

.....FINAL REPORT
December 2000

*Results of the FY 1999
Northwest Forest Plan
Implementation Monitoring Program*

*Part I
Timber Sales*

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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TABLE OF CONTENTS

Executive Summary	1
Introduction	2
Section 1 - The FY 1999 Implementation Monitoring Program	
Background and Purpose	2
Relationships of Implementation Monitoring with Other Monitoring Activities	4
The Approach to Implementation Monitoring	4
Overview	
Sample Selection	
Section 2 - Analysis of Monitoring Results	
Results and Discussion	5
Analysis	
Composition of the Interagency Oversight and Analysis Team	
Section 3 - Analysis of Monitoring Process	
Results of the Timber Sale Monitoring Process	12
Lessons Learned	13
Questionnaires	
Summary Lesson Learned	
Costs	
Discussion	13
Process Observations	
Section 4 - Conclusions and Recommendations	
Management Direction	15
Clarification and Improvements to the ROD and its S&Gs	16
Clarification of When S&Gs Apply	16
Improvements to the Monitoring Process	17
Acknowledgments	19
Acronyms	19

Tables

Table 1 Responses by PIMTs to Timber Sale Monitoring Questions 6
Table 2 Assessment of PIMT Timber Sale Responses by Interagency
Oversight and Analysis Team 6
Table 3 Compliance of Timber Sales with S&Gs 8
Table 4 Timber Sale responses that Exceeded or did not meet S&Gs 9
Table 5 Compliance by Individual Timber Sales10

Figure

Figure 1 Distribution of Timber Sales by Percent Compliance 8

Appendices

Appendix A Summary of Responses to Individual Questions on the Timber Sale
Questionnaire S&Gs Exceeded or Not Met 20
Appendix B FY 1999 Implementation Questionnaire: Timber Sales 23
Appendix C FY 1999 PIMTs and the Timber Sales They Reviewed 31

Executive Summary

The FY 1999 Regional Implementation Monitoring Program reviewed 24 randomly selected timber sales and 12 watersheds. Watershed monitoring findings will be reported in Part II. For the fourth consecutive year, results of the Northwest Forest Plan (NFP) Implementation Monitoring Program show high levels of compliance with Standards and Guidelines (S&Gs) for timber sales (98 percent for FY 1999). However, throughout the region compliance was again less than 100 percent in meeting coarse woody debris and green tree retention requirements.

As in the previous three years, the FY 1999 monitoring process featured random sampling, a standardized questionnaire for determining compliance or noncompliance, and the inclusion of a broad spectrum of public interests and agency disciplines in determining whether timber sales under the NFP were meeting the Record of Decision (ROD) and its S&Gs.

None of the deficiencies noted in this report warrant recommending major corrective actions or operational shifts by land management agencies. Local Forest Service (FS) and Bureau of Land Management (BLM) units are aware of specific, local noncompliance findings and are expected to take corrective action. In no way, should any local noncompliance reflect unfavorably on local field units as the NFP Implementation Monitoring Program is designed to be a regional assessment of compliance and progress. Findings reported herein are regional, not local, in scope and importance.

Local unit managers continue to acknowledge the value this public review process in helping to build understanding and trust. Local unit managers also continue to adapt procedures developed for the Regional Implementation Monitoring Program to enhance their own local monitoring efforts. At the national scale, NFP Implementation Monitoring Program techniques of random sampling and employment of a standard questionnaire are being applied in an FY 2000 FS national audit of timber sales.

Finally, a number of programmatic issues called for in the ROD have yet to be accomplished. These unresolved issues forestall a time when full NFP compliance can be claimed. Unresolved programmatic issues include such actions as developing provincial standards for coarse woody debris and snags. Unresolved interpretation and compliance issues about coarse woody debris, and snags, as well as previous years' monitoring findings about green tree retention and riparian reserve boundaries, lead to the same conclusions as in previous years' monitoring compliance in these areas needs strengthening. Four years of consistent findings have become a call for action to resolve these noncompliance issues.

Costs of the FY 1999 Implementation Monitoring Program continue to be predictable and in line with those of the previous three years. Total direct cost was approximately \$120,000, not counting the overhead costs associated with program development, training, analysis, and reporting. Provincial Implementation Monitoring Team (PIMT) review costs were about \$5,000 per project review over two days.

Introduction

The FY 1999 implementation monitoring results are presented in two parts: timber sales results (fall 2000) and watershed results (winter 2000). This timber sales monitoring report is presented in two ways: first, an analysis of results of the project reviews; and second, an evaluation of the review processes. Coupled with an overview and a conclusions and recommendations section, this report is divided into four sections:

Section 1 provides an overview of the monitoring program. It explains the relationship of implementation monitoring to the NFP, describes the approach used to design the monitoring process for FY 1999, and presents information related to the questions asked in the field monitoring reviews.

Section 2 specifically addresses the analysis of implementation monitoring data related to individual timber sales with the S&Gs of the NFP. This section includes a presentation of results followed by a discussion of those results and recommendations intended to improve compliance in the future.

Section 3 describes the process used for implementation monitoring. Like Section 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 monitoring.

Section 4 addresses overall conclusions and recommendations. This 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 Record of Decision and the Standards and Guidelines that comprise Attachment A of the ROD. “Provincial Monitoring Team” refers to a Provincial Implementation Monitoring Team (PIMT). Likewise, “Regional Monitoring Team” refers to the Regional Implementation Monitoring Team (RIMT).

Section 1 -The FY 1999 Implementation Monitoring Program

Background and Purpose

FY 1999 marks the fourth year of a regional-scale NFP implementation monitoring. The purpose of the program remains to determine and document whether the ROD for the NFP and its corresponding S&Gs are being consistently followed across the range of the NFP. This

monitoring program has been continued under the direction of the Regional Interagency Executive Committee (RIEC) and its associated interagency Monitoring Program Managers (MPM) group. During 1999, the MPM became responsible for overall direction and oversight for NFP monitoring. This report summarizes the implementation monitoring work of NFP field units and interagency, intergovernmental teams from the twelve NFP provinces.

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 with 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 detailed S&Gs and land allocations that make up a comprehensive set of ecosystem management rules.

The ROD directs three interrelated conservation strategies: aquatic, terrestrial, and socioeconomic. Overall NFP management strategy includes monitoring how well the NFP is working and whether BLM and the FS are conducting their activities in ways that satisfy NFP objectives.

