HEADWATERS,

Plaintiffs-Appellees,

v.

NATIONAL MARINE FISHERIES

SERVICE,
Defendant-Appellant,

No. 99-36027

D.C. No.

CV 99-00067-BJR

No. 99-36195

D.C. No.

CV 99-00067-BJR

OPINION

and

DOUGLAS TIMBER OPERATORS;
NORTHWEST FORESTRY ASSOCIATION,
Defendants-Intervenors.

Appeal from the United States District Court
for the Western District of Washington
Barbara J. Rothstein, District Judge, Presiding

Argued and Submitted
June 8, 2000--Seattle, Washington
Submission Vacated September 15, 2000
Resubmitted May 8, 2001

Filed May 31, 2001

Before: Alfred T. Goodwin, Procter Hug, Jr., and
Melvin Brunetti, Circuit Judges.

Opinion by Judge Goodwin

6690

6691

6692

COUNSEL

Katherine Barton, Department of Justice, Washington, D.C.,
for the defendant-appellant.

Mark Rutzick, Portland, Oregon, for the defendants-
intervenors-appellants.

Patti Goldman, Earthjustice Legal Defense Fund, Seattle,
Washington, for the plaintiffs-appellees.

OPINION

GOODWIN, Circuit Judge:

Six environmental organizations sued the National Marine Fisheries Service ("NMFS") for declaratory and injunctive relief to challenge four biological opinions which had the effect of clearing the way for 23 proposed timber sales in the Umpqua River watershed in southwestern Oregon. The district court granted substantial relief and the defendant agency, together with intervening timber operators, appeal.

The Pacific Coast Federation of Fishermen's Associations, Inc. and five other organizations representing fishermen and

6693

environmental concerns are collectively referred to as "Pacific Coast." Their principal claim is that the "no jeopardy" opinions issued by NMFS filed in Seattle, where the agency has its regional headquarters, were arbitrary and inadequately supported by the "best available science" as required by the Endangered Species Act ("ESA"). At the heart of the controversy is the impact of proposed timber sales on the Umpqua River cutthroat trout and the Oregon Coast coho salmon.¹ Douglas Timber Operators ("DTO") and the Northwest Forestry Association were allowed to enter the cases as defendant-intervenors. The cases have been consolidated for this appeal.

Pacific Coast alleged that NMFS acted arbitrarily and capriciously in reaching the conclusion that the proposed timber sales are not likely to jeopardize the continued existence of the listed species. The district court found that NMFS had acted arbitrarily and capriciously by assessing Aquatic Conservation Strategy ("ACS") compliance only at the watershed level, by failing to evaluate short-term degradations, and by failing to fully and sufficiently incorporate the watershed analysis consistently with the "best available science" requirements set by the ESA. The district court granted summary judgment in favor of Pacific Coast. Both NMFS and DTO filed timely appeals.

The DTO assert that the publication of the challenged biological opinions by NMFS is not a final agency action within the meaning of the Administrative Procedures Act, 5 U.S.C. § 704, and, therefore, that the district court did not have juris-

diction. The DTO also challenge the venue in the Western

1 At the time that the biological opinions were issued and this litigation was originally filed, the Umpqua cutthroat trout and the Oregon Coast coho salmon were listed as endangered and threatened, respectively, under the ESA. After the Umpqua cutthroat was determined to be part of a larger Evolutionarily Significant Unit ("ESU"), the species was delisted. Because NMFS is still required to have completed the biological opinions for the coho salmon, this delisting has no affect on the case at bar.

6694

District of Washington, asserting that the appropriate defendants are the Bureau of Land Management ("BLM") and Forest Service, whose proposed timber sales prompted this litigation, and whose headquarters are in Portland, in the District of Oregon.

