FINAL REPORT
November 6, 1998

Results of the FY 1997 Implementation Monitoring Program

for
Management of Habitat for Late-Succession
and
Old-Growth Forest Related Species
Within the Range of the Northern Spotted Owl

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Executive Summary

In FY 1997 the Northwest Forest Plan (NFP) Regional Implementation Monitoring Program addressed 40 timber sales, 17 roads, and 16 restoration projects.

The process continued the use of standardized questionnaires to determine whether these activities were meeting the Record of Decision (ROD) and its Standards and Guidelines (S&Gs).

For the second consecutive year, results of the Regional NFP Implementation Monitoring Program show a high level of compliance with ROD S&Gs for timber sales (95 percent), roads (99 percent), and restoration projects (98 percent).

Adverse biological effects associated with instances of noncompliance appeared to be minimal at the regional scale. Where noncompliance occurred, the local biological effects were judged to be generally low to moderate (but in two instances local affects were high).

Although there is room for improvement, none of the findings/deficiencies noted in this report warranted recommending major corrective actions or operational shifts on the part of land management agencies. Local units of the Forest Service and the Bureau of Land Management (BLM) have already implemented some corrective actions to address deficiencies noted during monitoring efforts.

Several programmatic issues called for in the ROD have not yet been accomplished. These include such actions as developing provincial standards for coarse woody debris and snags.

Provincial Implementation Monitoring Teams (PIMTs) continued the practice of obtaining broad representation of interests, agencies, and disciplines in the review process.

Field unit managers continue to acknowledge the value of this public review process with respect to helping build understanding and trust among interested parties.

Field unit managers are using the procedures developed for the Regional Implementation Monitoring Program to enhance local monitoring activities and requirements.
Costs of the FY 1997 Implementation Monitoring Program continue to be in line with the pilot year. The total direct cost was approximately $250,000, not counting overhead

costs associated with program development, training, analysis, and reporting. PIMT review costs averaged $4,300 per timber sale, $2,400 per road project, and $2,400 per restoration project. The average PIMT review cost for all projects was $4,100.

In summary, the FY 1997 Implementation Monitoring Program evaluated timber sales, roads, and restoration projects and found a high level of compliance with direction of the NFP at a regional scale.

Introduction

The nature of the Implementation Monitoring Program requires a two-fold approach: first, an analysis of the results of the timber sale, road construction, and restoration project reviews; and second, an evaluation of the review process. *Coupled with an overview and a "Conclusions and Recommendations" section, this report is divided into four parts:*

Part 1 provides an overview of the review program. It explains the relationship of the implementation review to the NFP, describes the approach used to design the review process for FY 1997 activities, and presents information related to the questions asked in the review.

Part 2 specifically addresses the analysis of implementation monitoring data related to timber sale, road construction, and restoration project compliance with the S&Gs of the NFP. It includes a presentation of the results, followed by a discussion of those results and recommendations intended to improve compliance in the future.

Part 3 focuses on the process used for implementation monitoring as undertaken in FY 1997. Like Part 2, it presents results but these results focus on the design and implementation of the process itself. A discussion of program success is followed by recommendations intended to provide helpful direction for future implementation review projects.

Part 4 addresses overall conclusions and recommendations concerning the implementation monitoring process. The discussion covers four topical areas: management direction, clarification of S&Gs, clarification as to when S&Gs apply, and improvements to the monitoring process.

Except where noted, in this report "ROD direction" refers to both the ROD and the S&Gs that comprise Attachment A of the ROD. "Provincial Monitoring Team" refers to a Provincial Implementation Monitoring Team; likewise, "Regional Monitoring Team" refers to the Regional Implementation Monitoring Team.

Part 1 - The FY 1997 Implementation Monitoring Program

Background and Purpose

In 1997, at the request of the Regional Interagency Executive Committee (RIEC), the Regional Ecosystem Office (REO) continued a regional-scale Implementation Monitoring Program that was initiated in 1996. The purpose was to further develop a monitoring program that would determine whether the ROD and its corresponding S&Gs were consistently being followed across the region of the NFP.

This report summarizes the second year's experience with implementation monitoring, sometimes called "compliance monitoring," which built on the work of field units and interagency, intergovernmental teams from the 12 provinces that encompass the geographical area of the NFP.

The NFP, implemented in May 1994, requires federal natural resource agencies to manage public land resources on nearly 25 million acres in Washington, Oregon, and northern California under a common, collaborative approach. The ROD for the NFP amended Regional Guidelines and the planning documents for 19 National Forests and 7 BLM Districts. The management direction in the ROD consists of extensive S&Gs, including land allocations, that comprise a comprehensive ecosystem management strategy.

The ROD is designed to implement three related conservation strategies: aquatic, terrestrial, and socioeconomic. Part of the management strategy involves monitoring how well the NFP is working and whether BLM and the Forest Service are conducting their activities in ways that satisfy NFP objectives.

In December 1994 U.S. District Court Judge William L. Dwyer said, *"Monitoring is central to the [Northwest Forest Plan's] validity. If it is not funded, or done for any reason, the plan will have to be reconsidered."* He added, *"If the plan as implemented is to remain lawful the monitoring . . . steps called for by the ROD will have to be faithfully carried out, and adjustments made if necessary."*

The ROD (page E-1) states that implementation monitoring *". . . ensures that management actions meet the prescribed standards and guidelines and that they comply with applicable laws and policies."* It also notes that the NFP calls for three components of monitoring: (1) implementation, (2) effectiveness, and (3) validation.

"Monitoring will . . . determine if the standards and guidelines are being followed (implementation monitoring); verify if they are achieving the desired results (effectiveness monitoring); and determine if the underlying assumptions are sound (validation monitoring)."

Additionally, the ROD (page E-1) indicates that *"Monitoring will be conducted at multiple levels and scales . . . to allow . . . information to be compiled and considered in a regional context."* Although both BLM and the Forest Service have extensive experience with monitoring, particularly at the project level, there has been only limited work on monitoring at broader scales and in areas of the size and scope covered by the NFP.

The ROD and its S&Gs, hereafter referred to as the "ROD direction," is the foundation of NFP conservation and management strategies and forms the basis for determining what questions to ask in implementation monitoring. Specific questions developed from the ROD direction center on specific activities and the applicability of the ROD direction to those projects.

Monitoring results are intended to provide managers with feedback regarding how well a particular activity meets management objectives. The monitoring process is intended to be an evolving, iterative, adaptive process where we learn by doing. As results are evaluated, the process is expected to be adjusted as needed by: (1) determining whether compliance is being achieved, (2) identifying deficiencies in our implementation, and (3) identifying what action steps need to be taken to achieve implementation objectives. More details on the adaptive management process are explained in Appendix A.

Relationship Between Implementation Monitoring and Other Monitoring Activities

As noted earlier, three different monitoring activities are to be conducted under the NFP: implementation monitoring, effectiveness monitoring, and validation monitoring. This report focuses on implementation monitoring where sampling and reporting are done at a regional scale, and where reviews are conducted on a sample of local projects. Implementation monitoring initially determines compliance with ROD direction across all land allocations in the NFP, serving as an important link to both effectiveness and validation monitoring. It also documents actual practices as they are carried out by field units, providing an important link to management and NFP assessment.

Various BLM and Forest Service management units monitor a number of projects and activities within and outside the scope of the NFP at multiple scales and for a variety of

purposes. For example, monitoring is conducted to address local issues of public interest, management actions not covered by the ROD direction, and land use plan requirements. This report does not address monitoring for these other activities, or for effectiveness or validation monitoring.

The Approach to Implementation Monitoring

Overview

Following completion of the ROD in 1994 an interagency work group attached to the Research and Monitoring Committee of the REO was assigned the task of designing the monitoring approach for the NFP. The group's work culminated in the release of a Final Draft Implementation Monitoring Guidance document in May 1995. The work group chose to systematically evaluate conformance with the ROD direction through an overall strategy that emphasized an interagency, interdisciplinary approach and included members of the public.

To accomplish the objective of conducting monitoring activities under a "systematic" approach, a “pilot” program was initiated in FY 1996; and a sample of projects (timber sales) in Forest Service Ranger Districts and BLM Resource Areas within the NFP provinces was selected for review. At the direction of the RIEC, and as recommended in the March 3, 1997, Final FY 1996 Implementation Monitoring Report (see Alverts et al., 1997), FY 1997 activities for formal review were expanded from the pilot year program to include not only timber sales, but also road construction and restoration projects. ROD direction, including the S&Gs that pertained to these activities, was converted into three questionnaires containing questions categorized by the land allocations in the ROD and taken from the May 30, 1995, Draft Implementation Monitoring Guidance document (see Appendices C, D, and E for lists of monitoring questions for timber sales, roads, and restoration projects, respectively).

In order to successfully monitor the implementation of the NFP, it is necessary to:

- Have clearly stated monitoring objectives which include:
    - Maintaining viability of the NFP.
    - Ensuring a baseline for adaptive management.
    - Implementing monitoring activities incrementally based on priority and building on the FY 1996 pilot year program results.

- Use clear and measurable standards (the S&Gs) and have clear and unambiguous monitoring measurements (e.g., "questions") that directly relate to the S&Gs.

- Have a clear definition of "success" or when our objectives have been met.

- Use statistically sound procedures.

The FY 1997 Implementation Monitoring Program attempted to incorporate these features and achieve two-fold goals: to determine whether the ROD and its S&Gs were being effectively and efficiently implemented throughout the area of the NFP, and to continue to improve monitoring which includes field testing a pilot monitoring process for road construction and restoration activities. The standard of "success" as to whether the S&Gs are being implemented is to have overall compliance for all NFP actions.

The time line for the action steps associated with the FY 1997 Implementation Monitoring Program is summarized as follows:

- Based on the discussion at the March 1997 Intergovernmental Advisory Committee (IAC) meeting, the RIEC directed the REO Research and Monitoring Committee to focus FY 1997 implementation monitoring activities on a sample of FY 1996 timber sales, road construction, and restoration activities as shown in Appendix B.

- Samples were determined May-June 1997.

- Questionnaires for the FY 1997 program were revised for timber sales and developed for roads and restoration projects.

- Provincial Monitoring Team Leaders were named in April 1997, and team leader training was conducted on June 4-5.

- Provincial teams completed field reviews and reports by November 1997.

- An interagency group was assembled in January 1998 to conduct a supplemental analysis of the "questionnaire" responses (see Analysis of Implementation Monitoring Responses).

- A draft report was distributed for internal review in May 1998.

- Results of the FY 1997 program and draft report were discussed at the August 1998 IAC meeting.

- A final report is planned to be completed and distributed to the parties of interest by the November 1998 IAC meeting.

Selection of the Sample

The basic sampling design for the FY 1997 Implementation Monitoring Program was a stratified random approach. Based on RIEC guidance and findings from the FY 1996 program, the FY 1997 sampling strata were constructed based on timber sale volume, road activities, and land allocations. Restoration projects were selected in a manner that provided for efficient review logistics and approximated a second stage sampling approach. RIEC guidance included the use of existing agency databases as the information sources for projects and sample selection. Several of these databases were found to be incomplete and containing errors that required the Regional Implementation Monitoring Team (RIMT) to make some adjustments and compromises during the execution of the design process and field reviews.

The timber sales and sampling strata were developed based on the information in the Forest Service STARS reporting system (report dated April 1, 1997) and the BLM Timber Sales Information System. Road information was obtained from the purchaser credit reports for the Forest Service and a special report from BLM. An initial RIMT decision created a non-sample strata for timber sales with less than 100 MBF. There were 226 FY 1996 timber sales in this strata. Reviews of small volume sales in the FY 1996 program indicated that few significant issues were associated with these sales and led to the decision to focus the 1997 review effort on larger sales. Timber sales strata were created for three land allocations (Matrix, Late-Successional Reserves (LSRs), Adaptive Management Areas (AMAs)) and three combinations of sale volume and associated roads (100-1000 MBF, 1000+ MBF without roads, 1000+ MBF with roads). There were 343 FY 1996 timber sales with volume greater than 100 MBF that were stratified and a random sub-sample selected for review (see Appendix B). Projects selected for the FY 1997 Implementation Monitoring program included 40 timber sales, 17 roads, and 16 restoration projects as summarized in Table 1.

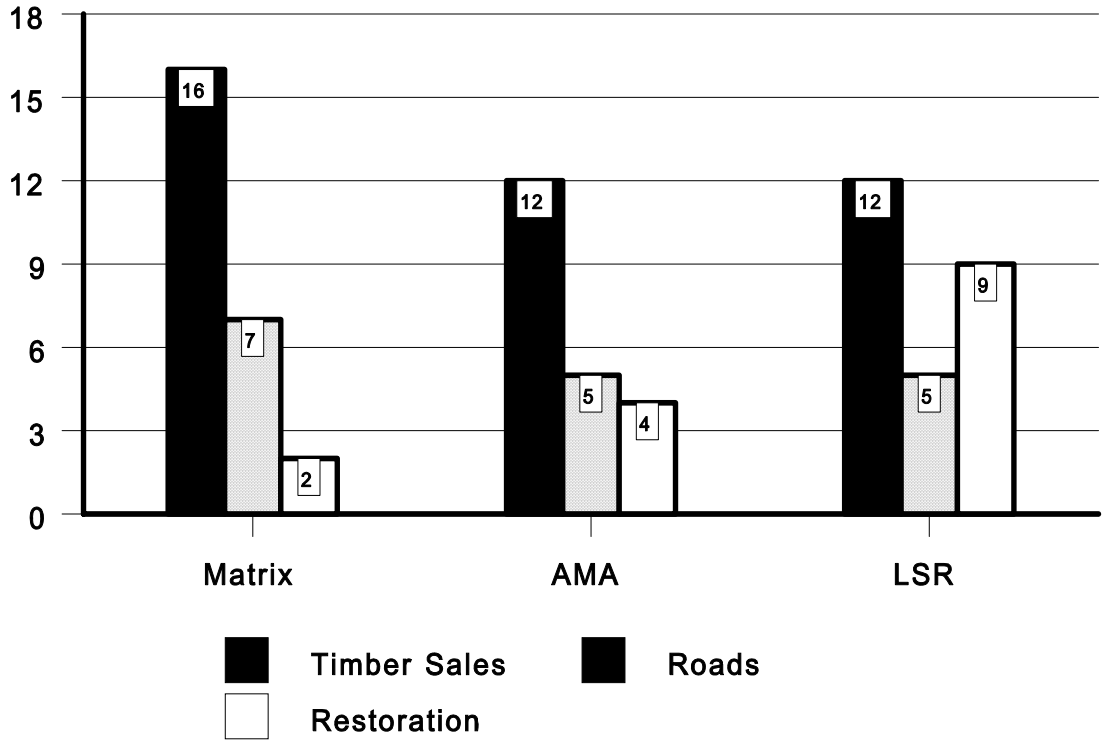
Figure 1 shows the distribution of FY 1997 projects by land use allocation. Appendix B provides a listing of the individual timber sale, roads, and restoration projects reviewed during the FY 1997 Implementation Monitoring Program.

Table 1
FY 1997 Implementation Monitoring Program
Number of Monitored Projects by Province and Land Use Allocation

Province	Matrix			Late Successional Reserve			Adaptive Management Area			Totals		
	TS[1]	RD[2]	RS[3]	TS	RD	RS	TS	RD	RS	TS	RD	RS
W. WA Cascades	0	0	0	0	0	0	0	0	0	0	0	0
E. WA Cascades	1	0	0	1	0	1	0	0	0	2	0	1
Olympic	0	0	0	0	0	1	2	1	0	2	1	1
Yakima	0	0	0	0	0	0	0	0	0	0	0	0
S.W. WA	0	0	0	0	0	0	2	0	2	2	0	2
OR Coast	0	0	0	1	1	0	1	1	0	2	2	0
Willamette	7[5]	3	2	1	1	2	2	2	1	10	6	5
Deschutes	2	1	0	1	1	0	0	0	0	3	2	1[4]
S.W. OR	4	2	0	2	1	2	1	1	0	7	4	2
Klamath	1	1	0	6	1	3	3	0	0	10	2	3
N.W. Sacto.	1	0	0	0	0	0	0	0	0	1	0	0
CA Coast	0	0	0	0	0	0	1	0	1	1	0	1
TOTALS	16	7	2	12	5	9	12	5	4	40	17	16

[1] TS = Timber Sales
[2] RD = Roads
[3] RS = Restoration Projects
[4] Includes administratively withdrawn site
[5] Includes sale not included in NFP compliance analysis

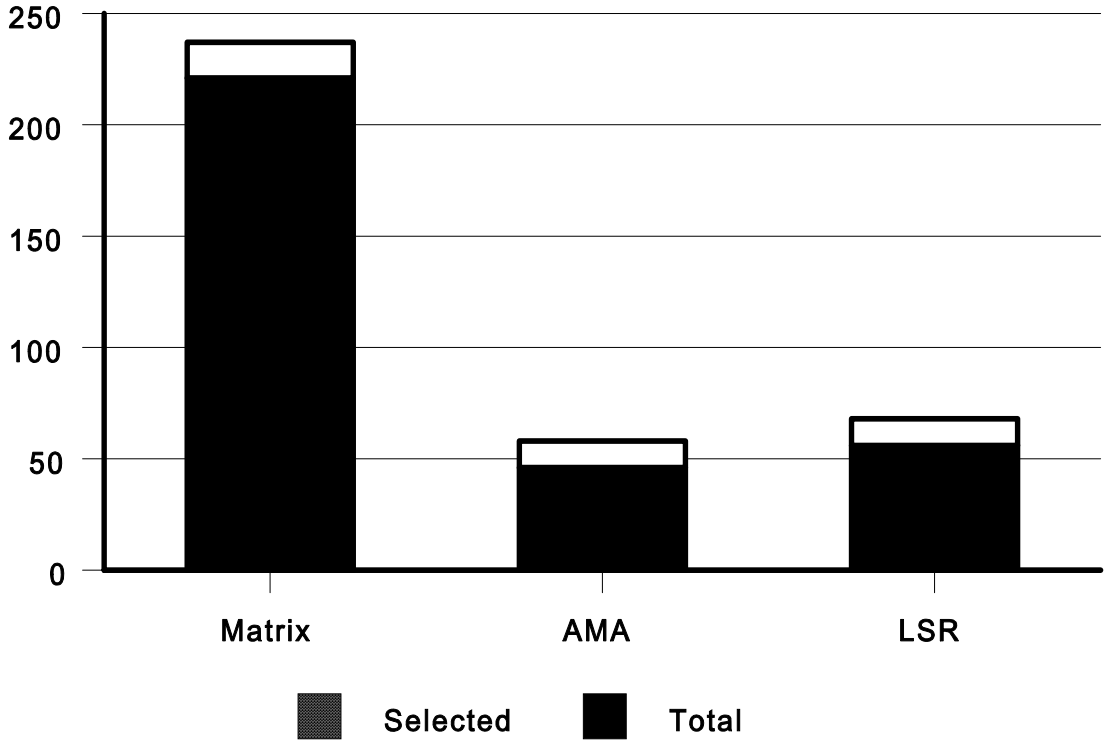
Figure 1 shows the number of monitored timber sales, roads, and restoration projects by land use allocation. Numeric values represent the percentage of sales, roads, and



restoration projects in each land allocation.

Figure 1

Figure 2 shows the distribution of timber sales (n=343) by land use allocation. For FY 1997, 16 of the 237 matrix sales were selected for review, 12 of the 58 AMA sales were



selected, and 12 of the 68 LSR sales were selected.

Figure 2

The sample size of 40 timber sales reflected the scope of effort for the FY 1997 Implementation Monitoring Program agreed to by the RIEC. Allocation of the number of sales to review within each of the strata was based on the need to provide information on all three land allocations, with an emphasis on larger sales and roads. Initially, 12 sales were allocated to both the LSR and AMA strata and the remaining 16 to Matrix timber sales. Following the initial sample selection based on the regional information, sale-specific information resulted in the identification of additional road information. Following the sample selection process, it was determined that several of the timber sales, initially reported as not having roads, actually had associated road activities. One Forest Service timber sale, Red 90, was reviewed and later determined to not be part of the population of timber sales covered by the NFP S&Gs. This sale was dropped from the sample and regional analysis (see Table 1 and Appendix B). Two of the timber sales in the STARS system, identified as sold and included in the sample, had not sold. These two sales were reviewed by the PIMT's and the results included in the analyses. Information on harvest status was not available at the time of sample selection. Observations recorded by PIMTs were used to post-stratify the sales into harvested and unharvested categories. The lack of complete and accurate information for all timber sales at the regional level complicated the design process and prevented strict adherence to a statistical sampling process.

The approach to identifying the 17 road projects selected for review (see Table 1 and Appendix B) was based on information from BLM and the Forest Service that FY 1996 road construction activities were associated with timber sales. The road information was obtained from the Forest Service regional database, purchaser credit reports, and BLM data. Additional information from field units resulted in updates to road information for the selected timber sales.

The desire to include restoration projects in the FY 1997 Implementation Monitoring Program resulted in the RIMT determining that a consistent regional database of restoration projects is not currently available, nor could it be easily developed by the RIMT. One of the factors that prevented a simple aggregation of local databases was the lack of a consistent terminology and method of tracking restoration projects.

Subsequently, the RIMT chose to use the Jobs-In-The-Woods (JITW) database for FY 1995-96 projects to identify the 16 restoration projects selected for review (see Table 1 and Appendix B). The RIMT recognized that the JITW list of restoration projects (242 in the NFP region) was not a comprehensive list of all restoration projects, but provided a representative regional population from which to select activities for review. From the regional JITW list of projects, local Forest Service and BLM administrative units (those previously selected to have a timber sale reviewed) were asked to identify restoration projects within their administrative boundaries. From the revised list, the RIMT randomly identified a primary and secondary JITW project within each of the administrative units (see Appendix F). The PIMT leaders were instructed to review the primary project if the ROD and its S&Gs were applicable; if not, then they were to review the secondary project. If ROD and associated S&Gs were not applicable to either project, no monitoring was conducted.

Team Leader and Review Team Selection

The Regional Monitoring Team assisted the field managers in developing the Provincial Monitoring Teams, which would perform the field reviews. The RIEC directed the field managers and the Regional Monitoring Team to structure interagency, intergovernmental, interdisciplinary teams from agencies and Provincial Advisory Committees (PACs) (see Appendix G for list of teams.)

The Regional Monitoring Team established a training program for the Provincial Monitoring Team leaders. Team leaders from each of the involved provinces covered by the NFP were selected from the Forest Service, BLM, and Fish and Wildlife Service by the Designated Federal Official from each PAC.

Team Leader Orientation and Training

The Regional Monitoring Team organized and conducted a two-day orientation and training session for Provincial Monitoring Team leaders in May 1997. Team leaders participated in the training, which was designed to ensure consistency in the execution of the implementation monitoring process. The training agenda included the following topics:

- Purpose and need for implementation monitoring.
- Overview of the implementation monitoring approach.
- Roles of the REO, Research and Monitoring Committee, Regional Monitoring Team, and the Provincial Monitoring Teams.

- Legal requirements for monitoring under the NFP.