In December 1994, U.S. District Court Judge William L. Dwyer stated, "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) explains that implementation monitoring ". . . ensures that management actions meet the prescribed standards and guidelines and that they comply with applicable laws and policies." The ROD 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 FS have extensive experience with monitoring, particularly at the project level, there has been little 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 "ROD direction," is the foundation of NFP conservation and management strategies. The ROD direction determines what questions to ask in implementation monitoring. Specific questions developed from the ROD direction have been applied to specific activities and the applicability of the ROD direction to those projects.

Monitoring results provide the public and public officials with feedback about how well particular activities meet management objectives. The ROD implementation monitoring process is an

iterative and adaptive process of learning 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 implementation, and (3) identifying needs for corrective actions.

Relationships of Implementation Monitoring to Other Monitoring Activities

Three different types of monitoring activities have been directed under the NFP: implementation monitoring, effectiveness monitoring, and validation monitoring. This report evaluates implementation monitoring where sampling and reporting are accomplished at a regional scale and where reviews are conducted on a random sample of local projects. Implementation monitoring initially determines compliance with ROD direction across all land allocations in the NFP, serving as an important baseline for both effectiveness and validation monitoring. It also documents actual practices as are carried out by field units, thus providing an important link between management and NFP assessment.

Various BLM and FS 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, nor effectiveness nor 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 systematically, a pilot program was initiated in FY 1996. The pilot program sampled FS and BLM timber sales within the NFP provinces. At the direction of the RIEC, FY 1997 activities for formal review were expanded to include not only timber sales but also road construction and restoration projects. The FY 1998 program called for monitoring timber sales along with an informal feasibility inquiry into watershed-scale activities. Six watersheds (five key watersheds and one non-key watershed) were examined (two per state). The watershed-scale approach tested out sufficiently that it was recommended for expanded application in FY 1999. FY 1999 watershed monitoring results will be presented in Part II – Watersheds.

Sample Selection

The basic sampling design for the FY 1999 Implementation Monitoring Program took a stratified

random approach. Based on RIEC guidance and findings from previous implementation monitoring efforts, the FY 1999 sampling strata were based on timber sale volume, harvest activity, and administrative unit (FS National Forest or BLM District). Following RIEC guidance, the RIMT used existing agency regional databases as the information sources for identifying the regional population of timber sales. These databases were found to be incomplete and contained errors that required the RIMT to make some adjustments and compromises during the design and field review processes.

The timber sales and sampling strata information were developed from information in the FS Sales Tracking and Reporting System (STARS) and the BLM Timber Sales Information System (TSIS). Sample selection essentially followed the proven procedures of FY 1998. That procedure starts with a population of timber sales that were sold since NFP implementation, with sale volume greater than 1000 MBF, and with some harvest activity completed. These sales were then further stratified by the FS and BLM administrative units and within the 12 provinces. From those sorts, a random sub-sample was selected for review.

The sample size of 24 timber sales reflected the total scope of the program agreed to by the RIEC. Results from the previous NFP Implementation Monitoring Program confirmed the desirability of focusing the FY 1999 program on relatively large, harvested sales. The selection of the administrative units and provinces as strata was based on a desire to review and equalize the workload across all units.

Section 2 - Analysis of Monitoring Results

Results and Discussion

One timber sale was reviewed from each of the 24 major administrative units participating in the NFP (National Forests and BLM Districts). The results from these sales are presented below.

The initial responses provided by the PIMTs are presented in Table 1. These responses show a relatively high level of compliance with NFP S&Gs. This initial categorization of responses not meeting S&Gs in FY 1999 was similar to the initial figures in FY 1998 (2.3 percent vs. 1.9 percent).

As in FYs 1996, 1997 and 1998, the PIMTs' initial responses were reviewed by an Interagency Oversight and Analysis Team composed of the RIMT and additional personnel from the FS, BLM, and Fish and Wildlife Service. The review examined all PIMT comments and responses that did not meet S&Gs, multiple answers and blank (no response). As a result, a couple of responses were placed into more appropriate categories (Table 2). A summary of recategorized responses was provided to each PIMT for review and comment.

Table 1
Responses by PIMTs to Timber Sale Monitoring Questions

<i>Responses</i>	<i>Count</i>	<i>Overall Percentage (%)*</i>	<i>Applicable Percentage (%)**</i>
Exceeded	17	0.79	2.53
Met	620	28.70	92.12
Not Met	13	0.60	1.93
Not Capable	22	1.01	3.27
Multiple Answers	1	0.05	0.15
Not Applicable	1,486	68.80	-
Blank (no response)	1	0.05	-
<i>Total</i>	2,160	100.00	100.00

* The overall percentage is based upon all 2,160 responses.

** The applicable percentage is based upon only those 673 responses for which the PIMTs decided the S&G applied (the sum of all “applicable” responses).

Table 2
Assessment of PIMT Timber Sale Responses by Interagency Oversight and Analysis Team

<i>PIMT Assessment</i>		<i>Interagency Oversight and Analysis Team Assessment</i>				
<i>Responses</i>	<i>Number</i>	<i>Exceeded</i>	<i>Met</i>	<i>Not Met</i>	<i>Not Capable</i>	<i>Not Applicable</i>
Exceeded	17	17	0	0	0	0
Met	621	0	620	0	0	0
Not Met	14	0	0	13	0	0
Not Capable	22	0	0	0	22	0
Multiple Answers	1	0	1	1	0	0
Not Applicable	1,486	0	0	0	0	1,486
Blank (no response)	1	0	0	0	0	0

<i>Total</i>	2,160	17	621	14	22	1,486

The Interagency Oversight and Analysis Team categorized each of the PIMT responses into one of categories described above.

Analysis

Each question was answered by the PIMTs using a response of whether it was judged to have “Exceeded”, “Met”, “Not Met”, was “Not Capable of Meeting”, or was “Not Applicable”.

After compiling all the PIMT reports, an Interagency Oversight and Analysis Team was assembled to review all PIMT responses in order to improve consistency among PIMT responses, to identify weaknesses in the implementation monitoring process, to level judgements about compliance with the ROD, and to develop management recommendations to improve future implementation of the NFP.

Composition of the Interagency Oversight and Analysis Team

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Bob Gunther, BLM Coos Bay District, Coos Bay, OR

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Sue Livingston, US Fish and Wildlife Service, Region 1, Portland, OR

After review by the RIMT and Interagency Oversight and Analysis Team, all responses were summarized by individual projects and by individual questions.