JURISDICTION

The NMFS issued four biological opinions stating that 23 timber sales in the Umpqua River Basin were not likely to jeopardize the continued existence of the Umpqua cutthroat trout and the Oregon Coast coho salmon. The proposed sales are within the range of the northern spotted owl, and therefore fall within the region covered by the Northwest Forest Plan ("NFP"). The United States Forest Service ("USFS") and the BLM adopted the NFP in 1994. The plan was designed to provide a comprehensive management program for 24.5 million acres of federal forest lands throughout the range of the spotted owl. See *Seattle Audubon Society v. Lyons*, 871 F. Supp. 1291, 1304 (W.D. Wash. 1994), *aff'd* 80 F.3d 1401 (9th Cir. 1996). One of the key components of the NFP is the ACS, a comprehensive plan designed to maintain and restore the ecological health of the waterways in the federal forests.

There are four components to the ACS: (1) key watersheds (the best aquatic habitat, or hydrologically important areas), (2) riparian reserves (buffer zones along streams, lakes, wetlands and mudslide risks), (3) watershed analysis (to document existing and desired watershed conditions), and (4) watershed restoration (a long-term program to restore aquatic ecosystems and watershed health). The ACS also has binding standards and guidelines that restrict certain activities within areas designated as riparian reserves or key watersheds. Additionally, ACS has nine objectives designed to maintain or restore properly functioning aquatic habitats.

When a timber sale or other project is proposed for the NFP region, it is initially subject to an internal planning process by

6695

the action agency, either the USFS or the BLM. The action agency then creates a team of biologists and other resource management specialists to incorporate the NFP requirements, including ACS standards and guidelines. A biologist on the team uses a Matrix of Pathways and Indicators (the "MPI") and a checklist developed by NMFS to assess the project's effect on listed species. The MPI and checklist help the biologist to analyze 18 different habitat indicators and determine whether they are properly functioning, at risk, or not properly functioning. The biologists also determine whether the proposed action is likely to restore, maintain, or degrade the indicator. Projects that receive either zero or only one degrade checkmark are considered "not likely to adversely affect" listed species.

Those projects determined "likely [to] adversely affect" listed species, i.e., those that received one or more degrade checkmarks, are referred to a Level 1 Team. This team is made up of biologists from various agencies. It reviews the proposed project for ACS consistency. The team can suggest changes in the plan to bring it into ACS compliance.

If the Level 1 Team agrees that the project complies with ACS, it then forwards the project to NMFS for formal consultation. Otherwise, the team elevates the review to a Level 2 Team, and the project undergoes the same review process. Failure to reach a consensus elevates the project to a Level 3 Team. Once one of these three teams approves the project, it goes to NMFS for ESA consultation.

The NMFS must review the project pursuant to Section 7 of ESA, which requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of" any species listed as threatened or endangered under the ESA. 16 U.S.C. § 1536(a)(2). Then, NMFS must issue a Biological Opinion.

6696

Pacific Coast sued earlier to challenge the first NMFS opinions with regard to several of the same proposed timber sales in Pacific Coast Federation of Fishermen's Associations, Inc.

v. National Marine Fisheries Service, No. C97-775R (W.D. Wash., May 29, 1998) ("PCCFA I"). Pacific Coast challenged in the district court NMFS's Programmatic Biological Opinion and three other site-specific biological opinions.

Reviewing the Programmatic Biological Opinion in PCFFA I, the district court held that NMFS may assume that projects that are consistent with ACS are unlikely to jeopardize the continued existence of a listed species. Jurisdiction in that litigation was not challenged, and there was no appeal.

The court invalidated the site-specific biological opinions in the earlier case because the opinions lacked a basis on which NMFS could conclude that the degrade checkmarks indicated on MPI would have only minor and transitory effects. The agency reinitiated the consultation process after clarifying the documentation required to show ACS consistency and articulating guidance on the "proper " use of MPI in the analysis at the various scales. Using these new procedures, NMFS issued the four biological opinions challenged in this case.