- Planning and preparation:
    - Team formulation, roles, and responsibilities.
    - Needed resources and logistics (personnel, vehicles, office space, etc.).
    - Safety.
    - Scheduling.
    - Relationships with line officers and field units.
    - Cost accounting.
    - Training and pre-work for Provincial Monitoring Team members.
    - Conducting and documenting field reviews.
    - Preparing reports.

As a follow-up to the training session, the group agreed to periodically hold conference calls. Several conference calls between the Regional Monitoring Teams and Provincial Monitoring Team leaders were conducted throughout the review period, addressing new issues, problems, and experiences that Provincial Monitoring Team leaders wanted to share for the benefit of other teams.

Process for Field Reviews

The Regional Monitoring Team established a series of expectations regarding the Provincial Monitoring Teams' performance of field reviews. First, the teams were expected to operate in an open forum that provided for the exchange of ideas, information, and expertise.

Second, teams were encouraged to group project reviews for efficiency and to conduct reviews such that no more than two days were spent on a particular project, including time for field visits (see Appendix G).

Third, teams were instructed to coordinate the scheduling of reviews with Provincial Monitoring Team members and field units, and complete field reviews in the 1997 field season.

Fourth, Provincial Monitoring Team leaders were responsible for obtaining the necessary resources and background information to adequately review the selected timber sales, roads, and restoration projects. The field units were also directed to provide all essential background information applicable to each sale and make it available for review by the Provincial Monitoring Team. This included National Environmental Policy Act (NEPA) documents, watershed assessments, LSR

assessments, AMA plans, and applicable Forest and District land management plans. The Regional Monitoring Team distributed all applicable supplemental direction issued by the REO to Provincial Monitoring Team leaders.

Fifth, teams were responsible for answering sets of questions for each project being reviewed (see Appendices C, D, and E). Provincial Monitoring Team leaders asked the host unit Ranger District or Resource Area to initially answer all applicable questions for each of their respective projects before the Provincial Monitoring Teams were convened.

Sixth, Provincial Monitoring Teams were required to review each of the questions to determine compliance with the ROD and its S&Gs. Five possible responses to questions were to be answered: "Exceeded," "Met," "Not Met," "Not Capable of Meeting," "Not Applicable." Provincial Monitoring Teams were also required to document the rationale for question responses.

Seventh, following the field reviews, Provincial Monitoring Team leaders were asked to prepare a written report summarizing the review of each timber sale. The reports were to include the following information:

- Brief description of the project.
- Responses to all applicable questions.
- Highlights of the review process.
- Recommended changes in the monitoring process.
- Overall assessment of project compliance with the ROD and its S&Gs.
- Identification of new topics for FY 1998 and beyond.
- Program costs.

For those reviews in which non-federal PAC members participated, the Federal Advisory Committee Act (FACA) remained an important consideration for the FY 1997 program. As originally addressed in the FY 1996 Pilot Year Implementation Monitoring Program, attorneys from the regional Office of General Counsel determined that because PACs were used to recruit Provincial Monitoring Team members, FACA applied (U.S. Department of Agriculture Office of General Counsel, 1996). As a result of this determination, where a province team contained non-federal PAC members, Provincial Monitoring Team reports were reviewed by the PACs before final submission to the Regional Monitoring Team. Provincial Monitoring Team reports are on file in the REO in Portland, Oregon.

Development of Databases

Databases to Aid in the Selection of Samples

Two databases were used to assist in the selection of timber sales, roads, and restoration projects:

- The first database assembled information on timber sales and roads throughout the area of the NFP. This database was compiled from two electronic lists from BLM and the Forest Service.

- The second database was a preexisting JITW database maintained by the REO. This database contained information on all FY 1995-96 JITW contracts. The primary limitations of the database for monitoring use was that it did not track the identity of the responsible administrative unit down to the Forest, District, or Resource Area level.

Databases Associated with the Evaluation of Results

PIMT leaders provided electronic files with responses to each of the questions in the three monitoring questionnaires. Data from the PIMT submissions were transferred into three databases (one for each of the monitoring topics; timber sales, roads, and restoration projects). The databases retained the original PIMT responses. Subsequent reviews of these responses by the RIMT and the Interagency Analysis Team resulted in the addition of fields which reflected the RIMT's reassessment of the original responses. These additional fields were then incorporated into these databases.

In addition to these databases, spreadsheets were maintained which tracked RIMT assessments of compliance and biological effects.

Deposition of Databases

These databases are PC-based and are on file in the REO in Portland, Oregon.

Analysis of Implementation Monitoring Responses

Each question in the three questionnaires was answered by the PIMT using a response of whether it was judged to have “Exceeded,” “Met,” “Not Met,” was “Not Capable of Meeting,” or was “Not Applicable” (see Appendix H).

The RIMT assembled an Interagency Analysis Team to review all PIMT responses in order to improve consistency among PIMT responses, to identify weaknesses in the

implementation monitoring process, to determine compliance of the project with the ROD, and to develop management recommendations to improve future implementation of the NFP. The results of this supplemental analysis are incorporated into the report.

Composition of the Interagency Analysis Team

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Dan McKenzie, Regional Ecosystem Office, Portland
Chuck Hawkins, BLM Salem District, Salem
Loyal Mehrhoff, Fish and Wildlife Service, Region 1, Portland

After review by the RIMT and Interagency Analysis Team, all responses were summarized by monitoring type (timber sales, roads, and restoration), by individual projects, and by individual questions. In addition, timber sale questions were also summarized by land use allocation, the size of the timber sale (volume), and whether or not harvest had begun on the sale.

Responses marked “Not Met” indicate that the reviewed action did not comply with NFP S&Gs. Responses of “Met,” “Not Capable of Meeting,” and “Exceeded” indicate that the reviewed action either complied with the NFP or exceeded the minimum requirements of the NFP.

The majority of responses falling into the "Exceeded" category indicated actions that were above and beyond minimum requirements of the NFP. However, these instances did not appear to be excessive and were not considered to be noncompliance.

Part 2 - Analysis of Monitoring Results

The results of the FY 1997 Monitoring Program are discussed in the following three sections on timber sales, roads, and restoration projects.

Results and Discussion: Timber Sales

Forty timber sales were originally selected during the FY 1997 program. One of these sales, Red 90, was later determined to be a timber sale under Section 2001(k) of P.L. 104-19 of the FY 1995 Rescissions Act. This sale did not have to comply with NFP S&Gs and was therefore dropped from the reported sample. Documents describing the history of Red 90 are included as part of the Administrative Record for the FY 1997 NFP Implementation Monitoring Program on file in the REO. Results from the remaining 39 NFP sales are presented below.

The initial responses provided by the PIMTs are presented in Table 2. These responses show a relatively high level of compliance with NFP S&Gs. This initial categorization of responses not meeting S&Gs in FY 1997 was significantly lower than the corresponding initial figures in FY 1996. The reason for this difference was most likely due to improvements in the FY 1997 monitoring questionnaire, increased experience of monitoring teams, and the additional training provided to monitoring team leaders.

Table 2
Responses by Provincial Monitoring Teams to Timber Sale Monitoring Questions

Responses	Count	Overall Percentage (%)[1]	Applicable Percentage (%)[2]
Exceeded	37	0.7	3.3
Met	990	19.7	88.4
Not Met	47	1.0	4.2
Not Capable	18	0.4	1.6
Multiple Answers	28	0.6	2.5
Not Applicable	3,704	73.6	--
Blank (no response)	207	4.1	--
TOTAL	5,031	100.0	100.0

1 The overall percentage is based upon all 5,031 responses.
2 The applicable percentage is based upon only those 1,120 responses for which the PIMTs decided the S&G applied (the sum of all "applicable" responses).

As in FY 1996, the PIMTs' initial responses were reviewed by an Interagency Analysis Team composed of the RIMT and additional personnel from the Forest Service, BLM, and Fish and Wildlife Service. However, unlike FY 1996, this year's review examined all 5,031 PIMT responses, not just the responses that did not meet S&Gs. As a result, a number of responses were placed into more appropriate categories (Table 3). It is apparent that there were proportionally fewer recategorizations of responses by the Interagency Assessment Team in FY 1997 than in FY 1996. Again, this is probably due to improvements in the monitoring process rather than on-the-ground differences in NFP implementation. There is still room for improvements in the monitoring process since the Interagency Analysis Team did need to recategorize some responses or to select the most appropriate response when PIMTs provided multiple responses (e.g., answering ambiguous questions with both a "Meets" and "Not Applicable" response).

A summary of recategorized responses was provided to each PIMT for review and comment.

The final results of the FY 1997 review of timber sales is found in Table 4. Because the sampling of timber sales were stratified by size and land use allocation, it was necessary to "adjust" the sample estimates by the appropriate strata weights in order to

estimate regional response levels. As in FY 1996, the FY 1997 program indicates a high overall level of compliance with NFP S&Gs (95 percent).

Table 3
Assessment of PIMT Timber Sale Responses by RIMT

PIMT Assessment		RIMT Assessment[1]				
Responses	**Number**	**Exceeded**	**Met**	**Not Met**	**Not Capable**	**Not Applicable**
Exceeded	37	33	1	0	0	3
Met	990	1	926	1	0	62
Not Met	47	0	6	37	0	4
Not Capable	18	0	0	1	12	5
Multiple Answers	28	0	15	2	4	7
Not Applicable	3,704	0	9	0	3	3,692
Blank	207	0	0	0	0	207
TOTAL	5,031	34	957	41	19	3,980

1 The RIMT categorized each of the PIMT responses into one of categories described above.

Table 4
Compliance of FY 1996 Timber Sales with S&Gs

Responses[1]	Count	Overall Percentage (%)	Applicable Percentage (%)	Adjusted Percentage (%)
Exceeded	34	0.7	3.2	3.6
Met	957	19.0	91.0	91.6
Not Met	41	0.8	3.9	2.5
Not Capable	19	0.4	1.8	2.3
Not Applicable	3,980	79.1	---	---
Blank (no response)	0	0.0	---	---
TOTAL	5,031	100.0	100.0	100.0

1The RIMT categorized the responses made by the PIMT as to whether or not they were consistent with the S&Gs. The overall percentage is based upon all responses - 5,031. The applicable percentage is based upon only those 1,051 responses for which a S&G did apply (the sum of all "Meets" and "Fails" responses). The adjusted percentage uses weighted values to estimate the "region-wide" percentages that take into account the stratified selection process.

When a timber sale either exceeded or did not meet NFP S&Gs, the Interagency Analysis Team and RIMT assessed whether the response applied throughout the project area (i.e., a consistent problem) or a localized event (e.g., only one of the ten Riparian Reserves was improperly established). The Interagency Analysis Team and RIMT then made a determination as to what the probable biological effects were in the local project area. General criteria were as follows:

- Low = Temporary effects that do not impact population levels.
- Moderate = Temporary effects that have a short-term impact on local population levels.
- High = Long-term impact on local population levels.

The results of these assessments are found in Table 5. In general, the results indicate local, project-level biological effects ranging from low to moderate, with some potentially high effects.

Table 5
Project Area Effects of Timber Sale Actions That Did Not Meet or Exceeded S&Gs

Effects Category[1,2]	Not Met Items		Exceeded Items	
	Localized Occurrence	Project-wide Occurrence	Localized Occurrence	Project-wide Occurrence
Low Positive Effect	0	0	3	9
Moderate Positive Effect	0	0	1	13
High Positive Effect	0	0	0	3
No Effect	0	0	0	0
Low Negative Effect	19	5	0	0
Moderate Negative Effect	3	2	0	0
High Negative Effect	0	2	0	0
Undetermined Effect	3	7	0	5
TOTAL	25	16	4	30

1The PIMT, Interagency Analysis Team, and RIMT reviewed all instances where S&Gs were not met and attempted to assess the biological impact of that noncompliance.
2The effect of not meeting or exceeding S&Gs to the immediate "project area" was assessed by the PIMT and RIMT. The RIMT categorized all events to determine if they were a localized occurrence in the project area or occurred throughout the project area ("project-wide" or systemic throughout the action).

The responses to individual questions on the timber sale questionnaire are summarized and presented in Appendix C. A review of those summaries indicates that some S&Gs are more difficult to attain than others. These summaries were screened in order to identify those S&Gs that were most frequently not complied with (i.e., those with less than a 90 percent compliance rate). Topics with higher rates of noncompliance were:

- ***The establishment of Riparian Reserves for permanently flowing, non-fish bearing streams.*** Of the 28 sales that applied this S&G, 3 did not fully meet ROD standards (11 percent). Two of the sales used Riparian Reserve widths that were less than ROD standards, and 1 sale overlooked a stream (thus failing to establish a Riparian Reserve). Four sales exceeded this S&G by using larger Riparian Reserve widths than required by the ROD (14 percent). The local biological effects of noncompliance are probably low to moderate.

- ***The establishment of Riparian Reserves for intermittent streams, <1 acre wetlands, and unstable areas***. Riparian Reserves were established for these areas in 35 sales. Of these, 25 met the reserve widths required by the ROD, 6 sales did not meet the required widths for all Riparian Reserves (17 percent), and 4 sales exceeded the required reserve widths (11 percent). One sale missed a < 1 acre wetland (thus failing to establish a Riparian Reserve), 2 sales reduced ROD interim Riparian Reserve widths without support from a Watershed Analysis, 2 sales used Riparian Reserve widths that were less than the ROD specifications, and 1 sale did not establish Riparian Reserves for a timber thinning project. Four sales used Riparian Reserve widths that were greater than ROD requirements. As with the above question, local biological effects were probably low to moderate and regional effects were probably minimal.

- ***The establishment of Riparian Reserves for lakes and natural ponds***. Riparian Reserves were established for 9 sales containing natural lakes and ponds. Only one of these sales did not fully meet ROD S&Gs (11 percent). This 1 sale established reserves that were 150 feet wide rather than the required 188 feet wide. The effects of this, both locally and regionally, were probably minimal.
- ***The retention of trees felled for safety reasons in order to meet coarse woody debris needs.*** Three of the 18 sales that felled safety trees in Riparian Reserves failed to retain those trees for coarse woody debris when downed wood may have been lacking (17 percent). In most instances, noncompliance involved very few trees. In several instances, administrative units realized this S&G was not being implemented and took corrective action to ensure compliance in unharvested units or actually mitigated lost debris by transporting logs back into the area. The overall biological effect of these actions is probably low, both locally and regionally.

- ***The retention of 240 feet of coarse woody debris in regeneration harvests in western Washington and Oregon.*** Two of 6 sales that should have retained at least 240 linear feet of coarse woody debris did not do so because there was insufficient material available to meet the guidelines, 3 sales met the guideline, and 1 sale did not meet the guideline even though adequate material could have been retained (17 percent). The one instance of noncompliance probably had a moderate biological effect on the project area. If this pattern of coarse wood retention was repeated throughout the region, it would probably have a moderately negative biological effect.

- ***The retention of 120 feet of coarse woody debris in regeneration harvests in eastern Washington and Oregon.*** Two of 5 sales that should have retained at least 120 linear feet of coarse woody debris met the guideline, 1 sale did not

meet the guideline even though adequate material was available (20 percent), and 2 sales exceeded the guideline (40 percent). The one instance of noncompliance occurred on only a portion of the sale area, and other areas maintained or exceeded required coarse woody debris levels. The local and regional biological effects were probably low.

- ***The modification of coarse woody debris guidelines in partial harvest areas.*** Three of the 14 partial harvests did not assess, modify, and retain coarse woody debris to reflect the timing of stand development cycles (21 percent). The biological effects of noncompliance were probably low.

- ***The retention of at least 15 percent of National Forest regeneration harvest units in green trees.*** Three of the 6 sales which were required to provide for green tree retention within cutting units met this standard, 1 sale exceeded the requirement (18 percent), 1 site was not capable of meeting the standard, and 1 sale did not meet the standard (18 percent). The sale exceeding the standard did so in order to protect a large number of small pockets of remnant old-growth legacy trees while conducting a partial harvest. One sale was not capable of retaining green trees because it was a salvage sale in Matrix where there had been 100 percent mortality of the stand. The sale that did not meet the standard was a harvest in a fuel break where green tree retention areas could have been (but were not) established outside of the fuel break. The overall biological effects of not meeting this standard were probably low, both locally and regionally.

- ***The retention of green trees in regeneration harvests in moderate-to-large clumps.*** The retention of green trees is required to occur both as aggregated clumps of trees and as dispersed trees. Three of the 6 sales required to provide for green tree retention met this standard, 2 were not capable of meeting the standard because the units were too small to accommodate clumps of trees, and 1 sale did not meet the standard when it could have (18 percent). The sale not meeting the standard retained 15 percent of the cutting unit as green trees, but did not retain those trees in clumps.

- ***The retention of snags to support cavity nesting birds at 40 percent of potential population levels.*** This S&G was applicable to 31 sales. Of these, 4 exceeded (13 percent), 18 met, 2 did not meet (6 percent), and 7 sales were not capable of meeting. The 4 sales exceeding the S&Gs provided 60-100 percent of potential levels. The 2 sales not meeting the S&Gs did so because in one instance less than 40 percent of potential was provided in fuel breaks; and in the other, snags were not assessed. Seven sales could not meet the S&Gs because there was a lack of snags or the potential to create snags from green trees. The

biological effects of not meeting these S&Gs were low, both locally and regionally.

- ***The retention of snags for white-headed woodpeckers and pygmy nuthatches.*** Nine sales needed to provide snags for these species. Seven sales fully met the standard (11 percent), 1 exceeded the standard by providing additional snags, and 1 did not meet the standard in fuel reduction areas (11 percent). The biological effects of not meeting the standard were low.

- ***The retention of snags for black-backed woodpeckers.*** Nine sales needed to provide snags for this species. Seven sales fully met the standard, 1 exceeded the standard by providing additional snags (11 percent), and 1 did not meet the standard in fuel reduction areas (11 percent). The biological effects of not meeting this standard were low. The additional snags provided were expected to provide for maintaining 100 percent of the area's population potential for the species, rather than the standard of 40 percent.

- ***The retention of beetle-infested trees for black-backed woodpeckers.*** Nine sales needed to retain some beetle infested trees for this species. Eight sales fully met the standard. One sale did not retain beetle-infested trees in fuel reduction areas (11 percent). The biological effects of not meeting the standard were low.

- ***The prohibition of harvests when snag requirements were not met.*** Of the 2 sales that did not meet snag requirements, 1 was not capable of meeting the requirements and the other could have, but did not meet the standard. This later sale was not dropped due to the risk of fire to the area. The negative biological effects of noncompliance were low in this instance.

- ***The development of site-specific timber harvest, roading, and fire management plans in known lynx range.*** Only 2 sales were in known lynx range. Of these, 1 sale did not adequately work with the state to develop plans addressing lynx management. The biological effects of this are undetermined.

- ***Early public involvement in projects in AMAs.*** Eleven sales were conducted in AMAs. Of these, 2 did not have adequate early public involvement (18 percent). One of these sales was planned soon after the signing of the NFP, and the other sale had limited public involvement due to accelerated salvage under P.L. 104-19.

Implementation Monitoring Results by Land Use Allocation, Sale Size, and Status of Harvest

The results of the FY 1997 monitoring effort were categorized by land use allocation, sale size, and whether or not timber harvest had occurred at the site. These results were used to determine the variability of certain categories of sales in meeting NFP S&Gs.

Twelve sales were conducted in LSRs, 15 sales in Matrix, and 12 sales in AMAs. There was no significant difference in the rate of compliance among land use allocations (Table 6). Similarly, there was no significant difference in compliance among medium-sized and large sales (Table 7). While both harvested and unharvested sales show low levels of noncompliance, there was a significantly higher level of noncompliance in harvested sales (4.9 percent vs. 2.1 percent; Table 8). This result was also apparent to provincial teams, who requested that future monitoring focus on timber sales that had been at least partially harvested. In several instances, planning and decision documents fully met S&Gs, but harvest activities did not meet some. Additional pre-sale coordination between planning staffs and contract administrators may help reduce differences between planning expectations and on-the-ground results.

Table 6
Percentage of Regional Estimates for Timber Sales by Land Use Allocation

	Number			Exceeded	Met	Not Met	Not Capable	Not Applicable
	Total	**Sample**	**Total Questions**					
LSR	58	12	1548	2.7	90.6	5.2	1.5	---
Matrix	237	15	1935	3.8	90.7	2.8	2.8	---
AMA	48	12	1548	3.1	92.0	4.0	0.9	---

Table 7
Percentage of Regional Estimates for Large and Medium-Sized Timber Sales

	Number			Exceeded	Met	Not Met	Not Capable	Not Applicable
	Total	**Sample**	**Total Questions**					

	Number			Exceeded	Met	Not Met	Not Capable	Not Applicable
	Total	**Sample**	**Total Questions**					
Large	178	29	3741	3.4	90.5	4.1	1.9	---
Medium	165	10	1290	2.6	93.0	3.1	1.3	---

Table 8
Percentage of Regional Estimates for Harvested and Unharvested Timber Sales

	Number			Exceeded	Met*	Not Met*	Not Capable	Not Applicable
	Total	**Sample**	**Total Questions**					
Harvested	--	25	3225	2.8	90.7	4.9	1.5	---
Unharvested	--	14	1806	3.9	91.6	2.1	2.3	---

* Chi-squared test shows harvested and unharvested evaluations for "Met" and "Not Met" responses are significantly different at p=0.0249.

Results and Discussion: Roads

Twenty of the timber sales selected for monitoring were thought to have road construction activities associated with them. It was intended that these road projects be reviewed for compliance with NFP S&Gs. After field reviews were conducted, it was determined that roads were dropped from 2 projects (they were not needed to support harvest activities); and 1 project which was originally thought to not include road construction actually did include road construction. This resulted in 18 road projects being evaluated. The evaluation of one of these projects was lost. Thus, 17 road projects are included in this report.

The initial responses provided by the PIMTs are presented in Table 9. These responses show a high level of compliance with NFP S&Gs. A review of these responses by the RIMT and Interagency Analysis Team resulted in a recategorization of results as presented in Table 10. Most recategorizations occurred when PIMTs were unable to select a single response to the questionnaire, and the Interagency Analysis Team or RIMT review was needed to select the most appropriate response.

Table 9
Responses by Provincial Monitoring Teams to Road Monitoring Questions

Responses	Count	Overall Percentage (%)[1]	Applicable Percentage (%)[2]
Exceeded	4	0.3	0.9
Met	422	28.5	95.0
Not Met	6	0.4	1.4
Not Capable	0	0.0	0.0
Multiple Answers	12	0.8	2.7
Not Applicable	998	67.5	--
Blank (no response)	37	2.5	--
TOTAL	1,479	100.0	100.0

1 The overall percentage is based upon all 1,479 responses.
2 The applicable percentage is based upon only those 444 responses for which the PIMTs decided a S&G applied (the sum of all "applicable" responses).