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. These instances did not appear to be excessive and were not considered to be noncompliant.

The results of the FY 1999 review of timber sales are found in Table 3. As in FYs 1996, 1997 and 1998, the FY 1999 program indicates a high overall level of compliance with NFP S&Gs (97.9 percent the sum of exceeded, met, and not capable in Table 3). Timber sale responses that

exceeded or did not meet S&Gs are presented in Table 4.

Table 3
Compliance of Timber Sales with S&Gs

<i>Responses *</i>	<i>Count</i>	<i>Overall Percentage (%)</i>	<i>Applicable Percentage (%)</i>
Exceeded	17	0.8	2.5
Met	621	28.8	92.1
Not Met	14	0.6	2.1
Not Capable	22	1.0	3.3
Not Applicable	1,486	68.8	-
Total	2,160	100.0	100.0

* The RIMT categorized the PIMT responses as to whether or not they were consistent with the S&Gs. The overall percentage is based upon all 2,160 responses. The applicable percentage is based upon only those 674 responses for which a S&G did apply (the sum of all "applicable" responses).

Overall results were compiled for each reviewed timber sale. Those results can be found in Table 5. Figure 1 shows the distribution of selected timber sales by percent compliance. As can be seen from this figure, the majority of sales had greater than 95 percent compliance. Fourteen sales had 100 percent compliance.

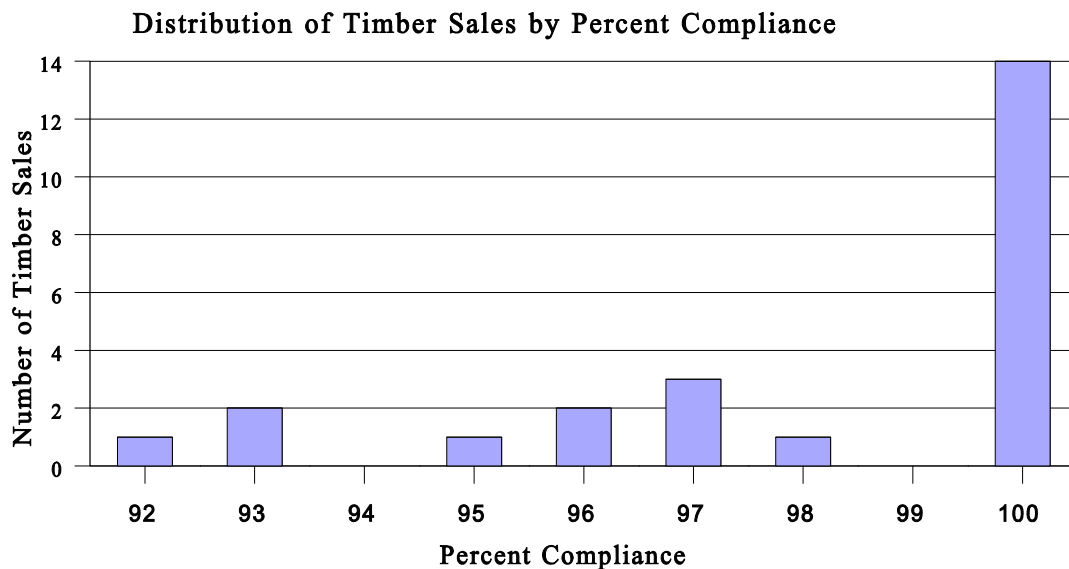


Figure 1

Table 4
Timber Sale Responses that Exceeded or Did Not Meet S&Gs

Exceeded		
Question #	TS#	Response
2	23	Complied with ESA.
31	2	Increased boundary in some areas.
46	4	Increased areas and size.
52	14	Retained all existing snags and 13.8 wildlife trees per acre of all sizes.
56	2	All were helicopter yarding.
56	13	Helicopter logging; slash was hand piled and burned.
60	12	Some red tree vole habitats were found and protected.
66	4	No treatments within 1/4 mile
68	4	No treatments within 1/4 mile
71	4	Yes; see EA pg. 2-9 Item 4.
72	9	Snags retained at 60 .
72	11	Snags were left at the 100 MPP level.
72	13	Project design is 2 snags per acre, 50 above the requirement.
73	19	Snags levels exceeded the S&G.
76	20	Over 1200 cavities were created in standing and downed trees.
87	3	Used numerous measures to avoid or mitigate disturbance.
87	7	Cable yarding
Not Met		
2	24	Did not have approved document for utilizing the second skid trail.
8	7	Canopy was less than 40 .
24	2	Did not have non-native species assessment for team review.
24	24	Contract did not avoid introduction of non-native plants.
37	5	Did not meet 240 feet.
41	8	Did not modify the coarse woody debris guidelines.
41	11	Did not plan to create large diameter coarse woody material.
41	15	Did not modify the coarse woody debris guidelines.
42	16	Burnt coarse woody debris; prescriptions could have provided greater protection.
44	15	Thinning removed many large trees.
48	4	Did not retain green tree retention indefinitely.
48	9	Did not mark green tree retention on the ground and not in permanent database.
56	5	Soil disturbance
78	2	Plan did not consult with the State.

Table 5
Compliance by Individual Timber Sales

Timber Sale No.	Number of Timber Sale Questions						Percent Compliance
	Exceeded	Met	Not Met	Not Capable	Not Applicable	Total	
1	0	28	0	2	60	90	100
2	2	31	2	4	51	90	95
3	1	33	0	1	55	90	100
4	4	38	1	0	47	90	98
5	0	26	2	1	61	90	93
6	0	16	0	2	72	90	100
7	1	29	1	0	59	90	97
8	0	23	1	2	64	90	96
9	1	23	1	1	64	90	96
10	0	24	0	0	66	90	100
11	1	33	1	1	54	90	97
12	1	26	0	0	63	90	100
13	2	15	0	0	73	90	100
14	1	18	0	1	70	90	100
15	0	20	2	4	64	90	92
16	0	32	1	0	57	90	97
17	0	20	0	1	69	90	100
18	0	31	0	0	59	90	100
19	1	24	0	1	64	90	100
20	1	20	0	0	69	90	100
21	0	19	0	1	70	90	100
22	0	31	0	0	59	90	100
23	1	33	0	0	56	90	100
24	0	28	2	0	60	90	93
Total	17	621	14	22	1486	2160	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. FY 1999 timber sale review is 98% compliance.