Pacific Coast brought this action under ESA, 16 U.S.C. § 1536. The district court found jurisdiction to adjudicate the claim under 28 U.S.C. § 1331 and under the Administrative Procedure Act, 5 U.S.C. § 702. This court reviews questions of jurisdiction de novo. See Ecology Center, Inc. v. USFS, 192 F.3d 922, 924 (9th Cir. 1999).

The DTO assert that the proper defendants are USFS and BLM and that claims against those entities can be brought only in the District of Oregon. They also assert that USFS and BLM are indispensable parties that should have been joined, and that in their absence the district court acted without a complete administrative record.

6697

FINAL AGENCY ACTION

The DTO argue that the challenged biological opinions are not final agency actions. See 5 U.S.C. § 704. Only final agency decisions are subject to review under the APA. See Ohio Forestry Ass'n, Inc. v. Sierra Club, 523 U.S. 726, 732 (1998), and Ecology Center, Inc., 192 F.3d at 924-26. The NMFS has not joined in the jurisdictional challenge.

The DTO argue that Pacific Coast has chosen the wrong target in an effort to stop all logging in a large part of Western Oregon by seeking to overturn the opinions of NMFS which are only interlocutory in the decision making process of the Forest Service and BLM, whose respective plans to approve the timber sales in the Umpqua River watershed are the real target of this suit. We do not accept that characterization.

The DTO attempt to distinguish Bennett v. Spear, 520 U.S. 154 (1997), in attacking jurisdiction in these cases. The Supreme Court held in Bennett that a jeopardy opinion was final agency action because it effectively stopped further proceedings by the action agency. The Court reasoned that a jeopardy opinion has "direct and appreciable legal consequences," id. at 178, because it "alters the legal regime to which the action agency is subject," id. at 169. In the case before us, NMFS issued a "no jeopardy" opinion, which became this agency's final action. We have found no authority for the proposition that while a "jeopardy " opinion is reviewable as a final agency action, a "no jeopardy" opinion is not final and reviewable.

This court, following Bennett v. Spear, applied the two-part test for ascertaining finality of agency action in Ecology Center, Inc. v. United States Forest Service, 192 F.3d at 925-26. We held that for an administrative agency action to be considered final, "(1) the action should mark the consummation of the agency's decision making process; and (2) the action should be one by which rights or obligations have been

6698

determined or from which legal consequences flow. " See id. at 925.

This no-jeopardy opinion satisfies the first part of our test because the issuance of a biological opinion marks the "consummation" of NMFS's consultation process. See id. The opinion meets the second part of the test because it "alters the legal regime" and has direct and appreciable legal consequences. As a practical matter, the opinion and its accompanying Incidental Take Statement grant immunity to the proposed actions of other agencies required to obtain an NMFS opinion before proceeding with their own actions, which these plaintiffs seek to block.

We are satisfied that the trial court had jurisdiction, and

that BLM and the Forest Service were not necessary parties. Venue, accordingly, was properly placed in the Western District of Washington.

THE MERITS

Agency decisions under ESA are governed by the Administrative Procedure Act, which requires an agency action to be upheld unless it is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); Friends of the Earth v. Hintz, 800 F.2d 822, 830-31 (9th Cir. 1986). This deferential standard is designed to "ensure that the agency considered all of the relevant factors and that its decision contained no 'clear error of judgment.'" Arizona v. Thomas, 824 F.2d 745, 748 (9th Cir. 1987) (quoting Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971)). Agency action should be overturned only when the agency has "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency

6699

expertise." Motor Vehicle Mfrs. Ass'n v. State Farm Mutual Auto Ins. Co., 463 U.S. 29, 43 (1983). Essentially, we must ask "whether the agency 'considered the relevant factors and articulated a rational connection between the facts found and the choice made.'" Natural Resources Defense Council v. United States Dep't of the Interior, 113 F.3d 1121, 1124 (9th Cir. 1997) (quoting Resources, Ltd. v. Robertson, 35 F.3d 1300, 1304 (9th Cir. 1993), in turn quoting Pyramid Lake Paiute Tribe of Indians v. United States Dep't of the Navy, 898 F.2d 1410, 1414 (9th Cir. 1990)). A biological opinion may also be invalid if it fails to use the best available scientific information as required by 16 U.S.C. § 1536(a)(2). See Greenpeace Action v. Franklin, 14 F.3d 1324, 1336 (9th Cir. 1993).