Table 10
Assessment of PIMT Roads Responses by RIMT

PIMT Assessment		RIMT Assessment[1]					
Responses	**Number**	**Exceeded**	**Met**	**Not Met**	**Not Capable**	**Not Applicable**	**Blank**
Exceeded	4	3	1	0	0	0	0
Met	422	0	422	0	0	0	0
Not Met	6	0	1	5	0	0	0
Not Capable	0	0	0	0	0	0	0
Multiple Answers	12	1	7	1	0	3	0
Not Applicable	998	0	0	0	0	998	0
Blank	37	0	0	0	0	37	0
TOTAL	1,479	4	431	6	0	1,038	0

1 The RIMT categorized each of the PIMT responses into one of categories described above.

The final level of compliance with NFP S&Gs was very high (Table 11). Only six responses indicated an inability to meet S&Gs, and four responses indicated that S&Gs were exceeded. The biological effects of these actions are discussed below and are presented in Table 12.

Table 11
Compliance of Roads with S&Gs

Responses[1]	Count	Overall Percentage (%)	Applicable Percentage (%)
Exceeded	4	0.3	1.0
Met	431	29.1	97.7
Not Met	6	0.4	1.4
Not Capable	0	0.0	0.0
Not Applicable	1,038	70.2	--
Blank (No Response)	0	0.0	--
TOTAL	1,479	100.0	100.0

1 The RIMT categorized the responses made by the PIMT as to whether or not they were consistent with the S&Gs. These categories are described in the text. The overall percentage is based upon all responses - 1,479 The applicable percentage is based upon only those 441 responses for which a S&G did apply (the sum of all "applicable" responses).

The responses to individual questions on the road questionnaire are summarized and presented in Appendix D. All questions which indicated that S&Gs were either not met or exceeded are discussed below:

- ***Consistency with existing laws (NEPA, Endangered Species Act, Clean Water Act).*** Sixteen of the 17 roads fully met this S&G, and 1 road exceeded the standard (6 percent). The one "Exceeded" response was the result of additional site reconnaissances being conducted. The biological effects of these additional items is undetermined.

- ***The reduction or maintenance of roads in Key Watersheds.*** One of the five applicable projects did not maintain or reduce the amount of roads in Key Watersheds (20 percent). That project retained 500 feet of new road construction that had originally been planned for obliteration. The biological effects of this action are probably low.

- ***The establishment of Riparian Reserves for intermittent streams, <1 acre wetlands, and unstable areas.*** Riparian Reserves were appropriate for these wetlands in 12 instances. Of these, all but two met the S&G (17 percent). In two cases, Riparian Reserves were not established; once when a < 1 acre wetland

was missed by the Project Manager and once when Riparian Reserves were not delineated for a project. Local biological effects were probably low to moderate, and regional effects were probably low.

- ***The restriction of sidecasting.*** Ten roads addressed sidecasting. Nine of those met the S&Gs, while the tenth exceeded the standard by removing old sidecasting from previous road construction (10 percent). The effects of this action were probably of moderate biological benefit.

- ***The avoidance of wetlands.*** All but one road successfully avoided wetlands (8 percent). That one road resulted in the clearing of a small, <1 acre wetland that was not detected by the wetland surveys. The biological effects of this action are probably low.

- ***The minimization of drafting site effects on streams and in-stream flows.*** One of the 7 roads that established drafting sites exceeded the standard by requiring the use of off-site water (14 percent). The other roads met this standard. The local biological effects of this action on the stream were probably moderate.

- ***Early public involvement in AMA projects.*** Three roads occurred in AMAs. Of these, 1 fully met the S&G, 1 exceeded it (by specifically increasing local participation), and 1 did not meet the standard (an early forest plan road that did not include early public participation). The effects of both exceeding and not meeting this standard were not determined.

Table 12
Assessment of Road Actions That Did Not Meet or Exceeded S&Gs

Effects Category[1,2]	Not Met Items		Exceeded Items	
	Localized Occurrence	Project-wide Occurrence	Localized Occurrence	Project-wide Occurrence
Low Positive Effect	0	0	0	0
Moderate Positive Effect	0	0	2	0
High Positive Effect	0	0	0	0
No Effect	0	0	0	0
Low Negative Effect	5	0	0	0
Moderate Negative Effect	0	0	0	0
High Negative Effect	0	0	0	0
Undetermined Effect	0	1	0	2
TOTAL	5	1	2	2

1 The PIMT, Interagency Analysis Team, and RIMT reviewed all instances where noncompliance was indicated and attempted to assess the biological impact of that noncompliance.
2 The effect of noncompliance to the immediate "project area" was assessed by the PIMT and RIMT. The RIMT categorized all noncompliance to determine if the event was a localized occurrence in the project area or occurred throughout the project area ("project-wide" or systemic problem with the action).

Results and Discussion: Restoration Projects

Nineteen restoration projects were selected for review. After field reconnaissance was conducted, it was determined that 1 project was outside the range of the NFP and that 2 projects were too minor to evaluate. This resulted in 16 restoration projects being evaluated.

The initial responses provided by the PIMTs are presented in Table 13. As with road projects, these responses show a high level of compliance with NFP S&Gs. A review of these responses by the RIMT resulted in a recategorization of results as presented in Table 14. Most recategorizations occurred when PIMTs were unable to select a single response to the questionnaire, and the Interagency Analysis Team or RIMT review was needed to select the most appropriate response.

Table 13
Responses by Provincial Monitoring Teams to Restoration Project Monitoring Questions

Responses	Count	Overall Percentage (%)[1]	Applicable Percentage (%)[2]
Exceeded	7	0.5	2.1
Met	313	20.0	94.8
Not Met	6	0.4	2.0
Not Capable	2	0.1	0.6
Multiple Answers	2	0.1	0.6
Not Applicable	1,221	78.0	-
Blank (no response)	17	1.1	-
TOTAL	1,568	100.0	100.0

1 The overall percentage is based upon all 1,568 responses.
2 The applicable percentage is based upon only those 330 responses for which the PIMT decided a S&G applied (the sum of all “applicable” responses).

Table 14
Assessment of PIMT Restoration Project Responses by RIMT

PIMT Assessment		RIMT Assessment[1]					
Responses	**Number**	**Exceeded**	**Met**	**Not Met**	**Not Capable**	**Not Applicable**	**Blank**
Exceeded	7	7	0	0	0	0	0
Met	313	0	312	0	0	1	0
Not Met	6	0	0	6	0	0	0
Not Capable	2	0	0	0	2	0	0
Multiple Answers	2	0	0	0	0	2	0
Not Applicable	1,221	0	0	0	0	1,221	0
Blank	17	0	0	0	0	17	0
TOTAL	1,568	7	312	6	2	1,241	0

1 The RIMT categorized each of the PIMT responses into one of the categories described above.

The final level of compliance with NFP S&Gs was very high (Table 14). Only six responses indicated a project did not meet S&Gs, and seven responses indicated that S&Gs were exceeded. The biological effects of these actions are discussed below and are presented in Table 15.

In general, compliance of restoration projects with ROD S&Gs was very high (>98 percent). The local biological effects were judged to be low to moderate. Six review questions recorded single noncompliance events, and no question had more than a single instance of noncompliance. The most important observation from these data was that most of the noncompliance events occurred on 1 project where contract specifications were also not met. As with timber sales, this observation indicated that improved coordination between planned expectations and contract administration could be beneficial.

Table 15
Compliance of Restoration Projects with S&Gs

Responses[1]	Count	Overall Percentage (%)	Applicable Percentage (%)
Exceeded	7	0.5	2.1
Met	312	19.9	95.4
Not Met	6	0.4	1.9
Not Capable	2	0.1	0.6
Not Applicable	1,241	79.1	--
Blank (No Response)	0	0.0	--
TOTAL	1,568	100.0	100.0

1 The RIMT categorized the responses made by the PIMT as to whether or not they were consistent with the S&Gs. The overall percentage is based upon all 1,568 responses. The applicable percentage is based upon only those 327 responses for which a S&G did apply (the sum of all "applicable" responses).

The responses to individual questions on the restoration questionnaire are summarized and presented in Appendix E. All questions which indicated that S&Gs were either not met or exceeded are discussed below:

- ***Consistency with existing laws (NEPA, Endangered Species Act, Clean Water Act).*** Fifteen of the 16 projects fully met this S&G, and 1 project did not meet the standard (7 percent). One project should have, but did not formally consult under the Endangered Species Act. The biological effects of these additional items is probably low since the team determined that consultation was not likely to have changed the project.

- ***Avoidance of reducing resource availability, restricting access, or limiting the exercise of treaty rights by tribes or tribal members.*** Five of the 6 projects where this was an issue met the S&G. The sixth project exceeded the stated standard by undertaking extensive consultation and cooperation with the tribe, including tribal monitoring (17 percent). The effects of these actions is undetermined.

- ***Planning and the identification of off-reservation tribal resources.*** Seven projects identified this S&G as applying to their situation. Six of these projects met the standard and the seventh exceeded it (14 percent). The 1 project exceeding the S&G involved the tribe in the project's design phase, resulting in further protection of cultural sites and family gathering areas.

Table 16
Assessment of Restoration Project Actions That Did Not Meet or Exceeded S&Gs

Effects Category[1,2]	Not Met Items		Exceeded Items	
	Localized Occurrence	Project-wide Occurrence	Localized Occurrence	Project-wide Occurrence
Low Positive Effect	0	0	0	4
Moderate Positive Effect	0	0	0	1
High Positive Effect	0	0	0	0
No Effect	0	0	0	0
Low Negative Effect	3	1	0	0
Moderate Negative Effect	1	0	0	0
High Negative Effect	0	0	0	0
Undetermined Effect	0	1	0	2
TOTAL	4	2	0	7

1 The PIMT, Interagency Analysis Team, and RIMT reviewed all instances where noncompliance was indicated and attempted to assess the biological impact of that noncompliance.

2 The effect of noncompliance to the immediate "project area" was assessed by the PIMT and RIMT. The RIMT categorized all noncompliance to determine if the event was a localized occurrence in the project area or occurred throughout the project area ("project-wide" or systemic problem with the action).

- ***Avoiding the introduction of non-native species into LSRs.*** Eight projects showed this as an issue. Seven projects met the S&G, and 1 project did not meet the standard because it used a non-native seed mixture without assessing the effects on the LSR (13 percent). The biological effects of this action was probably low.

- ***The establishment of Riparian Reserves for fish-bearing streams.*** Of the 6 projects that applied this S&G, 5 fully meet the standards and 1 exceeded the standard (17 percent). The 1 project that exceeded this S&G did so by using larger Riparian Reserve widths than required by the ROD. The local biological effects of this was probably low.

- ***The establishment of Riparian Reserves for permanently flowing, non-fish bearing streams.*** Of the 9 projects that applied this S&G, 7 fully meet the standards and 2 exceeded the standard by using larger Riparian Reserve widths than required by the ROD (22 percent). The local biological effects of this was probably low.

- ***The establishment of Riparian Reserves for intermittent streams, <1 acre wetlands, and unstable areas.*** Of the 7 projects that applied this S&G, 6 fully meet the standards and 1 exceeded the standard by using larger Riparian Reserve widths than required by the ROD (14 percent). The local biological effects of this was probably low.

- ***Minimizing sediment deliveries to streams.*** Eight projects met this standard. One project did not meet the standard due to sediment delivery from excavated stream crossings (11 percent). The biological effects of this action were probably low and of a short-term duration.

- ***Minimizing disruptions to natural hydrologic flow paths.*** Five projects met this standard, and 1 project did not meet it (17 percent). The reason for noncompliance was due to channel excavations not being implemented to contract specifications. The local biological effects of the action were probably low.

- ***The restriction of sidecasting.*** Six projects addressed sidecasting. Five of those met the S&Gs, while the sixth did not meet the standard because sidecasting was not always minimized (17 percent). The effects of this action were probably of moderate local biological concern.

- ***The reconstruction of roads and associated drainage features.*** Five projects addressed this issue. Four of the 5 projects met the standard, and 1 project exceeded it by restoring natural drainage patterns (20 percent). The biological benefits of this action were probably of moderate local value.

- ***The retention of trees felled for safety reasons in order to meet coarse woody debris needs.*** One of the 3 projects that felled safety trees in Riparian Reserves failed to retain that wood for coarse woody debris when downed wood was needed (33 percent). In one instance, a single 54 inch DBH tree was felled and removed from the Riparian Reserve. The rationale for removal was that the material was expected to be illegally removed for firewood. The biological effects of this action were probably low.

Part 3 - Analysis of Monitoring Process

This part of the report summarizes the methods that were employed in monitoring implementation of timber sales, roads and restoration activities in FY 1997. It (1) summarizes process critiques that were submitted by the FY 1997 Provincial Monitoring Teams, (2) offers solutions to problems encountered in carrying out the FY 1997 program, and (3) displays cost summaries of the FY 1997 program. Finally, it recounts the major lessons learned in this second-year monitoring effort.

The FY 1997 Implementation Monitoring Program built upon experiences from the 1996 Pilot Implementation Monitoring Program. The FY 1996 program was characterized by successful interagency, interdisciplinary, and public participation. The 1997 program carried on that principle of broadly-based participation.

The FY 1997 program, as in the pilot year, used a teamwork approach with discussions facilitated by questionnaires and their guidance (see Appendices C, D, and E). The questionnaires for FY 1997 had been modified according to recommendations from 1996 pilot program critiques. Please refer to the report, "Results of the FY 1996 (Pilot Year) Implementation Monitoring Program," pp. 30-34 (Alverts et al., 1997), for additional background information on the uses of the questionnaires by provincial teams.

Although the questionnaires for timber sale monitoring had undergone significant revisions and were generally noted to have been improved for FY 1997, questionnaires for roads and restoration activities were being applied for the first time in FY 1997. The approach to the roads and restoration questionnaires was based on the view that they were independent projects. However, the sampling and review approach resulted in timber sales and roads being viewed as a single project. Consequently, the review teams experienced some redundancy in the questionnaires for roads and timber sales.

Following are the findings and results of other ongoing improvements to the processes used in monitoring timber sales, roads and restoration projects, along with a summary of the direct costs to the FY 1997 program.

Results - Timber Sale Monitoring Process

The most significant and widely acknowledged improvement to timber sale monitoring process in FY 1997 came from stratifying the regional population of timber sales so that a significant number of larger, more complex sales would be selected (see discussion in Part 1 of this report). Provincial Team Leaders who had served in both the FY 1996

and FY 1997 programs universally noted that revisions to the timber sale questionnaires had lent significant improvements to the timber sale implementation monitoring process. Questionnaire revision has become an exercise in continuous quality improvement. The 1997 review of raw PIMT responses by the Interagency Analysis Team and RIMT noted that PIMT responses were much more consistent than in the pilot year effort. This is probably the result of a better worded questionnaire (as noted above), increased experience of PIMT members, and the addition of more training prior to actual monitoring.

Field reviews in FY 1997, as in FY 1996, continued to be the most satisfying parts of the participants' monitoring experiences. Provincial team leadership; interagency, interdisciplinary, and public participation; local unit openness and quality hosting--all contributed to a summer season of successful field reviews.

Analysis was again facilitated by a computer database that summarized statistical information. The importance of using a common instrument to review and record data was emphasized when some of the field reports were returned to the RIMT with modifications that--although they were modified to be more field-user friendly--no longer fit the character recognition needs of the (larger) common database. Because of this and other analysis awkwardness in the FY 1997 program, the database and questionnaire formats will again be modified for FY 1998. Modifications will be aimed at enhanced compatibility and field-user friendliness.

The initial monitoring questionnaires had response categories of "Exceeds," "Meets," "Fails," "Not Capable of Meeting," and "Not Applicable."

Provincial monitoring teams indicated a desire to use “Not Met” instead of "Fails" in order to characterize a finding of noncompliance. This suggestion was incorporated throughout this FY 1997 Regional Implementation Monitoring Report.

Complete disclosure and openness again characterized the FY 1997 program. As in the pilot year, some Provincial Team Leaders exchanged lead positions for their respective agencies. For example, in the Willamette Province, the Forest Service Provincial Team Leader led reviews on BLM projects and the BLM Provincial Team Leader led reviews on Forest Service sales. Team participation also typically crossed agency boundaries. The wide representation and diversity of monitoring team members provides for the review team independence and objectivity that is crucial to reporting valid findings (see Appendix G).
Although this monitoring program is aimed at the regional scale, it is notable that when noncompliance was found by PIMTs some local units took steps to mitigate negative effects. In addition, some units instituted Forest-wide or District-wide changes in operating procedures to improve compliance with S&Gs.

Regional databases which maintain information on agency timber programs were not very compatible and, at times, not very accurate. This situation complicated monitoring efforts.

Results - Road Monitoring Process

Field review of randomly selected roads ranged from inspecting minor maintenance activities (e.g., a French drain on a secondary road) to major road construction. Given that road monitoring was being pilot tested in FY 1997 and that redundancies were evident during both field review and analysis, the RIMT has committed to improving process efficiencies for future timber sale and road monitoring.

Results - Restoration Project Monitoring Process

Restoration projects, also randomly chosen for implementation monitoring in FY 1997, had been drawn from a list of JITW projects. The first finding was that they had all passed through the NEPA planning process. In addition to meeting NEPA requirements, the NFP also required particular attention to the ROD and its S&Gs (see Part 2 of this report).

Because restoration projects were meant to improve environmental conditions, some offered that effectiveness monitoring for restoration should be emphasized over implementation monitoring. Implementation monitoring, however, sets the stage for effectiveness monitoring by first establishing a level of compliance. Without prior establishment of compliance, other judgments about effectiveness or worth of projects become much more difficult to interpret. Also not to be overlooked in basic determination of compliance or noncompliance--even for projects that are aimed at environmental improvement--is the fundamental need for governmental accountability. Implementation monitoring establishes accountability through equal application of standard criteria to restorative projects as well as extractive projects.

The monitoring questionnaire for restoration projects worked reasonably well, and few changes have been suggested to it. However, the regional JITW database used to select reviewed projects was limited in its usefulness because it lacked information on administrative subunits (i.e., Ranger Districts and Resource Areas). In addition, the database tracked individual contracts, not "projects," making it difficult to design a good sampling procedure. In spite of these shortcomings, the process was successful.

Results - Lessons Learned

Questionnaire Format

FY 1997 results have further established that regional questions drawn from ROD direction can be effectively answered through an objective process carried out by Provincial Monitoring Teams. The Provincial Monitoring Teams endorsed the value of the questionnaire in the review process, noting that organizing review questions by land use allocation in the same manner and sequence as the ROD aided teams in the interpretations and responses to the questions. Along with continuous improvement to bring clarity to the S&G-based questions, review teams found some questions to be more relevant to programmatic review rather than to specific project review. For example, a previous year's question asked "Have matrix objectives for silviculture included the following: production of commercial yields of wood, retention of moderate levels of ecologically valuable old-growth components, and provision of early successional habitat?" This question was deleted from the FY 1997 review, because it is not really pertinent to individual timber sale planning, but to general landscape planning.

The primary value of the questionnaire remains its use as an objective instrument for determining compliance with ROD direction. In sum, the questionnaire continues to serve as a catalyst for PIMT discussions that usually lead to consensus answers.

Summary Lesson Learned

The repeated and overriding lesson about the implementation monitoring process that has been learned from two years of NFP implementation monitoring is that public natural resource agents, in collaboration with citizens of diverse interests, can render credible judgments about public natural resource project compliance.

- Timber sales, roads, and restoration projects all indicated a high level of compliance with ROD direction and the S&Gs. The processes used to obtain these data were adequate. However, there are some important points to be made:

    - The timber sale questionnaire was acceptable with the primary recommendation being to delete "programmatic" questions, focusing entirely on project-level questions.

    - Evaluating roads separately from timber sales proved to be tedious and inefficient. The recommendation for the future is to monitor roads associated with timber sales as a single, combined activity. This would require the timber sale questionnaire to be expanded to include road-

specific questions. Repetitive questions on both the timber sale and roads questionnaires would be deleted.

- The review of restoration projects showed a high degree of compliance with ROD direction and S&Gs. The recommendation is for "restoration" to be reviewed at a landscape level that assesses the strategic importance of NFP objectives and not at a project level.

- Project-level reviews provide an important evaluation of how well agencies are meeting NFP direction and S&Gs. There is also a need to review S&Gs applicable to a landscape scale (e.g., watershed, province, and regional scales).

Costs of the FY 1997 Program

Costs of the FY 1997 Regional Implementation Monitoring Program again fell within the Regional Implementation Monitoring Team's expectations. Actual minimum and average costs were near the sums expected. Table 17 illustrates a simple cost accounting that is based on a subjective subsample of 21 sales where preparation costs, review costs, and/or travel and other costs were recorded:

Table 17
Estimated Costs for an Average FY 1997 Timber Sale Implementation Monitoring Program

Preparation	Review	Travel & Other	TOTAL
$965	$2,192	$1,139	$4,296

The range of costs to the government for implementation monitoring of timber sales is from approximately $800 for a simple salvage sale review to $7,740 for review of a commercial thinning that was utilized as a learning opportunity for a 19-member extended review team. Again as noted in the pilot year report, costs are primarily a function of the complexity of the subject projects, review team size, and the numbers of projects reviewed at one time.

Road monitoring costs, drawn from a sample of 7 projects for which cost information was available, averaged $2,415 per project (range: $550-$4600). Restoration project

monitoring cost estimates, based on a sample of only 5 project reviews, averaged $2,420 per project (range: $660-2,630).

The total estimated direct cost for the FY 1997 Implementation Monitoring Program (40 timber sales, 17 roads, and 16 restoration projects) is $251,615. FY 1996 (pilot year) cost for 45 timber sale reviews was estimated at $234,000. Neither year's figures include costs associated with host unit participation in reviews, regional program development, training, analysis, and reporting.

Provincial Monitoring Team Leaders were encouraged to track costs associated with field unit preparation, Provincial Monitoring Team review, and other categories such as travel and per diem. The actual costs derived from the 37 cost accounting reports submitted by the team leaders show an average of $4,090 per review.

The least expensive review was $550 which involved evaluating a road project. The most expensive project review was $7,740 for a timber sale.

Data analysis continues to back up the following cost containment principles:

- Monitoring costs increase as project complexity increases.
- Monitoring costs decrease with smaller review teams.
- Monitoring costs decrease when multiple projects are visited during the same review.

Project complexity is more relevant to overall costs than any other single factor. It simply takes more time to weigh and discuss issues surrounding projects having greater complexity. Also, by visiting more than one project on a given day, some review teams were able to efficiently use their field review time. Per diem costs were reduced when review team members were residents of local communities, able to return to their homes each night.

The estimated total direct cost for the 72 project reviews is $251,615. Indirect costs associated with overhead as well as monitoring program design, training, and analysis are not included in this figure.

Table 18
Cost Comparison - Average Cost per Type of Project

Timber Sale	Road	Restoration

Timber Sale	Road	Restoration
$4,296	$2,415	$2,420

Cost comparisons for the various components of the review (i.e. preparation, review, travel/other) were difficult because timber sale costs were often combined with road costs. This combination reflected the logistics of the review process where a timber sale was often reviewed first and a nearby road was reviewed afterwards. Because the majority of costs (e.g., mileage) were incurred first to evaluate the timber sale, the costs were charged to the timber sale even though some of the expense could have been pro-rated to the evaluation of the nearby road. Thus, timber sale monitoring costs are higher than road monitoring costs, both because the timber sales were larger and more complex and because the timber sale monitoring generally occurred first before the road(s) were monitored.