The responses to individual questions from the timber sale questionnaire are summarized and presented in Appendices A. Appendix B is the FY 1999 implementation questionnaire for timber sales. Review of those summaries and similar summaries from past years indicates that some S&Gs are more difficult to attain than others. This year's summaries show that management of coarse woody debris and green tree retention remains the most problematic of the sets of S&Gs not meeting compliance. These higher rates of noncompliance were:

- **The retention of 240 feet coarse woody debris in regeneration harvests in western Washington and Oregon.** One of the 24 sales has three units, and one of those units did not meet the 240 feet standard.
- **The modification of coarse woody debris guidelines in areas of partial harvest to reflect the timing of stand development cycle.** Two of the 24 sales did not modify coarse woody debris guidelines. One sale did not plan to create large diameter coarse woody material.
- **The retention of coarse woody debris already on the ground and protection to the greatest extent possible during treatment.** In one sale, several of the units had hard burns of existing coarse woody debris. The burn prescription did not provide greater protection.
- **The retention of at least 15 percent of each cutting unit under green tree retention standards and guidelines.** One sale removed many large trees.
- **The indefinite retention of green tree retention and dispersed retention patches.** One sale did not retain green tree retention indefinitely. Another sale did not mark green tree retention on the ground and not in permanent database.

Section 3 -Analysis of the Monitoring Process

This section of the report summarizes the methods for monitoring implementation of timber sales in FY 1999. Further, it summarizes process critiques from the FY 1999 PIMTs. Additionally, it presents opportunities for continuous improvement in the FY 2000 implementation monitoring program. Program costs to the government, as noted in the previous three years of cost accounting, are summarized as simply a matter of how much time was devoted to monitoring and how many federally-funded people were engaged in the monitoring effort. Finally, this section again recounts the major lessons learned in this fourth-year monitoring effort.

The FY 1999 Implementation Monitoring Program built upon experiences from the 1996 Pilot Implementation Monitoring Program and the 1997 and 1998 Implementation Monitoring Programs. As in previous years, the FY 1999 program featured successful interagency, interdisciplinary, and public participation, although it is evident that a few provinces, both public

and agency interest in the program is decreasing. The program requires broad participation to be fully successful.

The FY 1999 program, as in the previous three years, used a teamwork approach with discussions facilitated by questionnaires (see Appendix B). Questionnaires for FY 1999 had been modified according to recommendations from previous years' program critiques. Please refer to the report, *Results of the FY1996 (Pilot Year) Implementation Monitoring Program*, pp. 30-34 (Alverts et al., 1997), for more in-depth background information on how questionnaires have been applied by provincial teams.

Following are the findings and results of continuing improvements to monitoring processes that have been applied to timber sales for the past four years, along with a summary discussion about the direct costs of a provincial program.

Results of the Timber Sale Monitoring Process

Capitalizing on the major process lessons learned from the preceding three years of NFP implementation monitoring, the regional timber sale population was again stratified so that a significant number of larger, more complex sales would be included in the random selection process. Questionnaire revision has become an annual exercise in continuous quality improvement. Consistency in how the questions are interpreted and applied has also been improved as more experience has been gained. An improved questionnaire, more experience, and experience-based training prior to actual monitoring have all added value to an already solid monitoring program.

Field reviews continue to be noted as the most satisfying parts of the monitoring experience. Provincial team leadership; interagency, interdisciplinary, and public participation; local unit openness and quality hosting—all added up to another summer season of successful field reviews.

The FY 1999 computerized database essentially replicated the 1998 method. The 1998 method features centralization, electronic data transfer that minimizes data transfer errors, and a simplified, universally accessible electronic database. As in 1998, this user-friendly database with minimal human error-inducing data handling has helped bring the implementation monitoring program to its current state of maturity. The challenge now has become how to ensure long-term stability and accessibility of all accumulated implementation monitoring data. Implications for data base stability and accessibility are significant as determination of compliance and progress in meeting ROD S&Gs form the foundation for effectiveness monitoring.

Complete disclosure, openness, and a *jury system* for deliberating over controversies again characterized the FY 1999 program. Team participation typically crosses agency and public interest boundaries. Team member diversity continues to be a key attribute in achieving successful monitoring results (see Appendix C).

Lessons Learned

Questionnaires

For the fourth year, results have further established that regional questions drawn from ROD direction can be effectively answered through an objective process carried out by PIMTs. The questionnaire remains the key instrument in the review process. After each year's program, the questionnaire receives editorial improvement to bring clarity to the S&G-based questions. The primary value of the questionnaire continues to be as an objective instrument for determining compliance with ROD direction. In sum, the questionnaire continues to importantly serve as a neutral focus for PIMT discussions that usually lead to consensus answers.

Summary Lesson Learned

The summary statement about the implementation monitoring process taken from the last two years' reports still holds. The repeated and overriding lesson about the implementation monitoring process that has been learned from four 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.

Costs

Costs of the FY 1999 Regional Implementation Monitoring Program again fell within expectations. Actual minimum and average costs were near the sums expected. The range of direct costs to the government for two days of implementation monitoring by a PIMT can be from less than \$2,000 to more than \$10,000; with an average of about \$5,000; depending on the numbers of federal employees engaged. Program costs are essentially a function of the complexity of the subject projects, review team size, and the numbers of projects reviewed at one time.

The total estimated direct cost for the 1999 Implementation Monitoring Program (24 timber sales and their associated watersheds, i.e., two days of field review) is \$120,000. Regional interagency program development, training, analysis, and reporting (regional overhead) costs add another \$200,000. With provincial indirect costs related to training, review preparation and reporting (provincial overhead) at an estimated \$100,000; total estimated regional interagency program costs for implementation monitoring is \$420,000.

Discussion

Process Observations

The jury system continues to be the way that effective judgments about compliance are rendered. Teams reached consensus on most question responses but were occasionally unable to agree on a single response to a question. In these instances, the Interagency Oversight and Analysis Team determined the most appropriate responses through a group leveling process that aimed for consistency of interpretation as its main discussion criteria.

The sample size of 24 timber sales allowed for inclusion of all administrative units and provinces. Sample stratification lent some balance to the workloads of FS and BLM field units.

The 1999 Implementation Monitoring Program built upon experiences from the 1996 Pilot Implementation Monitoring Program and the 1997 and 1998 programs—all characterized by successful interagency, interdisciplinary, and public participation.