Pacific Coast argued, and the district court agreed, that NMFS acted arbitrarily and capriciously by (1) ignoring site-specific project effects and limiting its ACS compliance analysis to the watershed scale, (2) focusing on a long-term evaluation of ACS compliance that effectively masks all short-term impacts that may have adverse effects on listed species, (3)

failing to consider activities on federal lands that might adversely affect salmonid species, (4) "tiering " to BLM or USFS determinations of ACS consistency for Projects in Riparian Reserves where no aquatic benefits have been identified, and (5) failing to adequately consider, fully incorporate, or adequately explain deviations from the watershed analysis recommendations, which are designed to accomplish ACS objectives.

One preliminary matter must be addressed to avoid confusion. The NMFS argues that Pacific Coast and the district court inappropriately have required NMFS to serve as a review board or oversight committee for BLM and USFS determinations of ACS consistency. This argument appears significant, but in fact lacks substance. The NMFS is required under NFP to determine whether or not a project is likely to adversely affect a listed species. The NMFS is not required

6700

by NFP to determine ACS consistency. However, in PCFFA I, the district court held that NMFS was permitted to assume that implementation of projects under USFS's Land and Resource Management Plan ("LRMP") or BLM's Resource Management Plan ("RMP") would result in "no jeopardy" to the listed fish species if those projects were conducted in accordance with ACS. Therefore, because NMFS is allowed to equate ACS consistency with a no jeopardy finding, NMFS chooses to inquire into ACS consistency. Presumably, other methods of reaching a jeopardy determination are available to NMFS. The coincidence of ACS consistency inquiries is immaterial. The NMFS's primary obligation is to determine a project's effect on listed fish species. The action agencies, as part of their analyses, must also determine ACS consistency. That they are able to discharge dissimilar duties by the same means does not allow either party to fail to undertake its responsibilities.

WATERSHED SCALE ACS CONSISTENCY

In determining ACS consistency for the 23 timber projects challenged in this case, NMFS analyzed the projects' consistency with ACS at the watershed level. A watershed, or fifth field, generally covers between 20 to 200 square miles of land. This equates to between 12,800 and 128,000 acres. The largest watershed considered with reference to projects at issue here is 350 square miles, or 224,000 acres. By contrast,

a project site generally covers only a few sections (square miles) or fractions of sections. The NMFS conducts its analysis of the program by assessing the affects of any project level degradation on the entire watershed. Any degradation that cannot be measured at the watershed level is considered to be consistent with both ACS standards and objectives and therefore warrants a "no jeopardy" finding.

Pacific Coast contends that the watershed measure effectively masks all project level degradation. This argument raises two questions: (1) whether, because a 128 acre project

6701

represents only 1% to 0.1% of a watershed, any degradation would be perceptible at the watershed level; and (2) whether any effect was given to the cumulative degradation in an ACS. In PCFFA I, the court held that NMFS cannot reach a no jeopardy determination without analyzing whether the site-specific projects are in fact complying with ACS. See PCFFA I at 30. The court found that evidence of site specific degradation and the lack of mitigation showed that NMFS rationally could not find the "proposed actions . . . consistent with ACS's mandate that agencies maintain and restore aquatic systems within the range of the northern spotted owl." Id. It is clear from the court's order that application of ACS at the project level explained how NMFS could assume, for that project, that a proposed action would not jeopardize listed fish. The emphasis on site-specific evaluation is evident in the district court's opinion in PCFFA I, at 24.