To verify the cost of monitoring, the average cost for each type of project was calculated first. The cost was then re-calculated omitting both the most expensive and the least expensive project in category. Even with the highest and lowest cost projects omitted, the average cost for each type of project varied by only approximately $100, suggesting consistency in cost estimates. This, coupled with consistency between the 1996 and 1997 programs (average timber sale cost was $5,200 and in '97 $4,090) provide confidence in the estimated monitoring costs and should not require increased bookkeeping by field personnel in future monitoring efforts.

Future monitoring costs are expected to become more efficient with a decrease in per unit costs as review teams gain experience and as the monitoring process continues to improve.

Discussion - Implementation Monitoring Process

Organizationally, the Regional Interagency Implementation Monitoring Team remains committed to principles of sampling, simplicity, and interagency cooperation.

Observations and Interpretations

Provincial Monitoring Teams and the originating field units again worked hard to accurately respond to the questions and determine compliance with the NFP. Procedurally, teams tried several methods to achieve efficiencies and conduct open reviews, rather than fault-finding exercises.

The sample size appeared to be a sufficient sample of NFP projects for monitoring and statistical analysis within the constraints of budget, time, personnel, and logistics capabilities.

Teams worked, as during the pilot year, to resolve questions through discussion and interaction. Teams reached consensus responses to most questions but were occasionally unable to agree on a single response to a question. In these instances, the Interagency Analysis Team and RIMT determined the most appropriate response. There were several instances when the PIMTs were unable to agree upon a single response to a question. Most of these occasions were for timber sale questions (28 instances) and roads (12 instances). On two occasions, they were unable to agree on restoration project questions. A review of the PIMT responses indicates that judging coarse woody debris S&Gs were the most difficult to assess.

The 1997 Implementation Monitoring Program built upon experiences from the 1996 Pilot Implementation Monitoring Program that was characterized by successful interagency, interdisciplinary, and public participation.

The 1997 program was also characterized by teamwork that surrounded discussions facilitated by questionnaires. The struggle to interpret and answer questions together is one aspect of the review process that develops understanding and trust between team members. The questionnaires for 1997 were modified according to PIMT recommendations from 1996 program critiques. Refer to the report, “Results of the FY 1996 (Pilot Year) Implementation Monitoring Program,” pp. 30-34, for additional background information on the uses of the questionnaires by provincial teams.

The questionnaire for timber sale monitoring used in the pilot year had undergone significant revisions and was generally noted to have been improved for 1997. While the roads questionnaire was optional in FY 1996, both the new questionnaire for

restoration activities and the previously optional questionnaire for roads were required for the first time in 1997. Where a road and timber sale were located close by, instructions to the PIMTs were to review the timber sale first and then apply a separate set of questions to the associated road. Many of the questions in the roads questionnaire were repeats of the timber sale questions and/or did not apply. To improve efficiency, review comments suggest that the timber sale and roads questions be combined and that the two projects be reviewed concurrently.

Developing and maintaining a consistent region-wide evaluation is critical to the success of NFP implementation monitoring. The FY 1997 reviews by PIMTs appeared to be much more consistent than the pilot year reviews. This assessment is based on the observation that there were comparatively fewer inconsistencies in how different teams answered the same question. A few questions appear to require re-wording to improve consistency.

It is important to compartmentalize the questionnaires. As the results show, all of the monitoring efforts found a large number of questions to be "Not Applicable" to specific timber sales, roads, or restoration projects. In some instances, this is due to "asking" irrelevant questions. However, in the majority of cases, the RIMT will continue to review the value of asking these questions which have a low level of applicability. Questions were answered Not Applicable because they pertained to a land use allocation that did not include the project area.

Due to the way timber sales were selected for review in 1997 (random sample of all sales), those provinces with higher timber sale volumes have the largest monitoring burden. Efforts are underway to make future project selection procedures more equitable.

The significant difference in noncompliance between harvested and nonharvested sales emphasizes the need to focus future monitoring on completed actions.

While most reviews appeared to have been conducted in a very objective manner, some team members did feel pressure to avoid "Not Met" responses. Team leaders need to continually reinforce the value of objective responses and the undesirability of less than objective responses.

Part 4 - Conclusions and Recommendations

The summary conclusions and recommendations have been placed in four categories: management direction, clarification of S&Gs, clarification of when S&Gs apply, and improvements to the monitoring process. These categories provide a framework for follow-up activities by focusing on general problem areas and specific actions.

The management direction category contains issues for which recommendations are based on findings where the S&G is clearly stated and understood. For these issues, the recommended action is for regional management to re-affirm commitment to these S&Gs and communicate the expectation of full compliance in the future.

The clarification of the S&Gs category addresses issues for which the monitoring results indicate difficulties in understanding, interpretation, and implementation of the S&G. As recommended in the FY 1996 report, issue resolution teams or interagency groups should address the S&G inconsistencies and field interpretations. Results of these (now ongoing) efforts should lead to greater consistency and efficiency in implementation of the S&Gs.

The third category, clarification of when and where S&Gs apply, contains issues concerning when, where, and to which agency a specific S&G applies. Many of these issues were resolved through redesign of the FY 1997 questionnaire. Some of these issues arise when the ROD implies that the S&G applies to all activities, when the intent would have been more appropriately applied to some activities (e.g., timber sales) and not others (e.g., hazard tree removal, road right-of-way blowdown removal). Others apply to programmatic matters rather than site-specific issues.

The fourth category, improvements to the monitoring process, contains issues related to the monitoring process that arose during the year's review and reporting efforts. In these cases, the continuous improvement process based on PIMT feedback to the RIMT continues to bring efficiencies to the NFP Implementation Monitoring Program.

Management Direction

The Provincial Monitoring Teams, who conducted the field monitoring reviews; the Regional Monitoring Team, who analyzed the Provincial Team reports and prepared the draft and final reports; and the Interagency Analysis Teams who further analyzed the field data all concluded that FY 1997 findings demonstrate high levels of compliance with the ROD and its S&Gs. Instances of noncompliance were anticipated to have minor biological effects at the regional scale and generally had low-to-moderate effects

at the local project-level scale (although there were two instances of high local effects). Exceptions are summarized in Table 5 with accompanying explanations about topics that showed higher rates of noncompliance.

Based on that summary conclusion, the RIMT recommends no major changes in management direction relating to NFP implementation for timber sales, roads, or restoration projects at this time. However, the RIMT does recommend a number of actions to improve NFP implementation. These are listed as follows:

Recommendations related to timber sales are to emphasize direction, training, and information for the following:

- Establishment of Riparian Reserves.
- Meeting the coarse woody debris S&Gs.
- Meeting green tree retention S&Gs.
- Improved coordination between project planning staff/decision makers and contract administrators to ensure that planned actions are fully translated and carried out in on-the-ground implementation.
- Meeting the snag requirements of the ROD and its S&Gs.
- Distribution of the Regional FY 1997 Implementation Monitoring Report to field offices with direction to adopt procedures and recommendations as appropriate.
- Evaluate regional timber sale databases for opportunities to improve compatibility, usefulness, and accuracy.

Recommendations related to roads are to emphasize direction, training, and information for the following:

- Establishment of Riparian Reserves for intermittent streams, <1 acre wetlands, and unstable areas.

Recommendations related to restoration projects are to emphasize direction, training, and information for the following:

- Avoiding the introduction of non-native species into LSRs. This finding and recommendation repeats a finding and recommendation from the FY 1996 report.

- Improved coordination between project planning staff/decision makers and contract administrators to ensure that planned actions are fully translated and carried out in on-the-ground implementation.

- Retaining trees felled for safety reasons in order to meet coarse woody debris needs.

Clarification and Improvements to S&Gs

The FY 1997 Monitoring Program, as in the pilot year program, provided field units, through the Provincial Monitoring Teams, the opportunity to identify difficulties with understanding and interpreting the S&Gs. Although a number of S&Gs continue to be cited as being ambiguous and difficult to understand and interpret, there were no significant problems identified. There continues to be room for improving and clarifying S&Gs to reduce multiple interpretations at the field level and to increase field unit efficiencies through clarification of ROD and S&G direction for:

- Hazard tree removal.
- Snags.
- Coarse woody debris.
- Riparian Reserve establishment.
- How to maintain legacy trees given the constraints of operational needs and safety concerns.

Such clarification can be facilitated by findings generated not only through implementation monitoring, but additionally through effectiveness monitoring and validation monitoring of the NFP. Some of these clarifications are intended by the ROD to be developed on a province-by-province basis. Action on these items is needed.

Clarification of When S&Gs Apply

Some S&Gs are allocation specific, others agency specific, others time specific, and others apply to programs more directly than projects. Most of the pilot year recommendations in this area were considered in the design, training, and instruments used in the FY 1997 program.

Recommendations

- Provide explicit guidance to the field on meeting S&Gs for actions relating to programmatic versus project requirements.

- Provide explicit guidance to field units on how to apply S&Gs for green tree retention, snags, coarse woody debris, and Aquatic Conservation Strategy objectives in areas designated for fuel breaks or risk reduction efforts.

Improvements to the Monitoring Process

NFP implementation monitoring features continue to facilitate credible results: intergovernmental, interagency team selection; training; project selection; field review evaluations; and cost containment.

The following list contains suggestions and recommendations from the Province Review Teams to improve the implementation monitoring process in FY 1997.

Recommendations

Monitoring Objectives

- Continue project-level reviews of key activities (i.e., timber sales).

- Expand implementation monitoring to assess S&Gs that address programmatic functions and planning issues in a landscape-level context.

Training and Orientation

- Continue the one-day, pre-season workshop for Provincial Monitoring Team Leaders and capitalize on the experience of FY 1996 and FY 1997 leaders.

- Continue to provide more detailed guidance on how to answer questions.

Provincial Monitoring Teams

- Provincial Monitoring Teams should be strengthened through active, personal recruitment of team members from federally recognized Tribes. Although federally recognized Tribes were usually afforded opportunities to participate in reviews through regular agency notification procedures, their status as sovereign governments warrants personal contact regarding participation.

- Continue to draw non-federal team membership from PACs.

- Continue to involve purchasers' representatives and contractors where possible in project reviews.

Sampling

- Continue to stratify sample populations so that maximal effort will go to types of projects having greater complexity or importance.

- Continue to focus evaluations on actions that have been implemented to some extent.

Cost Containment

- Continue to limit project selection to the highest priorities identified by the PACs, the field units, and the RIEC.

- Continue to address cost efficiency (e.g., concurrently monitoring timber sales, roads, and restoration projects). Monitoring systems should be designed to avoid duplication of efforts.

- Do not escalate cost reporting requirements for next year.

Communication

- Field units need ongoing information sources and contacts for specific applications, changes, updates, guidance, and clarification on the ROD and its S&Gs (e.g., protocols for Survey and Manage species surveys).

Follow-Up

- Recommend that agencies inform subordinate units about specific monitoring concerns so that corrective actions can be taken.

- Continue to use monitoring as a tool to extend the life of BLM and Forest Service land management plans.

The Questionnaire

- Continue to refine the questionnaire based on PIMT critiques.

- Continue to provide opportunities for the Provincial Monitoring Teams to identify and discuss questions (or the associated S&Gs) that are unclear, ambiguous, or of questionable biological value.

- Continue to improve training and direction for PIMTs that is aimed at achieving better question response consistency.

Acknowledgments

Internal agency and PAC reviews were conducted during the development of this report. Numerous comments and suggestions for modifying and improving the approach to implementation monitoring were provided. The Regional Monitoring Team wishes to thank everyone who contributed comments and ideas during these reviews, along with those who participated in the monitoring process.

Special thanks go to Provincial Monitoring Team leaders; Provincial Monitoring Team members; PACs; and Mary Schoenborn for document preparation.

Acronyms

AMA ..... Adaptive Management Area
BLM ..... Bureau of Land Management
EX Exceeded Standards and Guidelines
FACA ..... Federal Advisory Committee Act
IAC ..... Intergovernmental Advisory Committee
JITW ..... Jobs-in-the-Woods
LSR ..... Late-Successional Reserve
M ..... Met Standards and Guidelines
NA Standards and Guidelines were not Applicable
NC Not Capable of Meeting Standards and Guidelines
NEPA ..... National Environmental Policy Act
NFP ..... Northwest Forest Plan
NM ..... Did not Meet Standards and Guidelines
PAC ..... Provincial Advisory Committee
PIMT ..... Provincial Implementation Monitoring Team
REO ..... Regional Ecosystem Office, Portland, OR
RIMT ..... Regional Implementation Monitoring Team
ROD ..... Record of Decision
RIEC ..... Regional Interagency Executive Committee
S&G ..... Standard and Guideline

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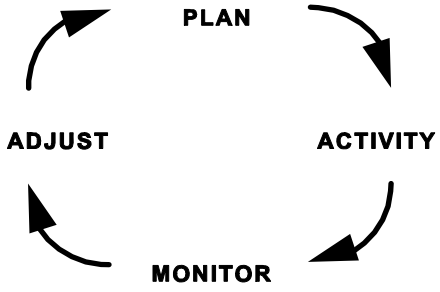
Appendix A
The Adaptive Management Process

Of primary importance is an understanding of how implementation monitoring is to be used. The key concept is "adaptive management," as used in the scientific literature and in the ROD and FEMAT (Thomas et al. 1993) documents which provide the conceptual basis for the Northwest Forest Plan.

The adaptive management process is a continuous cycle of action based on hypothesis testing. Planning is followed by an action based on a stated hypothesis, then the action is monitored, evaluation of monitoring results occurs, and finally adjustment is made.

ADAPTIVE MANAGEMENT PROCESS



This process helps managers determine how well their actions meet Northwest Forest Plan direction and identifies where management actions may need to be modified to increase success. Implementation monitoring is one key to adaptive management. Monitoring in the adaptive management framework is necessary because of the uncertainty of our predictions. The purposes of implementation monitoring under this adaptive management framework are to provide the manager with the information necessary to adjust management actions in a timely manner, and to document how successfully the Northwest Forest Plan is being implemented.

Appendix B

List of Timber Sales, Roads, and Restoration Projects Evaluated for FY 1997 NFP Implementation Monitoring Program

ID#	Province	Timber Sale	Road Project	Restoration Project
1	Klamath	Wendy SSTS		
2	Klamath	North Garner Salvage		
3	California Coast	Henry Fire Salvage		Pilot Ck. Rd. Decom.
4	SW Washington	Walupt-Cispus		Upper Cispus PCT
5	SW Washington	Doe		Manual PCT
6	Olympic Peninsula	Tharsabarhar Thin		
7	Klamath	Divide Helicopter		
8	Willamette	Delta Thin	Delta Thin Road	Blue River PCT/Pruning
9	Olympic Peninsula	Fresca	Fresca Road	Soil Bioengineering
10	OR Coast Range	Rye Mountain	Rye Mountain Roads	
11	SW Oregon	White Cap	White Cap Road	
12	Willamette	Flam Thin	Flam Thin Road	
13	Klamath	Ten Bear Roadside	Ten Bear Road Maint.	Steinacher Road Decom.
14	SW Oregon	Red Bess		
15	Klamath	South Hurdy Hazard		South Kelsey Trail
16	Klamath	Taylor Heli	Taylor Heli Road**	Specimen Fuel Red.
17	Klamath	46N10 Roadside Hazard		
18	Klamath	Happy Camp Mtn.		
19	OR Coast Range	Minerva Thin	Minerva Thin Road	
20	Klamath	Sweet Onion Salvage		
21	E Washington Cascades	Ty-Chi		Nason Creek Road Decon
22	SW Oregon	Fire Road Thin	Fire Road Thin Road	
23	Deschutes	Santiam Corridor	Santiam Corridor Road	Suttle Lakeshore Rest.
24	Willamette	Seven Fly	Seven Fly Road	
25	Willamette	Woody Hayes	Woody Hayes Road	D-Line Fall, Buck, Yard
26	Willamette	Pegasus		Fan Ck. Side Channel
27	SW Oregon	Ditto Salvage		Tree Planting/Rd. Decom.
28	Willamette	Lemans Salvage		Detroit Culvert Repair
29	Deschutes	Big Bear		
30	Klamath	Pott Cabbage	Pott Cabbage Road	

ID#	Province	Timber Sale	Road Project	Restoration Project
31	SW Oregon	Rum Willow		
32	NW Sacramento	Mud Thin		
33	E Washington Cascades	Mad Billy		
34	Willamette	Red 90*		Detroit PCT
35	Willamette	Mount June	Mount June Road	
36	SW Oregon	McLawson	McLawson Roads	
37	Deschutes	Copper/Tin	Copper/Tin Road	
38	Willamette	Roland Minto		
39	SW Oregon	Buckhorn	Buckhorn Road	Dunn Creek Obliteration
40	Willamette	Camp 5 Thin (North 5)	North 5 Thin Road	

* Red 90 was not a NFP timber sale, but a legislatively directed sale under the salvage rider

** Road evaluated, but questionnaire lost by administrative unit and project unavailable for analysis

Appendix H
Summary of Compliance of Timber Sales, Roads, and Restoration Projects

Timber Sales

Sale	Exceeded	Met	Not Met	Not Capable	Not Applicable	Compliance (%)*
1	0	22	0	0	107	100.0
2	0	23	4	0	102	85.2
3	0	21	1	0	107	95.5
4	0	32	0	0	97	100.0
5	3	29	0	0	97	100.0
6	0	24	0	1	104	100.0
7	3	18	0	0	108	100.0
8	0	19	6	0	104	76.0
9	0	26	0	1	102	100.0
10	1	24	2	0	102	92.6
11	3	25	0	1	100	100.0
12	0	34	0	0	95	100.0
13	0	26	2	0	101	92.9
14	1	13	0	0	115	100.0
15	2	25	0	0	102	100.0
16	1	28	0	2	98	100.0
17	0	15	0	0	114	100.0
18	2	24	0	0	103	100.0
19	0	32	0	2	95	100.0
20	0	24	0	0	105	100.0
21	2	27	1	0	99	96.7
22	0	22	2	0	105	91.7
23	1	36	10	1	81	79.2
24	0	27	2	0	100	93.1
25	0	17	0	1	111	100.0
26	2	23	0	0	104	100.0

Sale	Exceeded	Met	Not Met	Not Capable	Not Applicable	Compliance (%)*
27	1	20	0	2	106	100.0
28	0	21	0	0	108	100.0
29	2	30	0	0	97	100.0
30	0	23	2	0	104	92.0
31	2	21	0	1	105	100.0
32	1	20	0	0	108	100.0
33	2	26	1	3	97	96.9
35	0	23	2	0	104	92.0
36	5	17	2	0	105	91.7
37	0	27	0	2	100	100.0
38	0	29	3	0	97	90.6
39	0	37	1	0	91	97.4
40	0	27	0	2	100	100.0
TOTAL	34	957	41	19	3980	96.5

* Responses of exceeded, met, and not capable were considered to have met the compliance criteria (from a biological perspective) associated with ROD S&Gs.

Road Projects

Road	Exceeded	Met	Not Met	Not Capable	Not Applicable	Unknown	Compliance (%)*
8	1	38			48		100%
9		29			59		100%
10		23	3		61		88%
11	1	31			55		100%
12		24			63		100%
13		26			61		100%
19	1	33			53		100%
22		20			67		100%
23		22			65		100%
24		26	2		59		93%
25		14			73		100%
30		23			64		100%
35		14			73		100%
36	1	18	1		67		95%
37		23			64		100%
39		34			53		100%
40		33			54		100%
TOTAL	5	429	7	0	1,038	0	98%

* Responses of exceeded, met, and not capable were considered to have met the compliance criteria (from a biological perspective) associated with ROD S&Gs.

Restoration Projects

Project	Exceeded	Met	Not Met	Not Capable	Not Applicable	Unknown	Compliance (%)*
3		15	3		80		83%
4		12		1	85		100%
5		20		1	77		100%
8		23			75		100%
9		18			80		100%
13	5	25			68		100%
15	2	7			89		100%
16		23			75		100%
21		29	1		68		97%
23		15			83		100%
25		18			80		100%
26		25			73		100%
27		21	1		76		95%
28		17			81		100%
34		14			84		100%
39		30	1		67		97%
TOTAL	7	312	6	2	1,241	0	98%

* Responses of exceeded, met, and not capable were considered to have met the compliance criteria (from a biological perspective) associated with ROD S&Gs.

Appendix C
Summary of Questionnaire Responses for Timber Sales

This appendix includes two parts: the instructions for responding to the questionnaire and a table which provides the questions to be answered, the final categorization of responses (e.g., whether the standard and guideline was met, not met, etc.), the percentage of "applicable" responses that complied with the standards and guidelines (i.e., responses of exceeded, met, and not capable), and a summary sentence of any actions that resulted in a response that either exceeded or did not meet Northwest Forest Plan standards and guidelines.

1997 IMPLEMENTATION QUESTIONNAIRE: TIMBER SALES (V2.1)

Instructions

- Please complete a questionnaire and narrative report for each timber sale. An electronic version of your report should be submitted by October 1, 1997.

- **Each question has five potential responses** as to how well the project meets the standards and guidelines (note: some questions can only be answered met or not met).
  - **Exceeded** the biological requirements of the S&G (e.g., the S&Gs call for 240 linear feet of logs per acre greater than 20 inches in diameter and 20 feet long and the project retained 320 linear feet of such logs, the project "exceeded" the S&G);
  - **Met** the S&G (if, in the above example, 240 feet of such logs were retained);
  - **Not Met** to meet the S&G (if, in the above example, 180 feet of such logs were retained - but it was possible to have retained 240 feet);
  - **Not capable of meeting** the S&G (if, in the above example, 180 feet of such logs were retained - but the site did not have enough 20 inch logs to meet the S&G. Thus, the S&G was not met, but there was no way to meet it); and
  - **Not applicable** (for example, if a question pertains to management of a Survey and Manage species and there are no occurrences of the species in the project area - in the above example, a response of not applicable should not occur.

- Responses of "exceeded", "not met", or "not capable" of meeting MUST be explained. The potential biological effects of these situations will be summarized in the regional report. To facilitate the regional report, team reports should address local biological effects (positive, no effect, and negative effects - low, medium, or high).

- Where post-NFP amendments or NFP-directed analyses have modified initial S&Gs, the new, modified requirements should be used to determine compliance. Such situations must be summarized in the team report. The team will identify all S&G questions that have been locally modified, cite the modification document, and describe the modification.

- Some questions have a secondary question in parentheses. Answer both questions, but DO NOT base your response on meeting the S&G on the secondary question. For example, question 37 asks "Were the results of Watershed Analysis used to support the decision-making process?" The secondary question asks "Is the project consistent with the Watershed Analysis?" If a Watershed Analysis was used, the correct response is "meets" - regardless of how the secondary question is answered.

- Comment on unclear questions, if the S&G is problematic, or if the team failed to reach consensus.

- For efficiency, some units may fill in the answers to the questions prior to the site visit. If the team decides on a response different from the unit's response, the team's response should be recorded. Such differences in response should be explained in the comment section.

- The questionnaires for timber sales and roads have significant overlap. For your convenience, the road questions that overlap timber sale questions are cross-referenced back to the timber sale form. Questions unique to the road questionnaire are identified in bold type. Narrative comments for roads do not have to be duplicated, but can be incorporated by reference to the applicable road question.