The 1999 program was also characterized by monitoring team discussions facilitated by questionnaires. The struggle to interpret and answer questions together as monitoring teams is a driving feature of a review process that does more to foster understanding and trust between team members than any other aspect of the program. The 1999 questionnaires were refined according to PIMT recommendations from 1998 program critiques. Questionnaire revision is an annual part of the monitoring process. Refer to the report, *Results of the FY1996 (Pilot Year) Implementation Monitoring Program*, pp. 30-34, for more in-depth background on the uses of the questionnaires by provincial teams. The RIMT remains committed to principles of random sampling, simplicity, and interagency cooperation.

Developing and maintaining consistent region-wide evaluation is critical to the success of NFP implementation monitoring. FY 1999 PIMT reviews improved further on consistencies noted in previous years' reviews as monitoring and evaluation experience has been gained.

There are still some irrelevant questions. The RIMT, based on PIMT feedback, continues to evaluate and weed out questions that have low levels of applicability.

A word of caution about past and future field reviews: while most reviews appeared to have been conducted objectively, team members may feel pressure to avoid "Not Met" responses. Team leaders need to continually reinforce the value of objectivity and the minimization of bias.

Section 4 - Conclusions and Recommendations

Summary conclusions and recommendations are presented 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 needs by focusing on general problem areas and specific actions.

The management direction category contains issues for which recommendations are based on findings where S&Gs are clearly stated and understood. For these issues, the recommended action is for regional management to reaffirm 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 particular S&Gs. As recommended in previous years' reports, issue resolution teams or interagency groups should address S&G inconsistencies and field interpretations. Results of these (now ongoing) efforts continue to 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 rewording of questions and redesign of the FY 1998 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 PIMTs who conducted the field monitoring reviews; the RIMT who analyzed the PIMT reports and prepared the draft and final reports; and the Interagency Oversight and Analysis Team who further analyzed the field data all concluded that FY 1999 findings demonstrate high levels of compliance with the ROD and its S&Gs. As determined in past years' findings, instances of noncompliance are anticipated to have minor biological effects at the regional scale and generally low-to-moderate effects at the local project-level scale.

Based on that summary conclusion, the RIMT recommends no major changes in management direction. The RIMT does, however, recommend the following actions (reiterated from previous years' reports) to improve NFP implementation. Emphasize direction, training, and information for the following:

- Meeting the coarse woody debris requirements of the ROD and its S&Gs (principal FY 1999 finding).
- Meeting green tree retention requirements of the ROD and its S&Gs.

- Improved coordination between project planning staff/decision-makers and contract administrators to ensure that planned actions are fully communicated and carried out as on-the-ground implementation.
- Meeting the snag requirements of the ROD and its S&Gs.
- Distribution of the Regional FY 1999 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.

Clarification and Improvements to the ROD and its S&Gs

The FY 1999 Monitoring Program, as in the previous three years' programs, provided field units, through the PIMTs, opportunities to identify difficulties with understanding and interpreting the ROD and its 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 in FY 1999. There continues to be room, however, 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 (principal FY 1999 finding).
- Riparian Reserve establishment for wetlands of less than one acre.
- How to maintain legacy trees given the constraints of operational needs and safety concerns.
- Resolve differing interpretations of how trees are selected under BLM Green Tree Retention guidelines.
- Appropriate silvicultural treatments in Riparian Reserves.

Such clarification can be facilitated by findings generated not only through implementation monitoring, but also through effectiveness monitoring and validation monitoring. The ROD

anticipated that province-specific coarse woody debris recommendations would eventually be developed. 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 rather than projects. Most of the pilot year recommendations in this area were considered in the design, training, and instruments used in the FY 1999 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.
- Provide guidance for green tree retention requirements for group selection and individual tree selection.

Improvements to the Monitoring Process

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

The following list contains suggestions and recommendations from the PIMTs over the past four years for implementation monitoring process improvement.

Recommendations

Monitoring Objectives

- Continue project-level reviews of key activities recommended by the PACs.
- Continue to develop implementation monitoring to assess S&Gs that address programmatic functions and planning issues in landscape-level and watershed-level contexts.

Training and Orientation

- Continue the one-day, pre-season workshop for PIMT leaders and capitalize on the

experiences of past years' leaders.

- Continue to improve guidance on how to answer questions.

Provincial Implementation Monitoring Teams

- PIMTs could be strengthened through active, personal recruitment of team members from federally recognized Tribes.
- Continue to draw non-federal team membership from Provincial Advisory Committees (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 projects having greater complexity or importance.
- Continue to focus monitoring reviews on actions that have been implemented on the ground.

Cost Containment

- Continue to limit project selection to the highest priorities identified by the PACs, the field units, and the RIEC.
- Continue to address monitoring cost efficiency.
- Keep cost accounting requirements to those of past years' programs.

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

- Agencies should inform field units about specific monitoring concerns so that corrective actions can be taken.
- Continue to use monitoring as a tool to extend the useful life cycles of BLM and FS land management plans.

The Questionnaire

- Continue to refine questionnaires based on PIMT critiques.

- Continue to provide opportunities for the PIMTs to identify and help clarify monitoring questions (or the associated S&Gs) that are unclear, ambiguous, or of questionable biological value.
- Continue to improve the annual workshop for PIMTs that is aimed at achieving better question response consistency.

Acknowledgments

Special thanks to PAC members, PIMT leaders, and PIMT members who gave their energies to another successful implementation monitoring year.

Acronyms

BLM	Bureau of Land Management
FS	Forest Service
FWS	Fish and Wildlife Service
MPM	Monitoring Program Managers
NFP	Northwest Forest Plan
PAC	Provincial Advisory Committee
PIMT	Provincial Implementation Monitoring Team
REO	Regional Ecosystem Office
RIEC	Regional Interagency Executive Committee
RIMT	Regional Implementation Monitoring Team
ROD	Record of Decision
S&Gs	Standards and Guidelines
STARS	Sales Tracking and Reporting System
TSIS	Timber Sales Information System

Appendix A – Summary of Responses to Individual Questions on the Timber Sale Questionnaire

Land Use Allocation	Question No.	Number of Timber sales					Total	Percent Compliance
		Exceeded	Met	Not Met	Not Capable	Not Applicable		
ALL	1		24				24	100
	2	1	22	1			24	96
	3		12			12	24	100
	4		12			12	24	100
	5		10			14	24	100
LSR &	6		3			21	24	100
MLSA	7		8			16	24	100
	8		8	1		15	24	89
	9		8			16	24	100
	10		3			21	24	100
	11		3			21	24	100
	12		1			23	24	100
	13		5			19	24	100
	14		1			23	24	100
	15		2			22	24	100
	16		2			22	24	100
	17		2			22	24	100
	18		2			22	24	100
	19		2			22	24	100
	20		1			23	24	100
	21		1			23	24	100
	22		6			18	24	100
	23		4			20	24	100
	24		6	2		16	24	75
	25		1			23	24	100
WA/ACS	26		20			4	24	100
& RR	27		21			3	24	100
	28		24				24	100