The NMFS contends that the proper level to evaluate ACS consistency is the watershed, because NFP and ACS are aimed at maintaining and restoring millions of acres of forest lands. Given that overall protection of forest and water resources is the concern of both NFP and ACS, it does not follow that NMFS is free to ignore site degradations because they are too small to affect the accomplishment of that goal at the watershed scale. For some purposes, the watershed scale may be correct, but NFP does not provide support for so limiting NMFS review. The purpose of ACS is to maintain and restore ecosystem health at watershed and landscape scales to protect habitat for fish and other riparian-dependent species and resources and restore currently degraded habitats. This general mission statement in NFP does not prevent project site degradation and does nothing to restore habitat over broad landscapes if it ignores the cumulative effect of individ-

ual projects on small tributaries within watersheds. The agency also must determine "how the proposed project or management action maintains the existing condition or moves it within the range of natural variability." Record of Decision for Amendments to Forest Service and Bureau of Land Man-

6702

agement Planning Documents Within the Range of the Northern Spotted Owl (hereinafter "Record of Decision for the Northern Spotted Owl"), Attachment A , at B-10 (April 13, 1994). The NMFS relies on this requirement to show that consistency will be attained at the watershed level. However, it is unclear whether NMFS performed an analysis of the cumulative effect of small degradations over a whole watershed. Pacific Coast asserts that NMFS did not consider cumulative effect. The NMFS had an opportunity to place in the record evidence demonstrating that it considered cumulative effect. We find nothing to show that it did. Appropriate analysis of ACS compliance is undertaken at both the watershed and project levels.

Pacific Coast argues that the Forest Ecosystem Management Assessment Team ("FEMAT") scientific team, which developed ACS, believed that ACS was to be implemented "at four spatial scales: regional, province/river basin, watershed, and site." Pacific Coast also argues that NMFS has indicated that the "accumulation of effects at the landscape level from numerous actions, if not fully arrested at the project scale, would reduce the likelihood of both survival and recovery of the species." Although the NFP, FEMAT, and ACS do not appear to address the proper scale for implementation of ACS, they explain that spatial levels should be considered and that watershed consistency is a primary goal. See Record of Decision for the Northern Spotted Owl, at B-9 and FEMAT, Forest Ecosystem Management: An Ecological, Economic, and Social Assessment (July 1993), at V-58. However, the record contains no proof that the cumulative effect of site specific degradation was considered in reaching a no jeopardy opinion at the regional watershed level.

The district court's earlier decision to allow NMFS to assume no jeopardy from an ACS consistency finding appears to be linked to the belief that ACS consistency was to be measured at the project level. This approach seems reasonable as far as it goes. Any project that maintains or restores fish habi-

tat presumably would not jeopardize the survival of the species. However, a project that degrades habitat at the project level must be included in any realistic study at the watershed scale. Its disregard of projects with a relatively small area of impact but that carried a high risk of degradation when multiplied by many projects and continued over a long time period is the major flaw in NMFS study. Without aggregation, the large spatial scale appears to be calculated to ignore the effects of individual sites and projects. Unless the effects of individual projects are aggregated to ensure that their cumulative effects are perceived and measured in future ESA consultations, it is difficult to have any confidence in a wide regional no-jeopardy opinion. Failure to account adequately for the cumulative effects of the various projects undermines the assumptions that the district court authorized NMFS to make in PCFFA I. If the effects of individual projects are diluted to insignificance and not aggregated, then Pacific Coast is correct in asserting that NMFS's assessment of ACS consistency at the watershed level is tantamount to assuming that no project will ever lead to jeopardy of a listed species.

Pacific Coast notes that many of these sales are located in areas that are already considered "not properly functioning," but still NMFS requires MPI to show a "measurable worsening of those conditions across the entire watershed." Pacific Coast contends that biological opinions are issued for projects in the same watersheds without any mention of each other. If in fact NMFS disregards these effects as "localized" when they can have significant aggregate effects, it acts arbitrarily and capriciously.