- The questions have been segregated into several categories. You may not have to answer all questions, but you do have to answer all questions pertaining to the type of timber sale being reviewed. The chart below indicates the appropriate section to complete.

SECTION IN QUESTIONNAIRE							
Land Use Allocation	**All (General)**	**LSR/ MLSA**	**ACS/ Riparian Reserves**	**Matrix**	**AMA**	**Species**	**Research**
LSR/MLSA	X	X	X			X	X
Matrix	X		X	X		X	X
AMA	X		X		X	X	X

Questionnaire and Responses to Individual Questions

Question			Comments
1	Ex	2	Has the timber sale undergone required site-specific analysis? Sale 10: Exceeded; Additional analyses and agency reviews Sale 11: Exceeded; Extra site reconnaissance and effort
	M	37	
	NM	0	
	NC	0	
	NA	0	
	%	100.0	
2	Ex	1	Does the timber sale comply with regulatory requirements for public participation and administrative appeal? Sale 11: Exceeded; Extra public meetings and field reviews
	M	38	
	NM	0	
	NC	0	
	NA	0	
	%	100.0	
3	Ex	0	Have analyses been conducted with coordination and consultation occurring to ensure consistency under existing laws (NEPA, ESA, Clean Water Act)?
	M	39	
	NM	0	
	NC	0	
	NA	0	
	%	100.0	
4	Ex	0	If land allocations overlap within the project area, have all applicable S&Gs been applied?
	M	30	
	NM	0	
	NC	0	
	NA	9	
	%	100.0	
5	Ex	0	In situations where more than one set of S&Gs apply, have the more restrictive S&Gs been followed?
	M	29	
	NM	0	
	NC	0	
	NA	10	
	%	100.0	
6	Ex	1	Have S&Gs in current plans been applied where they are more restrictive or provide greater benefits to late-successional forest related species? Sale 36: Exceeded; Red tree vole surveys before required
	M	20	
	NM	0	
	NC	0	
	NA	18	
	%	100.0	
7	Ex	0	When S&Gs vary between California and Oregon and a project is along the border of these two states, does management follow either state boundaries or administrative boundaries (to follow administrative boundaries, management must be consistent, stated as the intent of the unit, does not violate a clear assumption of the S&Gs, and involves only a slight fraction of the unit)?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	

Question			Comments
8	Ex	0	Has an Initial Late-Successional Reserve Assessment / Late-Successional Reserve Assessment / Managed Late-Successional Area Assessment been reviewed by and found consistent by the Regional Ecosystem Office prior to habitat manipulation activities in LSRs or MLSAs? Sale 13: Not Met; Did not have LSRA approved by REO.
	M	9	
	NM	1	
	NC	0	
	NA	29	
	%	90.0	
9	Ex	0	Have Late-Successional Reserves been established for all occupied marbled murrelet sites?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
10	Ex	0	If marbled murrelet occupation is documented, has all contiguous existing and recruitment habitat for marbled murrelets within a 0.5-mile radius been protected to maximize interior old-growth habitat?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
11	Ex	0	Have silvicultural treatments in non-murrelet habitat within the 0.5-mile murrelet circle been designed to protect or enhance suitable or replacement habitat?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
12	Ex	0	Have 100-acre Late-Successional Reserves been established for all spotted owl activity centers (known as of January 1, 1994)?
	M	14	
	NM	0	
	NC	0	
	NA	25	
	%	100.0	
13	Ex	0	Have the 100-acre spotted owl areas (as of January 1, 1994) been maintained even if they are no longer occupied by spotted owls?
	M	12	
	NM	0	
	NC	0	
	NA	27	
	%	100.0	
14	Ex	0	Have timber management activities within the 100-acre spotted owl areas complied with S&Gs for Late-Successional Reserves?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
15	Ex	0	Have management activities adjacent to the 100-acre spotted owl areas been designed to reduce risks from natural disturbance to these areas?

Question			Comments
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
16	Ex	0	Have Managed Late-Successional Areas been established for managed pair areas around known spotted owl activity centers (known as of January 1, 1994)?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
17	Ex	0	Have Managed Late-Successional Areas been established for protection buffer species?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
18	Ex	0	Unless exempted, have thinning, salvage, or silvicultural treatments within LSRs been reviewed and considered consistent by the Regional Ecosystem Office? If treatment was exempted from Regional Ecosystem Office review, explain. Sale 13: Not Met; Did not have LSRA approved by REO
	M	10	
	NM	1	
	NC	0	
	NA	28	
	%	90.9	
19	Ex	0	In LSR timber harvest units west of the Cascades, have stands over 80 years old(110 years in the North Coast Adaptive Management Area) been excluded?
	M	3	
	NM	0	
	NC	0	
	NA	36	
	%	100.0	
20	Ex	0	Has the purpose of silvicultural treatments in LSRs west of the Cascades(precommercial and commercial thinning) been to benefit the creation and maintenance of late-successional forest conditions?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
21	Ex	0	Has the purpose of silvicultural treatments in LSRs west of the Cascades(precommercial and commercial thinning) been to benefit the creation and maintenance of late-successional forest conditions?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
22	Ex	0	Has the objective of LSR silvicultural activities in younger stands east of the Cascades or in the Klamath Provinces of Oregon and California been to accelerate development of late-successional conditions while making the future stand less susceptible to natural
	M	1	
	NM	0	

Question			Comments
	NC	0	disturbances?
	NA	38	
	%	100.0	
23	Ex	0	Have salvage activities in younger stands east of the Cascades or in the Klamath Provinces of Oregon and California focused on the reduction of catastrophic insect, disease, and fire threats?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
24	Ex	0	Has salvage been limited to disturbed sites that are greater than 10 acres in size and have less than 40 percent canopy closure?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
25	Ex	0	Have all standing live trees been retained in salvage areas (except as needed to provide reasonable access or for safety)?
	M	3	
	NM	0	
	NC	0	
	NA	36	
	%	100.0	
26	Ex	0	Have snags that are likely to persist (until the stand reaches late-successional conditions) been retained in salvage areas?
	M	3	
	NM	0	
	NC	0	
	NA	36	
	%	100.0	
27	Ex	0	Has coarse woody debris been retained in salvage areas in amounts so that in the future there will be coarse woody debris levels similar to those found in naturally regenerated stands?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
28	Ex	0	Has retained coarse woody debris approximated the species composition of the original stand?
	M	7	
	NM	0	
	NC	0	
	NA	32	
	%	100.0	
29	Ex	0	Have green-tree and snag guidelines been met before those for coarse woody debris?
	M	4	
	NM	0	
	NC	0	

Question			Comments
	NA	35	
	%	100.0	
30	Ex	0	If salvage does not meet the general guidelines, has it focused on areas where there is a future risk of unacceptable large scale fire or large scale insect damage?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
31	Ex	0	If access to salvage sites was provided and some general guidelines were not met, did the action ensure that a minimum area was impacted and that the intent or future development of the LSR was not impaired?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
32	Ex	0	Do MLSAs fuel management and fire suppression activities within LSRs minimize adverse impacts to late-successional habitat and emphasize maintaining late-successional habitat?
	M	5	
	NM	0	
	NC	0	
	NA	34	
	%	100.0	
33	Ex	0	Have hazard reduction and other prescribed fire applications been reviewed by and considered consistent by the Regional Ecosystem Office prior to completion of the fire management plan?
	M	6	
	NM	0	
	NC	0	
	NA	33	
	%	100.0	
34	Ex	0	Has the project avoided the introduction of nonnative plants and animals into Late-Successional Reserves (if an introduction is undertaken, has an assessment shown that the action will not retard or prevent the attainment of LSR objectives)?
	M	9	
	NM	0	
	NC	0	
	NA	30	
	%	100.0	
35	Ex	0	Have silviculture, salvage, and other multiple-use activities in Managed Late-Successional Areas been guided by the objective of maintaining adequate amounts of suitable habitat for the northern spotted owl?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
36	Ex	1	If required, has a Watershed Analysis been completed for watershed(s) encompassing the project area (required prior to timber harvest, salvage, or management activities in key watersheds, roadless areas, or Riparian Reserves)? Sale 2: Not Met; No WA for some areas when needed Sale 16: Exceeded; WA plus additional analyses done
	M	24	
	NM	1	
	NC	0	
	NA	13	
	%	96.2	

Question			Comments
37	Ex	0	Were the results of Watershed Analysis used to support the decision-making process? Is the project consistent with the Watershed Analysis? Sale 2: Not Met; No WA for some areas when needed
	M	24	
	NM	1	
	NC	0	
	NA	14	
	%	96.0	
38	Ex	0	Were the results of Watershed Analysis used to support the decision-making process? Is the project consistent with the Watershed Analysis? Sale 2: Not Met; No WA for some areas when needed
	M	38	
	NM	0	
	NC	0	
	NA	1	
	%	100.0	
39	Ex	2	Have riparian reserve boundaries been established for fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified)? If interim boundaries were modified, explain. Sale 8: Not Met; Used RR of 150' rather than SPT of 188' Sale 5: Exceeded; Used tallest SPT in planning area Sale 15: Exceeded; Used RR of 660'-1320' (Smith River Management Plan)
	M	14	
	NM	1	
	NC	0	
	NA	22	
	%	94.1	
40	Ex	4	Have riparian reserve boundaries been established for permanently flowing, non-fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of one site potential tree height; slope distance of 150 feet; or as modified)? If interim boundaries were modified, explain. Sale 8: Not Met; Used RR of 150' rather than SPT of 188' Sale 35: Not Met; Did not establish RR for one stream Sale 38: Not Met; Established RR too narrow (<200' rather than 220') Sale 5: Exceeded; Used tallest SPT in planning area Sale 15: Exceeded; Used RR of 660'-1320' (Smith River Management Plan) Sale 18: Exceeded; RR expanded because in LSR Sale 36: Exceeded; Used 200' RR buffers (>1 SPT)
	M	21	
	NM	3	
	NC	0	
	NA	11	
	%	89.3	
41	Ex	4	Have riparian boundaries been established for seasonally flowing or intermittent streams, wetlands <1 acre, and unstable areas(the greater of: the extent of unstable/potentially unstable areas; stream channel and extent to the top of the inner gorge; outer edges of riparian vegetation; slope distance of one site potential tree height; slope distance of 100 feet; or as modified)? If interim boundaries were modified, explain. Sale 2: Not Met; No WA support for 1/2 SAT RR Sale 8: Not Met; Used RR of 150' rather than SPT of 188' Sale 21: Not Met; Used RR of 100' rather than 150' Sale 22: Not Met; Did not establish RRs for thinning project Sale 24: Not Met; RR not established for one <1 ac. wetland Sale 39: Not Met; Reduced interim RR widths w/o WA support Sale 5: Exceeded; Used tallest SPT in planning area Sale 7: Exceeded; Buffered <1acre wetlands with 1 SPT Sale 18: Exceeded; RR expanded because in LSR Sale 36: Exceeded; Used 200' RR buffers (>1 SPT)
	M	25	
	NM	6	
	NC	0	
	NA	4	
	%	82.9	
42	Ex	0	Have riparian reserve boundaries been established for lakes and natural ponds(the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified). If interim boundaries were modified, explain.
	M	8	
	NM	1	

Question			Comments
	NC	0	Sale 8: Not Met; Used RR of 150' rather than SPT of 188'
	NA	30	
	%	88.9	
43	Ex	0	Have riparian reserve boundaries been established for constructed ponds and reservoirs and wetlands greater than 1 acre (the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of one site potential tree height; slope distance of 150 feet from the edge of the wetland or the maximum pool elevation; or as modified).
	M	6	
	NM	0	
	NC	0	
	NA	33	
	%	100.0	
44	Ex	0	Have Riparian Reserves been excluded from timber harvest except for treatments necessary to obtain Aquatic Conservation Strategy objectives (or for salvage/hazard tree removal if Watershed Analysis determines that present and future coarse woody debris needs are met and ACS objectives are not adversely affected)? Sale 2: Not Met; RR harvest without WA support Sale 10: Not Met; RR thinned w/o WA support for ACS Objectives Sale 38: Not Met; Removed 12 hazard trees from RR
	M	32	
	NM	3	
	NC	0	
	NA	4	
	%	91.4	
45	Ex	0	Do fuel treatments and fire suppression strategies meet Aquatic Conservation Strategy objectives and minimize disturbance of riparian ground cover and vegetation?
	M	26	
	NM	0	
	NC	0	
	NA	13	
	%	100.0	
46	Ex	0	Have incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities been located outside Riparian Reserves?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
47	Ex	0	Has an interdisciplinary team been used to predetermine suitable incident base and helibase locations if such activities must be located within Riparian Reserves?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
48	Ex	0	Have prescribed burn projects and prescriptions been designed to contribute to the attainment of the Aquatic Conservation Strategy objectives?
	M	17	
	NM	0	
	NC	0	
	NA	22	
	%	100.0	
49	Ex	0	Has delivery of retardant, foam, or additives to surface waters for fire and fuels management been minimized?
	M	4	
	NM	0	
	NC	0	

Question			Comments
	NA	35	
	%	100.0	
50	Ex	0	Have trees which were felled to reduce safety risks been kept on-site when needed for coarse woody debris? Sale 23: Not Met; Removed hazard trees from RR by accident Sale 24: Not Met; Removed hazard trees from RR Sale 38: Not Met; Removed 12 hazard trees from RR
	M	18	
	NM	3	
	NC	0	
	NA	18	
	%	85.7	
51	Ex	0	For National Forests, has the 15 percent green-tree retention standard for matrix been applied where current plans and draft plan preferred alternatives for National Forests are greater than 15 percent for the matrix?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
52	Ex	0	For western Oregon and Washington north of and including the Willamette National Forest and the Eugene District Bureau of Land Management, have 240 linear feet of logs per acre (greater than or equal to 20 inches been retained in diameter and 20 feet long and decay class 1 and 2)? Sale 35: Not Met; Did not retain 240' CWD
	M	3	
	NM	1	
	NC	2	
	NA	33	
	%	83.3	
53	Ex	2	In eastern Oregon and Washington, and western Oregon south of the Willamette National Forest and the Eugene Bureau of Land Management District, has a minimum of 120 linear feet of logs per acre (greater than or equal to 16 inches in diameter and 16 feet long and in decay class 1 and 2) been retained? Sale 23: Not Met; Did not retain 120' CWD Sale 27: Exceeded; Retained >120' of CWD Sale 36: Exceeded; Retained >120' of CWD
	M	2	
	NM	1	
	NC	0	
	NA	34	
	%	80.0	
54	Ex	0	For Forest Service and BLM, do down logs left for coarse woody debris reflect the species mix of the original stand?
	M	21	
	NM	0	
	NC	1	
	NA	17	
	%	100.0	
55	Ex	0	In areas of partial harvest, have coarse woody debris guidelines been modified to reflect the timing of stand development cycles? Sale 22: Not Met; Did not assess CWD in partial harvest Sale 23: Not Met; CWD retained did not reflect the timing of stand development cycles Sale 30: Not Met; Did not assess and retain CWD needs
	M	11	
	NM	3	
	NC	0	
	NA	25	
	%	78.6	
56	Ex	0	Has coarse woody debris already on the ground been retained and protected to the greatest extent possible during treatment?
	M	20	
	NM	0	
	NC	0	
	NA	19	

Question			Comments
	%	100.0	
57	Ex	0	For National Forests, have down logs been left within forest patches that are retained under the green-tree retention guidelines?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
58	Ex	1	For National Forests, outside the Oregon Coast Range and the Olympic Peninsula Provinces and the Mount Baker-Snoqualmie National Forest, has at least 15% of each cutting unit been retained? Sale 23: Not Met; Did not retain 15% GTR in all units Sale 29: Exceeded; 17.5% clumped GTR (>15% +/- 10% variation)
	M	3	
	NM	1	
	NC	1	
	NA	33	
	%	83.3	
59	Ex	0	On the Mt. Baker-Snoqualmie National Forest, have site specific prescriptions been developed to maintain green trees, snags and down logs?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
60	Ex	0	For National Forests, has 70% of the total retained area occurred as aggregates of moderate to larger size (0.5 to 2.5 acres or 0.2 to 1 hectare) with the remainder as dispersed structures? Sale 30: Not Met; Did not retain GTR clumps in one unit
	M	3	
	NM	1	
	NC	2	
	NA	33	
	%	83.3	
61	Ex	0	For National Forests, have patches and dispersed retention included the largest, oldest, decadent or leaning trees and hard snags occurring in the unit?
	M	6	
	NM	0	
	NC	0	
	NA	33	
	%	100.0	
62	Ex	0	For National Forests, are green tree retention and dispersed retention patches being retained indefinitely?
	M	5	
	NM	0	
	NC	1	
	NA	33	
	%	100.0	
63	Ex	0	For lands administered by the BLM in California, have green tree and snag retention been managed according to existing District Plans, which emphasize retention of old-growth?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
64	Ex	0	For BLM lands north of the Grants Pass line, and including all of the Coos Bay District,

Question			Comments
	M	2	outside of the South Willamette-North Umpqua Area of Concern, have projects within the 640 acre Connectivity/Diversity Blocks incorporated 150-year control rotations?
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
65	Ex	0	For BLM lands north of the Grants Pass line, and including all of the Coos Bay District, outside of the South Willamette-North Umpqua Area of Concern, have projects within the 640 acre Connectivity/Diversity Blocks retained 12 to 18 green trees per acre?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
66	Ex	0	For BLM lands north of the Grants Pass line, and including all of the Coos Bay District, outside of the South Willamette-North Umpqua Area of Concern, have projects within the 640 acre Connectivity/Diversity Blocks retained 25 to 30 percent in each 640 acre block in late-successional condition?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
67	Ex	0	For BLM lands north of Grants Pass and including the entire Coos Bay District,were 6 to 8 green trees per acre left in harvest units in the remainder of the matrix(General Forest Management Area)?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
68	Ex	0	For Medford District, BLM, lands south of Grants Pass, were 16 to 25 large green trees per acre retained in harvest units?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
69	Ex	0	For BLM lands, have 150-year area control rotations been applied to Connectivity/Diversity Blocks (in Old-growth Emphasis Areas in the Eugene District and to the seven Managed Pair Areas and two Reserved Pair Areas on the Coos Bay District surrounding Designated Conservation Area OD-33)? Note: Designated as Connectivity/Diversity Blocks in BLM RMPs.
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
70	Ex	0	For BLM lands, has 25- 30% of each Connectivity/Diversity Block been retained in late-successional condition (in Old-growth Emphasis Areas in the Eugene District and to the seven Managed Pair Areas and two Reserved Pair Areas on the Coos Bay District surrounding Designated Conservation Area OD-33)? Designated as Connectivity/Diversity Blocks in BLM RMPs.
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
71	Ex	0	For BLM lands, have 12-18 green trees per acre been retained in Connectivity/Diversity Blocks (in Old-growth Emphasis Areas in the Eugene District and to the seven Managed Pair Areas and two Reserved Pair Areas on the Coos Bay District surrounding
	M	0	

Question			Comments
	NM	0	Designated Conservation Area OD-33)? Designated as Connectivity/Diversity Blocks in BLM RMPs.
	NC	0	
	NA	39	
	%	---	
72	Ex	3	Did the project employ practices which minimize soil and litter disturbance from harvest methods, yarding, and heavy equipment? Sale 14: Exceeded; Restricted equip to existing roads Sale 23: Exceeded; Helicopter logging, over-snow logging, season restr. Sale 31: Exceeded; All yarding from existing roads
	M	19	
	NM	0	
	NC	0	
	NA	17	
	%	100.0	
73	Ex	0	Have specific measures been undertaken to reduce the intensity and frequency of site treatment practices?
	M	21	
	NM	0	
	NC	0	
	NA	18	
	%	100.0	
74	Ex	0	Have late-successional patches been retained where less than 15% of the Federal lands in a fifth field watershed are in late-successional forest?
	M	5	
	NM	0	
	NC	1	
	NA	33	
	%	100.0	
75	Ex	1	Have fire and fuels management activities in the rural interface been coordinated with local governments, agencies, and landowners during watershed analysis to identify additional factors which may affect hazard reduction goals? Sale 32: Exceeded; Consulted/coordinated with all adjacent owners
	M	4	
	NM	0	
	NC	0	
	NA	34	
	%	100.0	
76	Ex	0	Has information on known sites for Survey and Manage species (Survey Strategy 1) been used in the design modification and implementation of activities?
	M	38	
	NM	0	
	NC	0	
	NA	1	
	%	100.0	
77	Ex	1	Has the project managed known sites for Survey and Manage species (Survey Strategy 1 and Survey Strategy 2)? Sale 11: Exceeded; Red tree vole surveys before required
	M	13	
	NM	0	
	NC	0	
	NA	25	
	%	100.0	
78	Ex	0	Have 600 acre management areas been established around the two unprotected sites of Oxyporous nobilissimus until site-specific measures have been developed? Have site-specific measures been developed, explain?
	M	1	
	NM	0	
	NC	0	

Question			Comments
	NA	38	
	%	100.0	
79	Ex	0	Have 160 acres been withdrawn from ground-disturbing activities for rare and endemic fungi if site-specific measures have not been developed? Have site-specific measures been developed, explain.
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
80	Ex	0	In marbled murrelet habitat, within 50 miles of the coast, have marbled murrelet surveys been conducted to protocol in areas planned for timber harvest?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
81	Ex	0	Have stands of overmature white fir at about 5,000 feet elevation been maintained for Ptilidium californicum (liverwort)?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
82	Ex	0	Has timber harvest been deferred and removal of fallen trees and logs been avoided at Ptilidium californicum (liverwort) sites?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
83	Ex	0	Have known sites of Ulota meglospora (moss) been protected?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
84	Ex	0	Have timber harvest or other activities been deferred which would not maintain desired habitat characteristics and population levels for Ulota meglospora (moss)?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
85	Ex	0	Have ground-disturbing activities been deferred at sites of Aleuria rhenana(fungus)?
	M	0	
	NM	0	
	NC	0	
	NA	39	

Question			Comments
	%	---	
86	Ex	0	Have older forests been protected from ground disturbance where the fungi Otidealeporina, O. onotica, and O. smithii have been located?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
87	Ex	0	Have known sites and discovered localities of Shasta salamander been delineated and protected from timber harvest, mining, quarry activity, and road building?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
88	Ex	0	Has a buffer of at least the height of one site-potential tree or 100 feet horizontal distance, whichever is greater, surrounding the outcrop been established for each site containing Shasta salamanders?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
89	Ex	1	Have surveys for great gray owls been conducted prior to ground disturbing activities, within their range and habitat? Sale 31: Exceeded; GGO surveys conducted when not required
	M	5	
	NM	0	
	NC	0	
	NA	33	
	%	100.0	
90	Ex	0	Has the project maintained a no-harvest buffer of 300 feet around meadows and natural openings within the range and habitat of the great gray owl?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
91	Ex	0	Has the project protected a 1/4-mile protection zone around nest sites of the great gray owl?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
92	Ex	0	Were decay class 3, 4, and 5 logs and canopy closure greater than 70% maintained at sites containing the mosses Brotherella roellii, Buxbaumia viridis,Rhizomnium nudum, Schistostega pennata, and Tetraphis geniculata?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
93	Ex	0	Have activities that conflict with maintaining suitable habitat characteristics and known