	29		12			12	24	100
	30		18			6	24	100
	31	1	22			1	24	100
	32		3			21	24	100
	33		5			19	24	100
	34		23			1	24	100
	35		15			9	24	100
	36		14			10	24	100
MATRIX	37		3	1		20	24	75
	38		3		1	20	24	100
	39		2		1	21	24	100
	40		18		1	5	24	100
	41		11	3		10	24	79
	42		21	1		2	24	95
	43		14			10	24	100
	44		8	1	1	14	24	90
	45		1			23	24	100
	46	1	7		1	15	24	100
	47		10		1	13	24	100
	48		9	2	1	12	24	83
	49		1			23	24	100
	50					24	24	NA
	51					24	24	NA
	52	1	2			21	24	100
	53		1			23	24	100
	54		1			23	24	100
	55					24	24	NA
	56	2	19	1		2	24	95
	57		19			5	24	100
SPECIES	58		23			1	24	100
	59		8			16	24	100
	60	1	8			15	24	100

	61		12			12	24	100
	62		4			20	24	100
	63		3			21	24	100
	64		1			23	24	100
	65		1			23	24	100
	66	1				23	24	100
	67		2			22	24	100
	68	1				23	24	100
	69		1			23	24	100
	70		1			23	24	100
	71	1				23	24	100
	72	3	14		6	1	24	100
	73	1	8			15	24	100
	74		10		1	13	24	100
	75		7		2	15	24	100
	76	1	18		3	2	24	100
	77		3		3	18	24	100
	78			1		23	24	0
AMA	79		3			21	24	100
	80		3			21	24	100
	81		2			22	24	100
	82		2			22	24	100
	83		2			22	24	100
	84		3			21	24	100
	85		2			22	24	100
	86					24	24	NA
	87	2	1			21	24	100
	88		1			23	24	100
	89		1			23	24	100
	90		1			23	24	100
	Total	17	621	14	22	1,486	2,160	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. FY 1999 timber sale review is 98% compliance.

Appendix B - 1999 IMPLEMENTATION QUESTIONNAIRE:TIMBER SALES
(v2.0: 5/11/99)

Instructions

- Please complete a questionnaire and narrative summary for each timber sale. An electronic version of your report should be submitted by October 15, 1999.
- **Each question has five potential responses.** If there is an apparent conflict between the wording of the question and the related ROD language, answer the question.
 - **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** 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 - mark NA.
 - **Note that for three questions (46, 47, 72) you are asked to provide additional information as to what the sale actually did, regardless of which agency administered the sale.**
- Responses of “exceeded”, “not met”, or “not capable” of meeting **MUST** be explained. 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 report will identify all S&G questions that have been locally modified, cite the modification document, and describe the modification.
- 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.
- Roads associated with timber sales will not be specifically reviewed in FY 1999.
- Provincial teams should submit the following reports and output:
 - Cover sheet with information on the timber sale reviewed.
 - A narrative summary document.
 - An electronic file with answers to all timber sale questions.
 - Summarize the costs of conducting the review on the spread sheet provided.
- 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	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

Timber Sale Questionnaire

All Land Allocations	
1	Has the timber sale undergone required site-specific analysis? R13
2	Have analyses been conducted with coordination and consultation occurring to ensure consistency under existing laws (NEPA, ESA, Clean Water Act)? R54,A2-3,C1
3	Has the timber sale avoided restricting tribal treaty rights in accordance with the Record of Decision? R54-55,C16
4	Have analysis and planning efforts identified tribal trust resources, if any? (E-21)
5	Have land management units consulted affected tribes, when tribal trust resources may be affected? (E-21)
Late-Successional Reserves/Managed Late-Successional Areas	
6	For FY 1996 and earlier projects, an Initial Late-Successional Reserve Assessment / Managed Late-Successional Area Assessment must have been completed AND the project must be covered by, and fully comply with, the conditions of one of the following: <ul style="list-style-type: none"> • the May 1995 or July 1996 (amended September 1996) exemption memoranda on silvicultural treatments, or • a project-specific REO review and consistency letter. R57,A7,C11,C26
7	For FY 1997 and later projects, a Late-Successional Reserve Assessment / Managed Late-Successional Area Assessment must have been reviewed by and found consistent by the Regional Ecosystem Office AND the project must be covered by, and fully comply with, the conditions of one of the following: <ul style="list-style-type: none"> • exemption specifically granted by the REO's LSRA consistency letter, or • the May 1995 or July 1996 (amended September 1996) exemption memoranda on silvicultural treatments, or • a project-specific REO review and consistency letter. R57,A7,C11,C26
8	Was the project consistent with one of the following: <ul style="list-style-type: none"> • exemption specifically granted by the REO's LSRA consistency letter, or • the May 1995 or July 1996 (amended September 1996) exemption memoranda on silvicultural treatments, or • a project-specific REO review and consistency letter.
9	Did the project comply with the stocking, snag, coarse woody debris, and other parameters upon

	which an REO consistency finding (or exemption from REO review) was based?
10	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? C12
11	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? C12
12	Have silvicultural and risk reduction activities in <u>younger stands</u> in LSR/MSLAs east of the Cascades or in the Klamath Provinces of Oregon and California accelerated development of late-successional conditions while making the future stand less susceptible to natural disturbances? C13
13	Have silvicultural and risk reduction activities in <u>late-successional stands</u> in LSR/MSLAs maintained LSR objectives and clearly provided a greater assurance of long-term habitat maintenance by reducing the threat of catastrophic insect, disease, and fire events? C12-13
14	Has salvage been limited to disturbed sites that are greater than 10 acres in size and have less than 40 percent canopy closure? C14
15	Have all standing live trees been retained in salvage areas (except as needed to provide reasonable access or for safety)? C14-15
16	Have snags that are likely to persist (until the stand reaches late-successional conditions) been retained in salvage areas? C14
17	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? C15
18	Has retained coarse woody debris in salvage areas approximated the species composition of the original stand? C15
19	Have green-tree and snag guidelines in salvage areas been met before those for coarse woody debris? C15
20	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? C15
21	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? C15-16
22	Do fuel management and fire suppression activities within LSRs/MSLAs minimize adverse impacts to late-successional habitat and emphasize maintaining late-successional habitat? C17
23	Have hazard reduction and prescribed fire applications been reviewed by and considered consistent by the Regional Ecosystem Office? C18
24	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
25	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? C26
Watershed Analyses/Aquatic Conservation Strategy/Riparian Reserves	
26	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)?