The FEMAT report, which was instrumental in developing ACS, emphasized the importance of curtailing incremental aquatic habitat degradation because the effects of numerous actions can cause significant damage to fish species and their habitat. See FEMAT, Forest Ecosystem Management: An Ecological, Economic, and Social Assessment V-2 (1993). NMFS's assuming away site-specific degradations

that could lead to a jeopardy finding contradicts the purpose of ESA and is arbitrary. Any effect on a particularly important spawning area should show up as a degrade rating for the entire watershed. Confirming that proper aggregation occurs is central to a determination whether the district court's

assumptions under the site-specific ACS consistency regime still hold true under the watershed scale regime.

DISREGARDING SHORT-TERM EFFECTS

Pacific Coast challenged NMFS's evaluation of ACS consistency over a time frame of 10 to 20 years. The district court agreed. The court found that "NMFS has failed to adequately assess the short term impacts of the timber sales and . . . has failed to adequately explain its assumption that passive restoration will adequately mitigate the adverse impacts of logging." The district court found that the "NMFS could not rationally conclude, based on the evidence before it, that evaluating only long-term impacts of agency activities satisfied its mandate to ensure ACS compliance. Its failure, therefore, to evaluate the short-term impacts, (i.e. impacts that would manifest in less than a ten-year period) was also arbitrary and capricious." The district court's order requires NMFS to evaluate ACS consistency immediately after the project action is completed.

We find nothing in the record to authorize NMFS to assume away significant habitat degradation. Each of the biological opinions challenged acknowledges project-scale degradations but then deems that degradation inconsequential. Under the practice adopted by NMFS, only degradations that persist more than a decade and are measurable at the watershed scale will be considered to degrade aquatic habitat. This generous time frame ignores the life cycle and migration cycle of anadromous fish. In ten years, a badly degraded habitat will likely result in the total extinction of the subspecies that formerly returned to a particular creek for spawning.

6705

The NMFS predicts that more trees will grow within the watershed during the ensuing decade than are cut in the proposed project and, therefore, concludes that the "short-term" and "localized" effects of the logging will be naturally mitigated by regrowth. This optimism may be justified for the purpose of counting trees, but for the purpose of counting anadromous fish, it is wholly unrealistic. Pacific Coast contends that there is no scientific evidence in the record to support the conclusion that natural vegetation regrowth will adequately mitigate the degradation caused by the logging projects and ensure that fish that never hatched could return to the recovered spawning habitat. We agree.

The record contains the expert opinion of a Level 1 Team biologist that such reliance on projected "restoration" is "scientifically unsound." The NMFS does not and cannot explain adequately its disregard of short-term effects.

The NMFS never disputes that short-term effects have the potential to jeopardize listed fish populations. On the contrary, NMFS believes that the next few generations will be critical to Umpqua River anadromous species. In the Programmatic Biological Opinion, NMFS states that "even a low level of additional impact to any life form, especially the anadromous form which is at critically low levels, may reduce the likelihood of survival and recovery of the ESU as a whole." Given the importance of the near-term period on listed species survival it is difficult to justify NMFS's choice not to assess degradation over a time frame that takes into account the actual behavior of the species in danger.

NON-FEDERAL LANDS

The district court properly rejected the PCFFA argument as to the proper treatment of non-federal lands. As the court noted, that issue had been disposed of in PCFFA I.

6706

ACS CONSISTENCY DETERMINATIONS IN RIPARIAN RESERVES

The NMFS concluded that three proposed sales: Salvage II, Sugar Pine Density Management, and Little River were "not likely to adversely affect" the listed species. Little River was a small sale to be permitted under a research exception. The other two sales were geographically remote from any vulnerable water course. We find nothing in the record to call into question NMFS opinions with respect to these sales. Accordingly, we vacate the order appealed from insofar as it prohibited those three sales. With the exceptions noted, the district court order was free from error, and is affirmed. The appellees are entitled to costs on appeal.

VACATED IN PART AND AFFIRMED IN PART.

6707