Question			Comments
	M	0	populations of Brotherella roellii (moss) been deferred?
	NM	0	
	NC	0	
	NA	39	
	%	---	
94	Ex	0	Have deep litter layers of older forests where Sarcosoma mexicana (fungus) is found been protected?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
95	Ex	0	Has the project maintained buffers of at least the height of one site-potential tree or 100-feet horizontal distance, whichever is greater, surrounding the known locations for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
96	Ex	0	Have ground disturbing activities that disrupt the talus layer been avoided for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
97	Ex	0	Has a 40 percent canopy closure been maintained within the buffers for the Larch Mountain and Del Norte Salamanders?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
98	Ex	0	If partial harvest was undertaken within the buffers for the Larch Mountain Salamander and the Del Norte Salamander, was it conducted using helicopters or high-lead cable systems?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
99	Ex	0	Has removal of overstory trees within the buffer for the Siskiyou Mountain Salamander been prohibited?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
100	Ex	0	Has protection been provided for caves, mines, and abandoned wooden bridges and buildings that are used as roost/hibernation sites for bats?
	M	2	

Question			Comments
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
101	Ex	0	Have surveys for bats been conducted according to a standardized regional protocol?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
102	Ex	1	Has timber harvest been prohibited within 250 feet of sites containing bats? Sale 36: Exceeded; Dropped area due to bats
	M	1	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
103	Ex	0	Have site management measures been developed for sites containing bats?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
104	Ex	0	If Townsend's big-eared bats were found, have the appropriate state wildlife agencies been notified?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
105	Ex	0	Have management prescriptions included special consideration for caves or mines known to be occupied by Townsend's big-eared bat?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
106	Ex	4	For both Forest Service and BLM lands: Have snags been retained within the harvest unit at levels sufficient to support species of cavity-nesting birds at 40 percent of potential population levels? Sale 23: Not Met; Did not retain 40% pop. potential of snags in some areas Sale 36: Not Met; Did not assess/retain snags Sale 21: Exceeded; Retained 100% population potential of snags Sale 26: Exceeded; Retained 60% population potential of snags Sale 29: Exceeded; Retained 100% population potential of snags Sale 33: Exceeded; Retained 100% population potential of snags
	M	18	
	NM	2	
	NC	7	
	NA	8	
	%	93.5	
107	Ex	1	Have 0.6 conifer snags (ponderosa and Douglas-fir) per acre, at least 15 inches in diameter or the largest available, and in the soft decay stage, been retained for the
	M	7	

Question			Comments
	NM	1	white-headed woodpecker and the pygmy nuthatch, if within their range and habitat? Sale 23: Not Met; Did not retain needed snags in some areas Sale 21: Exceeded; Retained 100% population potential of snags
	NC	0	
	NA	30	
	%	88.9	
108	Ex	1	Have 0.12 conifer snags (mixed conifer and lodgepole pine in higher elevations of the Cascade Range) per acre, at least 17 inches in diameter or largest available, and in the hard decay stage, been retained for black-backed woodpecker, if within their range and habitat? Sale 23: Not Met; Did not retain needed snags in some areas Sale 33: Exceeded; Retained 100% population potential of snags
	M	7	
	NM	1	
	NC	0	
	NA	30	
	%	88.9	
109	Ex	0	Have some beetle infested trees been left for black-backed woodpeckers, if within their range and habitat? Sale 23: Not Met; Beetle invested trees were not retained in some areas
	M	8	
	NM	1	
	NC	0	
	NA	30	
	%	88.9	
110	Ex	1	Have the needs of other cavity nesting species, including primary cavity nesters, been provided for (above and beyond the needs for white-headed woodpecker (0.6 snags/acre) and black-backed woodpecker/pygmy nuthatch (0.12 snags/acre)? Sale 23: Not Met; Did not retain needed snags in some areas Sale 36: Not Met; Did not assess/retain snags Sale 26: Exceeded; Retained 60% population potential of snags
	M	17	
	NM	2	
	NC	3	
	NA	16	
	%	91.3	
111	Ex	0	If snag requirements for cavity nesters were not met, was harvest prohibited? Sale 23: Not Met; Snags requirements not met, but harvest continued
	M	0	
	NM	1	
	NC	1	
	NA	37	
	%	50.0	
112	Ex	0	Did the project use a standardized definition of hazard trees?
	M	29	
	NM	0	
	NC	0	
	NA	10	
	%	100.0	
113	Ex	0	In known lynx range, have site-specific timber harvest, roading, and fire management plans been developed? Sale 33: Not Met; Did not work with State on Lynx mgmt plan
	M	1	
	NM	1	
	NC	0	
	NA	37	
	%	50.0	
114	Ex	0	Has project planning in the Adaptive Management Area included early public involvement and coordination with other activities within the province? Sale 3: Not Met; Limited early public involvement due to salvage speed up
	M	9	
	NM	2	
	NC	0	

Question			Comments
	NA	28	Sale 10: Not Met; No early public involvement in planning
	%	81.8	
115	Ex	0	Within Adaptive Management Areas have S&Gs within current plans been considered during planning and implementation activities?
	M	12	
	NM	0	
	NC	0	
	NA	27	
	%	100.0	
116	Ex	0	Have projects in Late-Successional Reserves and Managed Late-Successional Areas within AMAs been managed according to the S&Gs for such reserves?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
117	Ex	0	Have the S&Gs in current plans for hazard reduction been followed until approved Adaptive Management Area plans have been established?
	M	10	
	NM	0	
	NC	0	
	NA	29	
	%	100.0	
118	Ex	0	Has riparian protection been comparable to that prescribed for other federal land areas? Sale 8: Not Met; Used RR of 150' rather than SPT of 188'
	M	11	
	NM	1	
	NC	0	
	NA	27	
	%	91.7	
119	Ex	0	Has analysis of Riparian Reserve widths also considered the contribution of these reserves to other, including terrestrial, species?
	M	11	
	NM	0	
	NC	0	
	NA	28	
	%	100.0	
120	Ex	0	Has the intent of the S&Gs for coarse woody debris, green tree and snag retention, identified for the matrix, been met? Sale 8: Not Met; Did not meet intent of CWD guidelines
	M	10	
	NM	1	
	NC	0	
	NA	28	
	%	90.9	
121	Ex	0	In watersheds where less than 15% of federal lands in fifth field watersheds are in late-successional forest, has the role of remaining stands been considered by Watershed Analysis prior to their modification?
	M	1	
	NM	0	
	NC	0	
	NA	38	

Question			Comments
	%	100.0	
122	Ex	0	Has the project met the S&Gs for Reserved Pair Areas for spotted owls in the Finney and Northern Coast Range Adaptive Management Area?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
123	Ex	1	Did the project employ practices which minimize soil and litter disturbance from harvest methods, yarding, and heavy equipment? Sale 7: Exceeded; Helicopter yarding
	M	13	
	NM	0	
	NC	0	
	NA	25	
	%	100.0	
124	Ex	1	Have specific measures been undertaken to reduce the intensity and frequency of site treatment practices? Sale 7: Exceeded; Manual manipulation of materials
	M	11	
	NM	0	
	NC	0	
	NA	27	
	%	100.0	
125	Ex	0	Have existing research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs?
	M	1	
	NM	0	
	NC	0	
	NA	38	
	%	100.0	
126	Ex	0	Have proposed research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs?
	M	2	
	NM	0	
	NC	0	
	NA	37	
	%	100.0	
127	Ex	0	Have research activities been analyzed to ensure that there is no significant risk to Aquatic Conservation Strategy objectives and to watershed values?
	M	4	
	NM	0	
	NC	0	
	NA	35	
	%	100.0	
128	Ex	0	If research activities are not consistent with the S&Gs, have they been assessed by the Regional Ecosystem Office to ensure that they test critical assumptions of these S&Gs or produce results important to habitat development?
	M	0	
	NM	0	
	NC	0	
	NA	39	
	%	---	
129	Ex	0	Have non-conforming research activities being located where they will have the least

Question			Comments
	M	0	adverse effect upon the objectives of these S&Gs?
	NM	0	
	NC	0	
	NA	39	
	%	---	

Appendix D
Summary of Questionnaire Responses for Road Projects

This appendix includes two parts: the instructions for responding to the questionnaire and a table which provides the questions to be answered, the final categorization of responses (e.g., whether the standard and guideline was met, not met, etc.), the percentage of "applicable" responses that complied with the standards and guidelines (i.e., responses of exceeded, met, and not capable), and a summary sentence of any actions that resulted in a response that either exceeded or did not meet Northwest Forest Plan standards and guidelines.

1997 IMPLEMENTATION QUESTIONNAIRE: ROADS (V2.1)

Instructions

- Please complete a questionnaire and narrative report for each road. An electronic version of your report should be submitted by October 1, 1997.

- **Each question has five potential responses** as to how well the project meets the standards and guidelines (note: some questions can only be answered met or not met):
  - **Exceeded** the biological requirements of the S&G (e.g., the S&Gs call for retaining trees felled for safety reasons to be kept on site when needed for coarse woody debris and more than enough coarse woody debris is retained, the project "exceeded" the S&G);
  - **Met** the S&G (if, in the above example, the needed amount was retained);
  - **Not Met** to meet the S&G (if, in the above example, felled trees were removed, even though coarse woody debris was needed);
  - **Not capable of meeting** the S&G (e.g., if 240 feet of 20 inch logs are needed for coarse woody debris, but the site did not have enough 20 inch logs to meet the S&G. Thus, the S&G was not met, but there was no way to meet it); and
  - **Not applicable** (e.g., if a question pertains to management of a Survey and Manage species and there are no occurrences of the species in the project area).

- Responses of "exceeded", "not met", or "not capable" of meeting MUST be explained. The potential biological effects of these situations will be summarized in the regional report. To facilitate the regional report, team reports should address local biological effects (positive, no effect, and negative effects - low, medium, or high).

- Where post-NFP amendments or NFP-directed analyses have modified initial S&Gs, the new, modified requirements should be used to determine compliance. Such situations must be summarized in the team report. The team will identify all S&G questions that have been locally modified, cite the modification document, and describe the modification.

- Some questions have a secondary question in parentheses. Answer both questions, but DO NOT base your response on meeting the S&G on the secondary question. For example, question 28 asks "Were the results of Watershed Analysis used to support the decision-making process?" The secondary question asks "Is the project consistent with the Watershed Analysis?" If a Watershed Analysis was used, the correct response is "meets" - regardless of how the secondary question is answered.

- Comment on unclear questions, if the S&G is problematic, or if the team failed to reach consensus.

- For efficiency, some units may fill in the answers to the questions prior to the site visit. If the team decides on a response different from the unit's response, the team's response should be recorded. Such differences in response should be explained in the comment section.

- The questionnaires for timber sales and roads have significant overlap. For your convenience, the road questions that overlap timber sale questions are cross-referenced back to the timber sale form. Questions unique to the road questionnaire are identified in bold type. Narrative comments for roads do not have to be duplicated, but can be incorporated by reference to the applicable road question.

- The questions have been segregated into several categories. You may not have to answer all questions, but you do have to answer all questions pertaining to the land allocation being reviewed. The chart below indicates the appropriate section to complete.

SECTION IN QUESTIONNAIRE							
Land Use Allocation	**All**	**Road Manage**	**LSR/ MLSA**	**ACS/ Riparian Reserves**	**AMA**	**Species**	**Research**
LSR/MLSA	X	X	X	X		X	X
MATRIX	X	X		X		X	X
AMA	X	X		X	X	X	X

Questionnaire and Responses to Individual Questions

Question			Comments
1	Ex	1	Have analyses been conducted with coordination and consultation occurring to ensure consistency under existing laws (NEPA, ESA, Clean Water Act)? Road 11: Exceeded; Additional analyses and agency reviews
	M	16	
	NM	0	
	NC	0	
	NA	0	
	%	100%	
2	Ex	0	If land allocations overlap within the project area, have all applicable S&Gs been applied?
	M	13	
	NM	0	
	NC	0	
	NA	4	
	%	100%	
3	Ex	0	In situations where more than one set of S&Gs apply, have the more restrictive S&Gs been followed?
	M	13	
	NM	0	
	NC	0	
	NA	4	
	%	100%	
4	Ex	0	Have S&Gs in current plans been applied where they are more restrictive or provide greater benefits to late-successional forest related species?
	M	11	
	NM	0	
	NC	0	
	NA	6	
	%	100%	
5	Ex	0	Has the project avoided building roads in the remaining unroaded portions of inventoried (RARE II) roadless areas?
	M	3	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
6	Ex	0	When S&Gs vary between California and Oregon and a project is along the border of these two states, does management follow either state boundaries or administrative boundaries (to follow administrative boundaries, management must be consistent, stated as the intent of the unit, does not violate a clear assumption of the S&Gs, and involves only a slight fraction of the unit)?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
7	Ex	0	Is the project consistent with a road management or transportation management plan (includes; operations and maintenance, traffic regulations during wet periods, road management objectives, and inspection/maintenance for storm events)? C32
	M	15	
	NM	0	
	NC	0	
	NA	2	

Question			Comments
	%	100%	
8	Ex	0	Have federal agencies cooperated with state and county agencies to achieve consistency in road design, operation, and maintenance? C32
	M	9	
	NM	0	
	NC	0	
	NA	8	
	%	100%	
9	Ex	0	Have existing culverts, bridges, and other stream crossings been designed to accommodate the 100-year flood, including bedload and debris? C33
	M	6	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
10	Ex	0	Have new culverts, bridges, and other stream crossings been designed to accommodate the 100-year flood, including bedload and debris? C33
	M	7	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
11	Ex	0	Has the priority for upgrading stream crossings been based on a determination of risk to ecological values and riparian conditions? C32-33, B19-20
	M	5	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
12	Ex	0	Has an Initial Late-Successional Reserve Assessment / Late-Successional Reserve Assessment / Managed Late-Successional Area Assessment been reviewed by and found consistent by the Regional Ecosystem Office prior to habitat manipulation activities in LSRs or MLSAs?
	M	4	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
13	Ex	0	Have Late-Successional Reserves been established for all occupied marbled murrelet sites?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
14	Ex	0	If new road construction in Late-Successional Reserves/Managed Late-Successional Areas was necessary, did the project keep new roads to a minimum, route roads through non-late-successional habitat, and minimize adverse impacts? C16 Road 10: Not Met; 500' of new road not obliterated as planned
	M	3	
	NM	1	
	NC	0	
	NA	13	
	%	75%	
15	Ex	0	Has project avoided reducing resource availability, restricting access, or limiting the

Question			Comments
	M	2	exercise of treaty rights by Indian tribes or their members? C16
	NM	0	
	NC	0	
	NA	15	
	%	100%	
16	Ex	0	Have 100-acre Late-Successional Reserves been established for all spotted owl activity centers (known as of January 1, 1994)?
	M	7	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
17	Ex	0	Have the 100-acre spotted owl areas (as of January 1, 1994) been maintained even if they are no longer occupied by spotted owls?
	M	6	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
18	Ex	0	Have management activities adjacent to the 100-acre spotted owl areas been designed to reduce risks from natural disturbance to these areas?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
19	Ex	0	Have Managed Late-Successional Areas been established for managed pair areas around known spotted owl activity centers (known as of January 1, 1994)?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
20	Ex	0	Have Managed Late-Successional Areas been established for protection buffer species?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
21	Ex	0	Has coarse woody debris been retained in salvage areas in amounts so that in the future there will be coarse woody debris levels similar to those found in naturally regenerated stands?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
22	Ex	0	Have new developments been planned to have the least possible adverse impacts on Late-Successional Reserves? C17
	M	0	

Question			Comments
	NM	0	
	NC	0	
	NA	17	
	%	100%	
23	Ex	0	Have new access proposals across federal lands considered alternative routes that avoid late-successional habitat? C19
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
24	Ex	0	If no alternative to routing access roads through Late-Successional Reserves exists, have they been designed and located to have the least impact on late-successional habitat? C19
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
25	Ex	0	Has the project avoided the introduction of nonnative plants and animals into Late-Successional Reserves (if an introduction is undertaken, has an assessment shown that the action will not retard or prevent the attainment of LSR objectives)?
	M	6	
	NM	0	
	NC	0	
	NA	11	
	%	83%	
26	Ex	0	Have S&Gs for Late-Successional Reserves been applied to Managed Late-Successional Areas? C26
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
27	Ex	0	If required, has a Watershed Analysis been completed for watershed(s)encompassing the project area (required prior to timber harvest, salvage, or management activities in key watersheds, roadless areas, or Riparian Reserves)?
	M	11	
	NM	0	
	NC	0	
	NA	6	
	%	100%	
28	Ex	0	Were the results of Watershed Analysis used to support the decision-making process? Is the project consistent with the Watershed Analysis?
	M	13	
	NM	0	
	NC	0	
	NA	4	
	%	100%	
29	Ex	0	Has the project reduced or maintained the net amount of roads in Key Watersheds? C7 Road 10: Not Met; 500' of new road not obliterated as planned
	M	4	
	NM	1	
	NC	0	

Question			Comments
	NA	12	
	%	80%	
30	Ex	0	Have surveys been conducted to locate all streams and water bodies in the project area (i.e. for all five stream and water categories)?
	M	16	
	NM	0	
	NC	0	
	NA	1	
	%	100%	
31	Ex	0	Have riparian reserve boundaries been established for fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified)? If interim boundaries were modified, explain.
	M	7	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
32	Ex	0	Have riparian reserve boundaries been established for permanently flowing, non-fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of one site potential tree height; slope distance of 150 feet; or as modified)? If interim boundaries were modified, explain.
	M	10	
	NM	0	
	NC	0	
	NA	7	
	%	100%	
33	Ex	0	Have riparian boundaries been established for seasonally flowing or intermittent streams, wetlands <1 acre, and unstable areas(the greater of: the extent of unstable/potentially unstable areas; stream channel and extent to the top of the inner gorge; outer edges of riparian vegetation; slope distance of one site potential tree height; slope distance of 100 feet; or as modified)? If interim boundaries were modified, explain. Road 24: Not Met; Riparian Reserve cleared in undetected <1 acre wetland Road 36: Not Met; Riparian Reserves not delineated
	M	10	
	NM	2	
	NC	0	
	NA	5	
	%	83%	
34	Ex	0	Have riparian reserve boundaries been established for lakes and natural ponds (the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified). If interim boundaries were modified, explain.
	M	4	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
35	Ex	0	Have riparian reserve boundaries been established for constructed ponds and reservoirs and wetlands greater than 1 acre (the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of one site potential tree height; slope distance of 150 feet from the edge of the wetland or the maximum pool elevation; or as modified).
	M	3	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
36	Ex	0	Have sediment deliveries to streams from roads been minimized? C32-33, B19-20
	M	16	
	NM	0	
	NC	0	
	NA	1	

Question			Comments
	%	100%	
37	Ex	0	Has fish passage been provided at road crossings of existing and potential fish-bearing streams? C32-33, B19-20
	M	5	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
38	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by minimizing road and landing locations in Riparian Reserves? C32
	M	16	
	NM	0	
	NC	0	
	NA	1	
	%	100%	
39	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by preparing road design criteria, elements, and standards? C32
	M	15	
	NM	0	
	NC	0	
	NA	2	
	%	100%	
40	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by preparing operation and maintenance criteria? C32
	M	16	
	NM	0	
	NC	0	
	NA	1	
	%	100%	
41	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by minimizing disruptions to natural hydrologic flow paths? C32
	M	15	
	NM	0	
	NC	0	
	NA	2	
	%	100%	
42	Ex	1	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by restricting sidecasting? C32 Road 19: Exceeded; Removed old side-casting
	M	9	
	NM	0	
	NC	0	
	NA	7	
	%	100%	
43	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by avoiding wetlands? C32 Road 24: Not Met; Riparian Reserve cleared in undetected <1 acre wetland
	M	11	
	NM	1	
	NC	0	
	NA	5	
	%	92%	
44	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned

Question			Comments
	M	11	roads by reconstructing roads and associated drainage features? C32
	NM	0	
	NC	0	
	NA	6	
	%	100%	
45	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by prioritizing road reconstruction? C32
	M	9	
	NM	0	
	NC	0	
	NA	8	
	%	100%	
46	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by stabilizing and closing or obliterating roads? C32
	M	11	
	NM	0	
	NC	0	
	NA	6	
	%	100%	
47	Ex	0	Have new leases, permits, rights-of-way, and easements for activities other than surface water developments been located and designed to avoid adverse effects? C36
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
48	Ex	0	Have herbicides, insecticides, and other toxic agents, and other chemicals been applied in a manner to avoid impacts to Aquatic Conservation Strategy objectives? C37
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
49	Ex	1	Have water drafting sites been located to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows? C37 Road 36: Exceeded; Required use of off-site water to minimize affects
	M	6	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
50	Ex	0	Have trees which were felled to reduce safety risks been kept on-site when needed for coarse woody debris?
	M	8	
	NM	0	
	NC	0	
	NA	9	
	%	100%	
51	Ex	0	Has information on known sites for Survey and Manage species (Survey Strategy 1) been used in the design modification and implementation of activities?
	M	13	

Question			Comments
	NM	0	
	NC	0	
	NA	4	
	%	100%	
52	Ex	0	Has the project managed known sites for Survey and Manage species (Survey Strategy 1 and Survey Strategy 2)?
	M	5	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
53	Ex	0	Have 600 acre management areas been established around the two unprotected sites of Oxyporous nobilissimus until site-specific measures have been developed? Have site-specific measures been developed, explain?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
54	Ex	0	Have 160 acres been withdrawn from ground-disturbing activities for rare and endemic fungi if site-specific measures have not been developed? Have site-specific measures been developed, explain.
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
55	Ex	0	In marbled murrelet habitat, within 50 miles of the coast, have marbled murrelet surveys been conducted to protocol in areas planned for timber harvest?
	M	4	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
56	Ex	0	Have known sites of Ulota meglospora (moss) been protected?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
57	Ex	0	Have timber harvest or other activities been deferred which would not maintain desired habitat characteristics and population levels for Ulota meglospora (moss)?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
58	Ex	0	Have ground-disturbing activities been deferred at sites of Aleuria rhenana (fungus)?
	M	0	
	NM	0	
	NC	0	

Question			Comments
	NA	17	
	%	100%	
59	Ex	0	Have older forests been protected from ground disturbance where the fungi Otidealeporina, O. onotica, and O. smithii have been located?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
60	Ex	0	Have known sites and discovered localities of Shasta salamander been delineated and protected from timber harvest, mining, quarry activity, and road building?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
61	Ex	0	Has a buffer of at least the height of one site-potential tree or 100 feet horizontal distance, whichever is greater, surrounding the outcrop been established for each site containing Shasta salamanders?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
62	Ex	0	Have surveys for great gray owls been conducted prior to ground disturbing activities, within their range and habitat? Sale 31: Exceeded; GGO surveys conducted when not required
	M	2	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
63	Ex	0	Has the project protected a 1/4-mile protection zone around nest sites of the great gray owl?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
64	Ex	0	Have activities that conflict with maintaining suitable habitat characteristics and known populations of Brotherella roellii (moss) been deferred?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
65	Ex	0	Has the project maintained buffers of at least the height of one site-potential tree or 100-feet horizontal distance, whichever is greater, surrounding the known locations for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders?
	M	1	
	NM	0	
	NC	0	
	NA	16	

Question			Comments
	%	100%	
66	Ex	0	Have ground disturbing activities that disrupt the talus layer been avoided for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
67	Ex	0	Has a 40 percent canopy closure been maintained within the buffers for the Larch Mountain and Del Norte Salamanders?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
68	Ex	0	If partial harvest was undertaken within the buffers for the Larch Mountain Salamander and the Del Norte Salamander, was it conducted using helicopters or high-lead cable systems?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
69	Ex	0	Has removal of overstory trees within the buffer for the Siskiyou Mountain Salamander been prohibited?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
70	Ex	0	Has protection been provided for caves, mines, and abandoned wooden bridges and buildings that are used as roost/hibernation sites for bats?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
71	Ex	0	Have site management measures been developed for sites containing bats?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
72	Ex	0	If Townsend's big-eared bats were found, have the appropriate state wildlife agencies been notified?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
73	Ex	0	Did the project use a standardized definition of hazard trees?