	R55-56,A7,B12,B17,B20-30,C3,C7,E20-21
27	Were the results of Watershed Analysis used to guide and support findings by decision-makers that activities are consistent with Aquatic Conservation Strategy Objectives? B10
28	Have surveys been conducted to locate all streams and water bodies in the project area (i.e., for all five stream and water categories)? C30
29	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
30	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
31	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. C30
32	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
33	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
34	Has timber harvest, including fuelwood cutting, in Riparian Reserves been prohibited, except as follows (C31-32): <ul style="list-style-type: none"> • where catastrophic events such as fire, flooding, volcanic, wind, or insect damage result in degraded riparian conditions, allow salvage and fuelwood cutting if required to attain Aquatic Conservation Strategy objectives. • salvage trees only when watershed analysis determines that present and future coarse woody debris needs are met and other Aquatic Conservation Strategy objectives are not adversely affected. • Apply silvicultural practices for Riparian Reserves to control stocking, reestablish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives?
35	Do fuel treatments and fire suppression strategies meet Aquatic Conservation Strategy objectives and minimize disturbance of riparian ground cover and vegetation? C35
36	Have trees which were felled to reduce safety risks been kept on-site when needed for coarse woody debris? C37

Matrix	
37	For regeneration harvests in 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)? C40
38	For regeneration harvests 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? C40
39	For regeneration harvests in northern California National Forests, have the local forest plan standards and guidelines for coarse woody debris been met? C40
40	For Forest Service and BLM, do down logs left for coarse woody debris reflect the species mix of the original stand? C40
41	In areas of partial harvest, have coarse woody debris guidelines been modified to reflect the timing of stand development cycles? C40
42	Has coarse woody debris already on the ground been retained and protected to the greatest extent possible during treatment? C40
43	Have down logs been left within forest patches that are retained under the green-tree retention guidelines? C41
44	For National Forests, outside the Oregon Coast Range and the Olympic Peninsula Provinces and the Mount Baker-Snoqualmie National Forest, has at least 15percent of each cutting unit been retained? C41
45	On the Mt. Baker-Snoqualmie National Forest, have site specific prescriptions been developed to maintain green trees, snags, and down logs? C41
46	Has 70 percent of green tree retention 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? R36,C41-42 Regardless of how the question is answered by the team (e.g., even if NA), state in the narrative whether or not the sale retained green trees as clumps.
47	Have green tree retention patches and dispersed retention included the largest, oldest, decadent or leaning trees and hard snags occurring in the unit? C42 Regardless of how the question is answered by the team (e.g., even if NA), state in the narrative whether or not the sale retained the largest, oldest, decadent or leaning trees and hard snags occurring in the unit.
48	For National Forests and BLM lands, have green tree retention and dispersed retention patches being retained indefinitely? C42
49	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? C41
50	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? C42
51	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, has the project avoided reducing the amount of late-successional forest to less than 25- 30 percent of each 640 acre Connectivity/Diversity Block? C42
52	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)? C42
53	For Medford District, BLM, lands south of Grants Pass, were 16 to 25 large green trees per acre retained in harvest units? C42
54	For BLM lands, has the project avoided reducing the amount of late-successional forest to less than 25- 30 percent of each Connectivity/Diversity Block (in Old-growth Emphasis Areas in the Eugene District and the seven Managed Pair Areas and two Reserved Pair Areas on the Coos Bay District surrounding Designated Conservation Area OD-33)? These areas are designated as Connectivity/Diversity Blocks in BLM RMPs. C42-43
55	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 Designated Conservation Area OD-33)? Designated as Connectivity/Diversity Blocks in BLM RMPs. C42-43
56	Did the project employ practices which minimize soil and litter disturbance from harvest methods, yarding, and heavy equipment? C44
57	Has the project avoided the harvest of late-successional forest in watersheds where little old-growth remains (i.e., watersheds where 15 percent or less of the federal forest-capable lands are late-successional)? C44 [Note: If more than 15 percent of the watershed is late-successional, the project has “met” requirements]
Species	
58	Have records or databases of Survey and Manage species (Survey Strategy 1) been consulted prior to the design and implementation of ground disturbing activities? C4,C43-48
59	Has the project managed known sites for Survey and Manage species (Survey Strategy 1) when known from the project area? C4-5
60	Has the project surveyed for Survey and Manage species (Survey Strategy 2) prior to ground disturbing activities? C4-5
61	<p>Have required management actions occurred for the following species (if in the project area). If none of the taxa are present then mark Not Applicable (NA). If management for any taxa does not meet requirements then mark Not Met (NM) and explain.</p> <ul style="list-style-type: none"> • Oxyporous nobilissimus (600 acre management areas) C4-5; • Rare and endemic fungi (160 acre management areas) C4-5; <ul style="list-style-type: none"> - Alpova sp. nov. Trappe 1966 - Alpova sp. nov. Trappe 9730 - Arcangeliella sp. nov. Trappe 12359 - Arcangeliella sp. nov. Trappe 12382 - Elaphomyces anthracinus - Elaphomyces subviscidus - Elaphomyces sp. nov. Trappe 1038 - Endogone acrogena - Gastroboletus sp. nov. Trappe 2897 - Gastrouillus sp. nov. Trappe 7516 - Gastrouillus sp. nov. Trappe 9608 - Gautieria magnicellaris - Gymnomyces sp. nov. Trappe 7545