Question			Comments
	M	11	
	NM	0	
	NC	0	
	NA	6	
	%	100%	
74	Ex	0	In known lynx range, have site-specific timber harvest, roading, and fire management plans been developed?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
75	Ex	1	Has project planning in the Adaptive Management Area included early public involvement and coordination with other activities within the province? Road 10: Not Met; An early NFP sale that did not have early public involvement Road 8: Exceeded; Specifically increased local participation
	M	1	
	NM	1	
	NC	0	
	NA	14	
	%	67%	
76	Ex	0	Within Adaptive Management Areas have S&Gs within current plans been considered during planning and implementation activities?
	M	5	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
77	Ex	0	Have projects in Late-Successional Reserves and Managed Late-Successional Areas within AMAs been managed according to the S&Gs for such reserves?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
78	Ex	0	Have the S&Gs in current plans for hazard reduction been followed until approved Adaptive Management Area plans have been established?
	M	4	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
79	Ex	0	Has riparian protection been comparable to that prescribed for other federal land areas?
	M	6	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
80	Ex	0	Has the project met the S&Gs for Reserved Pair Areas for spotted owls in the Finney and Northern Coast Range Adaptive Management Area?
	M	0	

Question			Comments
	NM	0	
	NC	0	
	NA	17	
	%	100%	
81	Ex	0	Has analysis of Riparian Reserve widths also considered the contribution of these reserves to other, including terrestrial, species?
	M	5	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
82	Ex	0	Has the intent of the S&Gs for coarse woody debris, green tree and snag retention, identified for the matrix, been met?
	M	4	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
83	Ex	0	Have existing research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
84	Ex	0	Have proposed research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs?
	M	1	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
85	Ex	0	Have research activities been analyzed to ensure that there is no significant risk to Aquatic Conservation Strategy objectives and to watershed values?
	M	3	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
86	Ex	0	If research activities are not consistent with the S&Gs, have they been assessed by the Regional Ecosystem Office to ensure that they test critical assumptions of these S&Gs or produce results important to habitat development?
	M	0	
	NM	0	
	NC	0	
	NA	17	
	%	100%	
87	Ex	0	Have non-conforming research activities being located where they will have the least adverse effect upon the objectives of these S&Gs?
	M	0	
	NM	0	
	NC	0	

Question			Comments
	NA	17	
	%	100%	

Appendix E
Summary of Questionnaire Responses for Restoration Projects

This appendix includes two parts: the instructions for responding to the questionnaire and a table which provides the questions to be answered, the final categorization of responses (e.g., whether the standard and guideline was met, not met, etc.), the percentage of "applicable" responses that complied with the standards and guidelines (i.e., responses of exceeded, met, and not capable), and a summary sentence of any actions that resulted in a response that either exceeded or did not meet Northwest Forest Plan standards and guidelines.

1997 IMPLEMENTATION QUESTIONNAIRE: RESTORATION (V2.1)

Instructions

- Please complete a questionnaire and narrative report for each restoration project. An electronic version of your report should be submitted by October 1, 1997.

- **Each question has five potential responses** as to how well the project meets the standards and guidelines (note: some questions can only be answered met or not met).

- **Exceeded** the biological requirements of the S&G (e.g., the S&Gs call for retaining trees felled for safety reasons to be kept on site when needed for coarse woody debris and more than enough coarse woody debris is retained, the project "exceeded" the S&G);
  - **Met** the S&G (if, in the above example, the needed amount was retained);
  - **Not Met** to meet the S&G (if, in the above example, felled trees were removed, even though coarse woody debris was needed);
  - **Not capable of meeting** the S&G (e.g., if 240 feet of 20 inch logs are needed for coarse woody debris, but the site did not have enough 20 inch logs to meet the S&G. Thus, the S&G was not met, but there was no way to meet it); and
  - **Not applicable** (e.g., if a question pertains to management of a Survey and Manage species and there are no occurrences of the species in the project area).

- Responses of "exceeded", "not met", or "not capable" of meeting MUST be explained. The potential biological effects of these situations will be summarized in the regional report. To facilitate the regional report, team reports should address local biological effects (positive, no effect, and negative effects - low, medium, or high).

- Where post-NFP amendments or NFP-directed analyses have modified initial S&Gs, the new, modified requirements should be used to determine compliance. Such situations must be summarized in the team report. The team will identify all S&G questions that have been locally modified, cite the modification document, and describe the modification.

- Some questions have a secondary question in parentheses. Answer both questions, but DO NOT base your response on meeting the S&G on the secondary question. For example, question 29 asks "Were the results of Watershed Analysis used to support the decision-making process?" a secondary question asks "Is the project consistent with the Watershed Analysis?" If a Watershed Analysis was used, the correct response is "meets" - regardless of how the secondary question is answered.

- Comment on unclear questions, if the S&G is problematic, or if the team failed to reach consensus.

- For efficiency, some units may fill in the answers to the questions prior to the site visit. If the review team decides on a response different from the unit's response, the review team's response should be recorded. Such differences in response should be explained in the comment section.

- The questions have been segregated into several categories. You may not have to answer all questions, but you do have to answer all questions pertaining to the land allocation being reviewed. The chart below indicates the appropriate section to complete.

SECTION IN QUESTIONNAIRE						
Land Use Allocation	**ALL (General)**	**LSR/ MLSA**	**ACS/ Riparian Reserves**	**AMA**	**Species**	**Research**
LSR/MLSA	X	X	X		X	X
MATRIX	X		X		X	X
AMA	X		X	X	X	X

Questionnaire and Responses to Individual Questions

Question			Comments
1	Ex	0	Have analyses been conducted with coordination and consultation occurring to ensure consistency under existing laws (NEPA, ESA, Clean Water Act)? R53-54,A2-3,C1 Project 21: Not Met; Project was not formally consulted on under ESA and should have been. However, the team determined that consultation was not likely to have changed the project.
	M	15	
	NM	1	
	NC	0	
	NA	0	
	%	94%	
2	Ex	0	If land allocations overlap within the project area, have all applicable S&Gs been applied? R7-8, C1, C2
	M	13	
	NM	0	
	NC	0	
	NA	3	
	%	100%	
3	Ex	0	In situations where more than one set of S&Gs apply, have the more restrictive S&Gs been followed? R7-8, C1, C2
	M	14	
	NM	0	
	NC	0	
	NA	2	
	%	100%	
4	Ex	0	Have S&Gs in current plans been applied where they are more restrictive or provide greater benefits to late-successional forest related species? R7-8,C1,C2
	M	8	
	NM	0	
	NC	0	
	NA	8	
	%	100%	
5	Ex	0	Has the project avoided building roads in the remaining unroaded portions of inventoried (RARE II) roadless areas? C7
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
6	Ex	0	When S&Gs VARY between California and Oregon and a project is along the border of these two states, does management follow either state boundaries or administrative boundaries (to follow administrative boundaries, management must be consistent, stated as the intent of the unit, does not violate a clear assumption of the S&Gs, and involves only a slight fraction of the unit)? C4
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
7	Ex	0	Has an Initial Late-Successional Reserve Assessment/Late-Successional Reserve Assessment/Late-Successional Area Assessment been reviewed by and found consistent by the Regional Ecosystem Office prior to habitat manipulation activities? Was the project consistent with the LSR Assessment and REO review? A7,C11,C26
	M	5	
	NM	0	
	NC	0	
	NA	11	

Question			Comments
	%	100%	
8	Ex	0	Have Late-Successional Reserves been established for all occupied marbled murrelet sites? C3
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
9	Ex	0	Have 100-acre Late-Successional Reserves been established for all spotted owl activity centers (known as of January 1, 1994)? C3
	M	4	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
10	Ex	0	Have the 100-acre spotted owl areas (as of January 1, 1994) been maintained even if they are no longer occupied by spotted owls? C10-11
	M	3	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
11	Ex	0	Have management activities adjacent to the 100-acre spotted owl areas been designed to reduce risks from natural disturbance to these areas? C10-11
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
12	Ex	0	Have Managed Late-Successional Areas been established for managed pair areas around known spotted owl activity centers (known as of January 1, 1994)? C3, C23
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
13	Ex	0	Have Managed Late-Successional Areas been established for protection buffer species? C3, C23
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
14	Ex	0	If new road construction in Late-Successional Reserves/Managed Late-Successional Areas was necessary, did the project keep new roads to a minimum, route roads through non-late-successional habitat, and minimize adverse impacts? C16
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
15	Ex	1	Has the project avoided reducing resource availability, restricting access, or limiting the

Question			Comments
	M	5	exercise of treaty rights by Indian tribes or their members? C16
	NM	0	
	NC	0	Project 13: Exceeded; Extensive consultation/cooperation with tribe, including tribal monitoring.
	NA	10	
	%	100%	
16	Ex	1	Has the planning or preparation for multiple-use activities other than silviculture identified off-reservation tribal resources? C16
	M	6	
	NM	0	
	NC	0	Project 13: Exceeded; Tribal consultation in the design phase resulted in further protection for cultural sites and family gathering areas.
	NA	9	
	%	100%	
17	Ex	0	Has coarse woody material been retained if available coarse woody material in Managed Late-Successional Areas is inadequate? C16
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
18	Ex	0	Have hazard reduction and other prescribed fire applications proposed prior to the completion of the fire management plan been reviewed by and found consistent by the Regional Ecosystem Office? C17
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
19	Ex	0	Have habitat improvement projects been designed to improve conditions for fish, wildlife, or watersheds and to provide benefits to late-successional habitat? C17
	M	7	
	NM	0	
	NC	0	
	NA	9	
	%	100%	
20	Ex	0	If habitat improvement projects were required for recovery of threatened or endangered species, have they avoided reduction of habitat quality for other late-successional species? C17
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
21	Ex	0	Do fuel management and fire suppression activities within Late-Successional Reserves minimize impacts to late-successional habitats? C17
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
22	Ex	0	Have fire management plans been prepared which specifies how hazard reduction and other prescribed fire applications will meet the objectives of the Late-Successional Reserves? C17
	M	1	

Question			Comments
	NM	0	
	NC	0	
	NA	15	
	%	100%	
23	Ex	0	Have new access proposals across federal lands considered alternative routes that avoid late-successional habitat? C19
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
24	Ex	0	If no alternative to routing access roads through Late-Successional Reserves exists, have they been designed and located to have the least impact on late-successional habitat? C19
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
25	Ex	0	Has the project avoided the introduction of nonnative plants and animals into Late-Successional Reserves (if an introduction is undertaken, has an assessment shown that the action will not retard or prevent the attainment of LSR objectives)? C19 Project 27: Not Met; Project used non-native seed mixture in LSR.
	M	7	
	NM	1	
	NC	0	
	NA	8	
	%	88%	
26	Ex	0	Have silviculture, salvage, and other multiple-use activities for Managed Late-Successional Areas been guided by the objective of maintaining adequate amounts of suitable habitat for the northern spotted owl? C23
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
27	Ex	0	Have S&Gs for Late-Successional Reserves been applied to Managed Late-Successional Areas? C26
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
28	Ex	0	If required, has a Watershed Analysis been completed for watershed(s) encompassing the project area (required prior to construction of new roads or landings in Riparian Reserves or management activities in key watersheds, roadless areas, or Riparian Reserves)? Is the project consistent with the Watershed Analysis? Was the Watershed Analysis used in project planning? R55-56, A7, B12, B17, B20-30, C3, C7, E20-21
	M	16	
	NM	0	
	NC	0	
	NA	0	
	%	100%	
29	Ex	0	Were the results of Watershed Analysis used to support the decision-making process? Is the project consistent with the Watershed Analysis? B10
	M	16	
	NM	0	
	NC	0	

Question			Comments
	NA	0	
	%	100%	
30	Ex	0	Have Key Watersheds been given the highest priority for watershed restoration? C7
	M	10	
	NM	0	
	NC	0	
	NA	6	
	%	100%	
31	Ex	0	Has the project reduced or maintained the net amount of roads in Key Watersheds? C7
	M	5	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
32	Ex	0	Has the priority for upgrading stream crossings been based on a determination of risk to ecological values and riparian conditions? B19-20,C32-33
	M	4	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
33	Ex	0	Have surveys been conducted to locate all streams and water bodies (i.e., for all five stream and water categories)? C30
	M	14	
	NM	0	
	NC	0	
	NA	2	
	%	100%	
34	Ex	1	Have riparian reserve boundaries been established for fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified)? If interim boundaries were modified, explain. C30 Project 15: Exceeded; Project used 1/4 mile Riparian Reserves (in accordance with NRA).
	M	5	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
35	Ex	2	Have riparian reserve boundaries been established for permanently flowing, non-fish bearing streams (the greater of: top of the inner gorge; outer edges of the 100-year flood plain; outer edges of riparian vegetation; slope distance of one site potential tree height; slope distance of 150 feet; or as modified)? If interim boundaries were modified, explain. C30 Project 13: Exceeded; Used Riparian Reserve widths that were the greater of two site potential trees or inner gorge plus one site potential tree. Project 15: Exceeded; Project used 1/4 mile Riparian Reserves (in accordance with NRA).
	M	7	
	NM	0	
	NC	0	
	NA	7	
	%	100%	
36	Ex	1	Have riparian reserve boundaries been established for seasonally flowing or intermittent streams, wetlands <1 acre, and unstable areas (the greater of: the extent of unstable/potentially unstable areas; stream channel and extent to the top of the inner gorge; outer edges of riparian vegetation; slope distance of one site potential tree height;
	M	6	
	NM	0	
	NC	0	

Question			Comments
	NA	9	slope distance of 100 feet; or as modified)? If interim boundaries were modified, explain. C30
	%	100%	
			Project 13: Exceeded; Used Riparian Reserve widths that were the greater of two site potential trees or inner gorge plus one site potential tree.
37	Ex	0	Have riparian reserve boundaries been established for lakes and natural ponds (the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of two site potential tree heights; slope distance of 300 feet; or as modified). If interim boundaries were modified, explain. C31
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
38	Ex	0	Have riparian reserve boundaries been established for constructed ponds and reservoirs and wetlands greater than 1 acre (the greater of: outer edges of riparian vegetation; extent of seasonally saturated soil; extent of unstable and potentially unstable areas; slope distance of one site potential tree height; slope distance of 150 feet from the edge of the wetland or the maximum pool elevation; or as modified). C30
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
39	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by minimizing road and landing locations in Riparian Reserves? C32
	M	6	
	NM	0	
	NC	0	
	NA	10	
	%	100%	
40	Ex	0	Have sediment deliveries to streams from roads been minimized? C32-33, B19-20
	M	8	
	NM	1	Project 3: Not Met; Sediment delivery from excavated stream channel crossings.
	NC	0	
	NA	7	
	%	89%	
41	Ex	0	Has fish passage been provided at road crossings of existing and potential fish-bearing streams? C32-33, B19-20
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
42	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by preparing road design criteria, elements, and standards? C32
	M	2	
	NM	0	
	NC	0	
	NA	14	
	%	100%	
43	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by preparing operation and maintenance criteria? C32
	M	4	
	NM	0	
	NC	0	

Question			Comments
	NA	12	
	%	100%	
44	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by minimizing disruptions to natural hydrologic flow paths? C32 Project 3: Not Met; Channel excavations not implemented to contract specifications.
	M	5	
	NM	1	
	NC	0	
	NA	10	
	%	83%	
45	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by restricting sidecasting? C32 Project 3: Not Met; Sidecasting not always minimized.
	M	5	
	NM	1	
	NC	0	
	NA	10	
	%	83%	
46	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by avoiding wetlands? C32
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
47	Ex	1	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by reconstructing roads and associated drainage features? C32 Project 13: Exceeded; Project restored natural drainage patterns.
	M	4	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
48	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by prioritizing road reconstruction? C32
	M	4	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
49	Ex	0	Has the project met Aquatic Conservation Strategy objectives for existing or planned roads by stabilizing and closing or obliterating roads? C32
	M	8	
	NM	0	
	NC	0	
	NA	8	
	%	100%	
50	Ex	0	Have new culverts, bridges, and other stream crossings been designed to accommodate the 100-year flood, including bedload and debris? C33
	M	3	
	NM	0	
	NC	0	
	NA	13	

Question			Comments
	%	100%	
51	Ex	0	Have structures, support facilities, and roads for minerals operations been located outside Riparian Reserves or in a way compatible with Aquatic Conservation Strategy objectives? C34, B19-20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
52	Ex	0	Do fuel treatments and fire suppression activities meet Aquatic Conservation Strategy objectives and minimize disturbance of riparian ground cover and vegetation? C35
	M	5	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
53	Ex	0	Have prescribed burn projects and prescriptions been designed to contribute to the attainment of the Aquatic Conservation Strategy objectives? C35
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
54	Ex	0	Have rehabilitation treatment plans been developed immediately after any significant fire damage to Riparian Reserves? C35
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
55	Ex	0	Have new leases, permits, rights-of-way, and easements for activities other than surface water developments been located and designed to avoid adverse effects? C36
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
56	Ex	0	Have fish and wildlife habitat restoration and enhancement activities been designed and implemented to contribute to the Aquatic Conservation Strategy objectives? C37
	M	11	
	NM	0	
	NC	0	
	NA	5	
	%	100%	
57	Ex	0	Have watershed restoration projects been designed to promote long-term ecological integrity of ecosystems, to conserve the genetic integrity of native species, and to attain Aquatic Conservation Strategy objectives? C37
	M	13	
	NM	0	
	NC	0	
	NA	3	
	%	100%	
58	Ex	0	Have herbicides, insecticides, and other toxic agents, and other chemicals been applied

Question			Comments
	M	0	in a manner to avoid impacts to Aquatic Conservation Strategy objectives? C37
	NM	0	
	NC	0	
	NA	16	
	%	100%	
59	Ex	0	Have water drafting sites been located to minimize adverse effects on stream channel stability, sedimentation, and in-stream flows? C37
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
60	Ex	0	Have trees which were felled to reduce safety risks been kept on-site in Riparian Reserves when needed for coarse woody debris? C37 Project 39: Not Met; One 54 inch DBH tree downed and removed from Riparian Reserve (expected to be illegally removed for firewood).
	M	2	
	NM	1	
	NC	0	
	NA	13	
	%	67%	
61	Ex	0	Has information on known sites for Survey and Manage species (Survey Strategy 1) been used in the design, modification, and implementation of activities? C4, C43-48
	M	12	
	NM	0	
	NC	0	
	NA	4	
	%	100%	
62	Ex	0	Has the project managed known sites for Survey and Manage species (Survey Strategy 1 and Survey Strategy 2)? C4-5
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
63	Ex	0	Have 600 acre management areas been established around the two unprotected sites of Oxyporous nobilissimus? C4-5
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
64	Ex	0	Have 160 acres been withdrawn from ground-disturbing activities for rare and endemic fungi if site-specific measures have not been developed? Have site-specific measures been developed, explain. C4-5
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
65	Ex	0	In marbled murrelet habitat, within 50 miles of the coast, have marbled murrelet surveys been conducted to protocol, if required? C10, 12
	M	3	

Question			Comments
	NM	0	
	NC	0	
	NA	13	
	%	100%	
66	Ex	0	Have known sites of Ulota meglospora (moss) been protected? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
67	Ex	0	Have activities been deferred which would not maintain desired habitat characteristics and population levels for Ulota meglospora (moss)? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
68	Ex	0	Have ground-disturbing activities been deferred at sites of Aleuria rhenana (fungus)? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
69	Ex	0	Have older forests been protected from ground disturbance where the fungi Otidea leporina, O. onotica, and O. smithii have been located? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
70	Ex	0	Have known sites and discovered localities of Shasta salamander been delineated and protected from timber harvest, mining, quarry activity, and road building? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
71	Ex	0	Has a buffer of at least the height of one site-potential tree or 100 feet horizontal distance, whichever is greater, surrounding the outcrop been established for each site containing Shasta salamanders? C20
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
72	Ex	0	Have surveys for great gray owls been conducted prior to ground disturbing activities? C21
	M	1	
	NM	0	
	NC	0	

Question			Comments
	NA	15	
	%	100%	
73	Ex	0	Has the project protected a 1/4-mile protection zone around nest sites of the great gray owl? C21
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
74	Ex	0	Have activities that conflict with maintaining suitable habitat characteristics and known populations of Brotherella roellii (moss) been deferred? C27
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
75	Ex	0	Has the project observed buffers of at least the height of one site-potential tree or 100-feet horizontal distance, whichever is greater, surrounding the known locations for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders? C28
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
76	Ex	0	Have ground disturbing activities that disrupt the talus layer been avoided for the Larch Mountain, Siskiyou Mountain, and Del Norte salamanders? C28
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
77	Ex	0	Has a 40 percent canopy closure been maintained within the buffers for the Larch Mountain and Del Norte Salamanders? C28
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
78	Ex	0	If partial harvest was undertaken within the buffers for the Larch Mountain Salamander and the Del Norte Salamander, was it conducted using helicopters or high-lead cable systems? C28
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
79	Ex	0	Has removal of overstory trees within the sites of the Siskiyou Mountain Salamander been prohibited? C28
	M	0	
	NM	0	
	NC	0	
	NA	16	

Question			Comments
	%	100%	
80	Ex	0	Has protection been provided for caves, mines, and abandoned wooden bridges and buildings that are used as roost sites for bats? C43
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
81	Ex	0	Have surveys for bats been conducted according to a standardized regional protocol? C43
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
82	Ex	0	Have site management measures been developed for sites containing bats? C43
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
83	Ex	0	If Townsend's big-eared bats were found, have the appropriate state wildlife agencies been notified? C44
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
84	Ex	0	Did the project use a standardized definition of hazard trees? C46
	M	5	
	NM	0	
	NC	0	
	NA	11	
	%	100%	
85	Ex	0	In known lynx range, have site-specific timber harvest, roading, and fire management plans been developed? C48
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
86	Ex	0	Has project planning in the Adaptive Management Area included early public involvement and coordination with other activities within the province? D6
	M	4	
	NM	0	
	NC	0	
	NA	12	
	%	100%	
87	Ex	0	Within Adaptive Management Areas have S&Gs within current plans been considered

Question			Comments
	M	4	during planning and implementation activities? C3
	NM	0	
	NC	0	
	NA	12	
	%	100%	
88	Ex	0	Have projects in Late-Successional Reserves and Managed Late-Successional Areas within AMAs been managed according to the S&Gs for such reserves? D9
	M	1	
	NM	0	
	NC	0	
	NA	15	
	%	100%	
89	Ex	0	Have the S&Gs in current plans for hazard reduction been followed until approved Adaptive Management Area plans have been established? D8
	M	3	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
90	Ex	0	Has riparian protection been comparable to that prescribed for other federal land areas? D9
	M	3	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
91	Ex	0	Has analysis of Riparian Reserve widths also considered the contribution of these reserves to other, including terrestrial, species? D10
	M	3	
	NM	0	
	NC	0	
	NA	13	
	%	100%	
92	Ex	0	Has the intent of the S&Gs for coarse woody debris, green tree and snag retention, identified for the matrix, been met? C41,D10
	M	1	
	NM	0	
	NC	2	
	NA	13	
	%	100%	
93	Ex	0	Has the project met the S&Gs for Reserved Pair Areas for spotted owls in the Finney and Northern Coast Range Adaptive Management Area? D13-16
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
94	Ex	0	Have existing research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs? C4,C38
	M	0	

Question			Comments
	NM	0	
	NC	0	
	NA	16	
	%	100%	
95	Ex	0	Have proposed research activities in LSRs, MLSRA, and Riparian Reserves been assessed to determine if they are consistent with the objectives of these S&Gs? R15,C4,C18,C38,D7,E3
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
96	Ex	0	Have research activities been analyzed to ensure that there is no significant risk to Aquatic Conservation Strategy objectives and to watershed values? C38
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
97	Ex	0	If research activities are not consistent with the S&Gs, have they been assessed by the Regional Ecosystem Office to ensure that they test critical assumptions of these S&Gs or produce results important to habitat development? R15,C4,C18,C38,D7,E3
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	
98	Ex	0	Have non-conforming research activities being located where they will have the least adverse effect upon the objectives of these S&Gs? R15,C4,C18,C38,D7,E3
	M	0	
	NM	0	
	NC	0	
	NA	16	
	%	100%	

Appendix G
Provincial Implementation Monitoring Teams and the Projects They Reviewed

(Note: Timber sales are numbered and associated Road and Restoration Projects are listed using same number. Numbered timber sales are noted as TS, road projects are noted as RD, and restoration projects as RS)

WASHINGTON

OLYMPIC PENINSULA

(6TS) Tharsabarhar Thin Timber Sale; Olympic National Forest
(9TS) Fresca Timber Sale; Olympic National Forest
(9RD) Fresca Road; Olympic National Forest
(9RS) Soil Bioengineering; Olympic National Forest

Team Leader: Ward Hoffman
Olympic National Forest

Team Members: Alexandra Bradley, Northwest Ecosystem Alliance, PAC
Kate Benkert, USFWS, PAC
Ron Lee, EPA, PAC
Jonathan Seil, Ecoforester, PAC
Trevin Taylor, Quileute Natural Resources, representing PAC member
John Wullschlager, NPS, representing PAC member
Chris Anderson, USFS
Rod Matye, USFS

EASTERN WASHINGTON CASCADES

(33) Mad Billy Timber Sale; Wenatchee National Forest
(21TS) Ty-Chi Timber Sale; Wenatchee National Forest
(21RS) Nason Creek Road Decommissioning; Wenatchee National Forest

Team Leader: Jim Furlong
Wenatchee National Forest

Team Members: Ron Lee, EPA
Edwin Lewis, BIA
Lee Carlson, Yakama Indian Nation, PAC
Jodi Bush, USFWS
Phil Campbell, NPS

SOUTHWEST WASHINGTON

(5TS) Doe Timber Sale; Gifford Pinchot National Forest
(5RS) Precommercial Thinning; Gifford Pinchot National Forest
(5RS) Road 2325 Stabilization; Gifford Pinchot National Forest
(Note: This was secondary project also reviewed by the team; results are not included in database for analysis. Lessons learned are highlighted in report.)
(4TS) Walupt Cispus Timber Sale; Gifford Pinchot National Forest
(4RS) Upper Cispus Precommercial Thinning; Gifford Pinchot National Forest

Team Leader: John Roland
Gifford Pinchot National Forest

Team Members: Russ Wigley, Lewis County Commissioner, PAC
Ron Lee, EPA, PAC
Lee Carlson, Yakama Indian Nation, PAC
John Squires, PAC
Jeanette Johnson, PAC
Randy Shepard, USFS

OREGON

OREGON COAST

(10TS) Rye Mountain Timber Sale; BLM Salem District
(10RD) Rye Mountain Road; BLM Salem District

Team Leader: Chuck Hawkins
BLM, Salem District

Team Members: Craig Snyder, USFS
Rennie Ferris, Ferris Nursery, PAC
Kathy Berry, USFWS
Elaine Sproul, USFWS
Lisa Brown, Coast Range Association, PAC
Cole Gardner, Oregon Trout, PAC
Wayne Logan, BLM
Chester Novak, BLM

(19TS) Minerva Thin Timber Sale; Siuslaw National Forest
(19RD) Minerva Thin Road; Siuslaw National Forest

Team Leader: Chuck Hawkins
BLM, Salem District

Team Members: Alan Corbin, BLM
Harriet Plumley, USFS
Julie Fulkerson, USFWS
Rennie Ferris, Ferris Nursery, PAC
Lisa Brown, Coast Range Association, PAC

WILLAMETTE

(8TS) Delta Thin Timber Sale; Willamette National Forest
(8RD) Delta Thin Timber Sale Road; Willamette National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: Ken Byford, USFS
Paul Gnerer, BLM
Cay Ogden, USFWS
Ray Bosch, USFWS
Paul Jeske, BLM

(8RS) Precommercial Thinning and Pruning; Willamette National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: Cay Ogden, USFWS
Paul Jeske, BLM
Paul Gnerer, BLM

(12TS) Flam Thin Timber Sale; Willamette National Forest
(12RD) Flam Thin Timber Sale Road; Willamette National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: Cole Gardiner, Oregon Trout, PAC
Paul Gnerer, BLM
Ray Bosch, USFWS
Wayne Logan, BLM
Jim Rice, USFS

(24TS) Seven Fly Timber Sale; Willamette National Forest
(24RD) Seven Fly Timber Sale Road; Willamette National Forest

Team Leaders: Dave DeMoss
BLM, Eugene District

Herb Wick
Willamette National Forest

Team Members: Cole Gardiner, Oregon Trout, PAC
Wayne Logan, BLM
Paul Gnerer, BLM
Jim Rice, USFS
Ray Bosch, USFWS

(**25TS) Woody Hayes Timber Sale; BLM Eugene District**
(25RD) Woody Hayes Timber Sale Road; BLM Eugene District
(25RS) Dline Falling, Bucking, Hauling; BLM Eugene District
(Note: Project in OR Coast Range Province)

Team Leader: Chuck Hawkins
BLM, Salem District

Team Members: Rennie Ferris, Ferris Nursery, PAC
Julie Fulkerson, USFWS
Harriet Plumley, USFS
Alan Corbin, BLM
John Gabrielson, EPA, PAC

(26TS) Pegasus Timber Sale; Mt. Hood National Forest
(26RS) Fan Creek Side Channel Restoration; Mt. Hood National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: John Davis, USFWS
Judy Jacobs, USFWS
Paul Jeske, BLM
Myron Blank, USFS
Cole Gardiner, Oregon Trout, PAC

(28TS) Lemans Salvage Timber Sale; Willamette National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: Judy Jacobs, USFWS
Wayne Logan, BLM
Paul Gnerer, BLM
Cole Gardiner, Oregon Trout, PAC

(28RS) Detroit Culvert Repair; Willamette National Forest

Team Leaders: Dave DeMoss
BLM, Eugene District

Herb Wick
Willamette National Forest

Team Members: Cole Gardiner, Oregon Trout, PAC
John Davis, USFWS

(34TS) Red 90 Timber Sale; Willamette National Forest

(Note: This sale was reviewed by the team but determined to be outside the NFP S&Gs. Therefore, the sale was dropped from analysis and the questions were not tallied in the report summaries.)

Team Leaders: Dave DeMoss
BLM, Eugene District

Herb Wick
Willamette National Forest

Team Members: Judy Jacobs, USFWS
Wayne Logan, BLM
Paul Gnerer, BLM
Ray Bosch, USFWS
Cole Gardiner, Oregon Trout, PAC

(34RS) Detroit Precommercial Thinning; Willamette National Forest

Team Leaders: Dave DeMoss
BLM, Eugene District

Herb Wick
Willamette National Forest

Team Members: John Davis, USFWS
Cole Gardiner, Oregon Trout, PAC

(35TS) Mt. June Timber Sale; BLM Eugene District
(35RD) Mt. June Timber Sale Road; BLM Eugene District

Team Leaders: Dave DeMoss
BLM, Eugene

Herb Wick
Willamette National Forest

Team Members: Cole Gardiner, Oregon Trout, PAC
Wayne Logan, BLM
Paul Gnerer, BLM
Ross Mickey, North West Forestry Association, PAC
Ray Bosch, USFWS

(38TS) Roland Minto Timber Sale; BLM Salem District
(38RD) Roland Minto Timber Sale Road; BLM Salem District

(Note: This road was determined to be unneeded for the timber sale and not constructed. Therefore the questions were not answered and the road was dropped from this report.)

Team Leaders: Dave DeMoss
BLM, Eugene District

Herb Wick
Willamette National Forest

Team Members: Cole Gardiner, Oregon Trout, PAC
Wayne Logan, BLM
Jim Rice, USFS
Coleen Henson, USFWS
Paul Jeske, BLM
John Davis, USFWS

(40TS) North 5 Thin Timber Sale; Willamette National Forest
(Originally Named Camp 5 Thin)
(40RD) North 5 Thin Timber Sale Road; Willamette National Forest

Team Leader: Dave DeMoss
BLM, Eugene District

Team Members: Ray Bosch, USFWS
Paul Jeske, BLM

DESCHUTES

(23TS) Santiam Corridor Timber Sale; Deschutes National Forest
(23RD) Santiam Corridor Timber Sale Road; Deschutes National Forest

Team Leader: Gery Ferguson
Deschutes National Forest

Team Members: Nancy Lee, USFWS
Chris Stecher, Mt. Bachelor Corp., PAC
Karen Thompson, Sisters Forest Planning Committee, PAC
Ted Young, Crown Pacific, PAC
Andrea Unruh, USFS
Tim Lillebo, Oregon Natural Resources Council, PAC

(23RS) Suttle Lake Shoreline Restoration; Deschutes National Forest

Team Leader: Gery Ferguson
Deschutes National Forest

Team Members: Karen Thompson, Sisters Forest Planning Committee, PAC
Ted Young, Crown Pacific, PAC
Nancy Lee, USFWS
Andrea Unruh, USFS

(29TS) Big Bear Timber Sale; Deschutes National Forest

Team Leader: Gery Ferguson
Deschutes National Forest

Team Members: Tim Lillebo, Oregon Natural Resources Council, PAC
Ted Young, Crown Pacific, PAC
Chris Stecher, Mt. Bachelor Corp., PAC
Nancy Lee, USFWS
Andrea Unruh, USFS

(37TS) Copper Tin Timber Sale; Mt. Hood National Forest
(37RD) Copper Tin Timber Sale Roads; Mt. Hood National Forest

Team Leader: Gery Ferguson
Deschutes National Forest

Team Members: Anne Saxby, Water District, PAC
Nancy Lee, USFWS
Kaz Thea, USFWS
Keith Kohl, Oregon Dept. of Fish and Wildlife
Bob Schuppe, Hood River County Commissioner
Monica Burke, USFS
Laura Ceperley, USFS

SOUTHWEST OREGON

(11TS) Whitecap Timber Sale; Umpqua National Forest
(11RD) Whitecap Timber Sale Roads; Umpqua National Forest

Team Leader: Doug McVean
BLM, Roseburg District

Team Members: Steve Niles, BLM
Jeff Dose, USFS
Scott Center, USFWS
Den Kenney, NMFS
Ron Yockim, Douglas County Counsel, PAC
Sue Kupillas, Jackson County Commissioner, PAC
Nabil Atalla, BLM
Joe Graham, BLM
Joe Burns, USFWS

(14TS) Red Bess Timber Sale; Rogue River National Forest

Team Leader: Doug McVean
BLM, Roseburg District

Team Members: David Hill, Southern Oregon Timber Industries Assn., PAC
Bob Gunther, BLM
John Royce, BLM
Debra Kinsinger, USFWS
Lawrence Chube, USFS
Judith McHugh, USFS

(22TS) Fire Road Thinning Timber Sale; BLM Coos Bay District
(22RD) Fire Road Thinning Timber Sale Roads; BLM Coos Bay District

Team Leader: Paul Uncapher
Umpqua National Forest

Team Members: Brendan White, USFWS
Eileen Stone, USFWS
Dave Reed, BLM
Richard Blake, PAC
Debra Grav, USFS

(27TS) Ditto Salvage Timber Sale; Siskiyou National Forest
(27RS) Tree Planting/Road Decommissioning; Siskiyou National Forest

Team Leader: Doug McVean
BLM, Roseburg District

Team Members: Dave Reed, BLM
Brendan White, USFWS
Dave Rupport, USFS
Richard Blake, PAC
Joe Witt, BLM
Eileen Stone, USFWS
Ned Davis, USFS
Sue Livingston, USFWS, PAC

(31TS) Rum Willow Timber Sale; Rogue River National Forest

Team Leader: Doug McVean
BLM, Roseburg District

Team Members: Dave Hill, Southern Oregon Timber Industries Assn., PAC
Debra Kinsinger, USFWS
Judith McHugh, USFS
John Royce, BLM
Bob Gunther, BLM
Lawrence Chube, USFS

(36TS) McLawson Timber Sale; BLM Medford District
(36RD) McLawson Timber Sale Roads; BLM Medford District

Team Leader: Paul Uncapher
Umpqua National Forest

Team Members: Joe Burns, USFWS
Steve Niles, BLM
Kathy McBride, USFS
Scott Center, USFWS
Joe Graham, BLM
Jeff Dose, USFS
Nabil Atalla, BLM
Dan Kenney, NMFS

(39TS) Buckhorn Timber Sale; Siskiyou National Forest
(39RD) Buckhorn Timber Sale Roads; Siskiyou National Forest
(39RS) Dunn Creek Road Obliteration/Stormproofing; Siskiyou National Forest

Team Leader: Doug McVean
BLM, Roseburg District

Team Members: Jim Luse, BLM
Frank Bird, NMFS
Cay Ogden, USFWS
Pauline Hoskinson, PAC
Craig Tuss, USFWS
Jim Russell, BLM
Jim Fierst, USFS

CALIFORNIA

KLAMATH

(1TS) Wendy SSTS Timber Sale; Klamath National Forest
(**1RS) Butte Valley Restoration Project; Klamath National Forest**
(Note: The team reviewed this project and determined it was outside the area of the NFP so the questions were not completed and no analysis is included in this report.)
(**2TS) North Garner Salvage Timber Sale; Klamath National Forest**
(2RD) North Garner Salvage Timber Sale Road; Klamath National Forest
(Note: The road for this timber sale was determined not to be needed, and was not constructed. Therefore the questions were not answered and the project dropped from this report.)
(17TS) 46N10 Roadside Hazard Timber Sale; Klamath National Forest
(17RS) Juanita Lakes Structures Restoration Project; Klamath National Forest
(Note: The team determined the NFP S&Gs were not applicable to this project, so the questions were not answered and the project dropped from this report.)

Team Leader: Mike Ford
Klamath National Forest

Team Members: Ron Iverson, USFWS
Tom Reed, USFWS
Sally Wells, PAC
Ed Kupillas, PAC
John Perkins, USFS
Bill Reynolds, USFS
Tom Farmer, USFS
Candy Dillingham, USFS

(7TS) Divide Helicopter Timber Sale; Shasta-Trinity National Forest

Team Leader: Jim Zander
Shasta-Trinity National Forest

Team Members: Michael Bornstein, USFWS
Jerry Broom, Timber Industry Rep., PAC
Trish Bratcher, USFWS
Ron Clemenson, USFWS
Bruce Haines, Purchaser's Rep.
Fred Ritchey, USFS
Charlie Fitch, USFS

(13TS) Ten Bear Roadside Hazard Timber Sale; Klamath National Forest
(13RD) Ten Bear Roadside Hazard Timber Sale Road Maint.; Klamath N. F.

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: Mark McGinney, USFWS
Tom Reed, USFWS
Ed Kuppillas, PAC

(13RS) Steinacher Road Decommissioning; Klamath National Forest

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: Mark McGinney, USFWS
Tom Reed, USFWS
Bob Rhode, Karuk Tribe Natural Resources

(15TS) South Hurdy Roadside Hazard Timber Sale; Six Rivers National Forest
(15RS) South Kelsey Trail Realignment; Six Rivers National Forest

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: David Solis, USFWS

(16TS) Taylor Helicopter Timber Sale; Klamath National Forest
(16RD) Taylor Helicopter Timber Sale Road; Klamath National Forest
(Note: The team reviewed the road and completed the questions, but the questionnaire was lost on the electronic database and not included in the final Provincial Team report. No results were available for inclusion in this report.)
(16RS) Specimen Creek Fuel Reduction; Klamath National Forest

Team Leader: Mike Ford
Klamath National Forest

Team Members: Tom Reed, USFWS
Roberta Vandewater, USFS
John Schulyer, USFS
Tony Osa, USFS
Tom Herold, USFS

(18TS) Happy Camp Mt. Blowdown Timber Sale; Shasta-Trinity National Forest
(Originally named New River Blowdown)

Team Leader: Jim Zander
Shasta-Trinity National Forest

Team Members: Ron Clemenson, USFWS
Clyde Crosswhite, Timber Industry Rep.
Robert Jones, Logger on Sale
Fred Ritchey, USFS
Don Perry, USFS
Eric Johnson, USFS

(20TS) Sweet Onion Salvage Timber Sale; Six Rivers National Forest
(20RS) Aggregate Base Road Restoration; Six Rivers National Forest
(Note: Team determined the NFP S&Gs were not applicable to this project so the questions were not answered and the project dropped form this report.)

Team Leader: Mike Ford
Klamath National Forest

Team Members: Lynn Roberts, USFWS
Clarence Hostler, USFS
Pat Bello, USFS
Dick Kersh, USFS

(30TS) Pot Cabbage Timber Sale; Klamath National Forest
(30RD) Pot Cabbage Timber Sale Road; Klamath National Forest

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: Mark McGinney, USFWS
Tom Reed, USFWS
Ed Kupillas, PAC

NW SACRAMENTO

(32TS) Mud Thin Timber Sale; Shasta-Trinity National Forest

Team Leader: Jim Zander
Shasta-Trinity National Forest

Team Members: Kelly Wolcott, USFWS
Bill Branham, USFS
Dan Sendak, Hi-Ridge Lumber Co., Timber Sale Purchaser's Rep.
Carl Weidert, Environmental Rep., PAC

CALIFORNIA COAST

(3TS) Henry Fire Salvage Timber Sale; Six Rivers National Forest

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: Steve Kramer, NMFS
Robin Hamblin, USFWS
Paul Roush, BLM
Tim McKay, Northcoast Environmental Center, PAC
Tim Meyers, Eel River Sawmills, PAC

(3RS) Pilot Creek Road Decommissioning; Six Rivers National Forest

Team Leader: Laura Chapman
Six Rivers National Forest

Team Members: Paul Roush, BLM
Steve Kramer, NMFS
Tim McKay, Northcoast Environmental Center, PAC
Anthony Ambrose, Northcoast Environmental Center, PAC

Appendix F

Primary and Secondary Jobs-in-the-Woods Projects for FY 1997 Implementation Monitoring Program

Sample*	Province	Admin Unit	Sub-Admin Unit	Project
S	Will	Mt. Hood	Estacada	Stream Improvement - placement wood debris
P	Will	Mt. Hood	Estacada	Equip Rental, Fan Ck
P	SW Wash	Gifford Pinchot	Packwood	PCT 2 units - 50 Ac
P	SW Wash	Gifford Pinchot	Randle	PCT 7 units - 265 Ac
S	SW Wash	Gifford Pinchot	Randle	Rd Decomm (0.5 mi), Stabl 3.0 mi Rd 2325
P	SW OR	Siskiyou	GB	Rd Drainage
S	SW OR	Siskiyou	GB	Tree Planting
P	SW OR	Siskiyou	IV	Rd Sed Reduction - E. Fk Ill.
S	SW OR	Siskiyou	IV	Upslope Site Restor
P	Desch	Deschutes	Sisters	Suttle Lake Restoration
S	Desch	Deschutes	Sisters	Boat Launch & Access Rd Obliteration
P	EWA Cas	Wenatchee	Lake Wenatchee	Rd Decomm & Reconstruction
S	EWA Cas	Wenatchee	Lake Wenatchee	Arch pipe (fish passage)
S	Oly	Olympic	Soleduck	Drainage & Stablization
P	Oly	Olympic	Soleduck	Soil Bioengineering
P	Will	Willamette	BR	Tbr Stand Improvement
S	Will	Willamette	BR	Equip Rental (dozer)
P	Will	Willamette	DE	PreComm Thin
S	Will	Willamette	DE	Blowout Ck Culvert Replacement
P	Will	Willamette	DE	Equip Rental
S	Will	Willamette	DE	Rd Maintance
P	OR Coast	Siuslaw	Mapleton	In-Stream Fish Structures (boulders)
S	OR Coast	Siuslaw	Mapleton	Log haul for in-stream fish structures
P	Klam	Klamath	Salmon River (54)	Speciman Fuel Reduction
S	Klam	Klamath	Salmon River	Broadcast Burn
P	Klam	Klamath	Ukonom (58)	Steinacher Rd Restoration

Sample*	Province	Admin Unit	Sub-Admin Unit	Project
S	Klam	Klamath	Goosenest (57)	Antelope Ck planting
P	Klam	Klamath	Goosenest	Butte Valley Grasslands
S	Klam	Klamath	Goosenest	Little Shasta Meadow Restoration
P	Klam	Klamath	Goosenest	Juanita Lk Structures
P	Klam	Six Rivers	LT	Aggregate base Rd 7N53
P	Ca Coast	Six Rivers	MR	Rd Decomm in Pilot Ck
S	Ca Coast	Six Rivers	MR	Resurf Rd 3534 &drainage improvement
S	Klam	Six Rivers	NRA	Resurf, culvert install, improve Fish Ck Rd
P	Klam	Six Rivers	NRA	So Kelsy Trail Maint
P	OR Coast	Eugene	CR	Line falling, bucking, hauling
S	OR Coast	Eugene	CR	Native species test plots
				Lk Ck Nox Wd control pilot, Rip wk

* P = Primary
S = Secondary