61	<p>(continued)</p> <ul style="list-style-type: none"> - <i>Hydnotrya subnix</i> sp. nov. Trappe 1861 - <i>Rhizopogon</i> sp. nov. Trappe 9432 - <i>Thaxterogaster</i> sp. nov. Trappe 4867, 6242, 7427, 7962, 8520 - <i>Tuber</i> sp. nov. Trappe 2302 - <i>Tuber</i> sp. nov. Trappe 12493 <ul style="list-style-type: none"> • <i>Ptilidium californicum</i> (establish LSR) C20; • <i>Ulotia meglospora</i> (establish LSR) C20; • <i>Aleuria rhenana</i> (establish LSR) C20; • <i>Sarcosoma mexicana</i> (establish MLSA) C20,27; • <i>Otidia tidealeporina</i> (establish LSR) C20 • <i>Otidia onotica</i> (establish LSR) C20 • <i>Otidia smithii</i> (establish LSR) C20; • Shasta salamanders (establish LSR) C20 • Larch Mountain salamanders (establish MLSA) C28 • Siskiyou Mountain salamanders (establish MLSA) C28 • Del Norte salamanders (establish MLSA) C20,28; • great gray owl nest sites (1/4 mile zone), meadows, and openings C21; • <i>Brotherella roellii</i> (establish MLSA) C27 • <i>Buxbaumia viridis</i> (establish MLSA) C27 • <i>Rhizomnium nudum</i> (establish MLSA) C27 • <i>Schistostega pennata</i> (establish MLSA) C27 • <i>Tetraphis geniculata</i> (establish MLSA) C27.
62	Have management activities adjacent to the 100-acre spotted owl Late-Successional Reserves been designed to reduce risks from natural disturbance to these areas? C10-11
63	In marbled murrelet habitat, within 50 miles of the coast, have marbled murrelet surveys been conducted to protocol in areas planned for timber harvest? C10,12,D15
64	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? C9-10,12
65	Have silvicultural treatments in non-murrelet habitat within the 0.5-mile murrelet circle been designed to protect or enhance suitable or replacement habitat? C12
66	Has protection been provided for caves, mines, and abandoned wooden bridges and buildings that are used as roost/hibernation sites for bats? C43,D10
67	Have surveys for bats been conducted according to a standardized regional protocol? C43,D10
68	Has timber harvest been prohibited within 250 feet of sites containing bats? C43,D10
69	Have site management measures been developed for sites containing bats? C43
70	If Townsend's big-eared bats were found, have the appropriate state wildlife agencies been notified? C44
71	Have management prescriptions included special consideration for caves or mines known to be occupied by Townsend's big-eared bat? C44,D10
72	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? C42 Regardless of how the question is answered by the team (e.g., even if NA), state in the narrative whether or not the sale retained enough snags to support species of cavity-nesting birds at 40 percent of potential population levels.

73	For both Forest Service and BLM matrix lands: 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 white-headed woodpecker and the pygmy nuthatch, if within their range and habitat? C46
74	For both Forest Service and BLM matrix lands: 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? C46
75	For both Forest Service and BLM matrix lands: have some beetle infested trees been left for black-backed woodpeckers, if within their range and habitat? C46
76	For both Forest Service and BLM matrix lands: have the needs of non-bird cavity nesting species been provided for? C46-47
77	For both Forest Service and BLM matrix lands: if snag requirements for cavity nesters were not met, was harvest prohibited? C46
78	In known lynx range, have site-specific timber harvest, roading, and fire management plans been developed? C48
Adaptive Management Areas	
79	Has project planning in the Adaptive Management Area included early public involvement and coordination with other activities within the province? D6
80	Within Adaptive Management Areas have S&Gs within current plans been considered during planning and implementation activities? C3
81	Have projects in Late-Successional Reserves and Managed Late-Successional Areas within AMAs been managed according to the S&Gs for such reserves? D9
82	Has riparian protection been comparable to that prescribed for other federal land areas? D9
83	Has analysis of Riparian Reserve widths also considered the contribution of these reserves to other, including terrestrial, species? D10
84	Has the intent of the S&Gs for coarse woody debris, green tree and snag retention, identified for the matrix, been met? C41,D10
85	Has the project avoided modifying late-successional forests in watersheds where little old-growth remains (i.e., watersheds where 15 percent or less of the federal forest-capable lands are late-successional) unless the role of those forests has been considered by Watershed Analysis prior to their modification? D11
86	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
87	Did the project employ practices which minimize soil and litter disturbance from harvest methods, yarding, and heavy equipment? C44,D11
Research	
88	Have research activities been analyzed to ensure that there is no significant risk to Aquatic Conservation Strategy objectives and to watershed values? C38
89	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
90	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
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Appendix C – FY 1999 PIMTs and the TIMBER SALES THEY REVIEWED

TS#1

Team Leader: Gary Ketcheson, Forest Service

Members: Ron Lee, US Environmental Protection Agency/PAC member
 Robert Johnson, PAC Member
 George Kirkmire, Washington Contract Loggers Assn./PAC Member
 Ed Gastellum, North Cascades National Park/PAC Alternate
 Cindy Levy, US Fish and Wildlife Service/PAC Alternate

TS#2

Team Leader: Jodi Leingang, Forest Service

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 Edwin Lewis, Bureau of Indian Affairs
 Tim McCracken, US Fish and Wildlife Service
 Chris Hall, WA Department of Ecology
 Liz Tanke, Northwest Ecosystem Alliance
 Bob Progulske, US Fish and Wildlife Service, REO

TS#3

Team Leader: Ward Hoffman, Forest Service

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 Ron Lee, Environmental Protection Agency/PAC Member
 Guy Lusignan, Society of American Foresters/PAC Member
 Deanna Lynch, US Fish and Wildlife Service/representing PAC Member
 Jonathan Seil, Ecoforester/PAC Alternate
 Trevin Taylor, Quileute Natural Resources/representing PAC Member
 John Wullschlager, National Park Service/representing PAC Member

TS#4

Team Leader: Jodi Leingang, Forest Service

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 Jodi Bush, US Fish and Wildlife Service
 Dan Robison, Environmental Protection Agency

TS#5

Team Leader: John Roland, Forest Service

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 Dorothy Saunders, PAC Member
 Ron Lee, Environmental Protection Agency
 James Bouchard, Cowlitz Indian Tribe

Pam Repp, US Fish and Wildlife Service
Philo Greg, PAC Member
Lee Carlson, Yakama Nation
Bob Dick, Northwest Forestry Association

TS#6

Team Leader: Katrina Symons, Bureau of Land Management
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Carolina Hooper, Bureau of Land Management
Cal Wettstein, Forest Service
Rennie Ferris, Ferris Nursery/PAC Member
Nancy Lee, US Fish and Wildlife Service

TS#7

Team Leader: Katrina Symons, Bureau of Land Management
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Carolina Hooper, Bureau of Land Management
Craig Snider, Forest Service
Tom Haswell, PAC Member
Mike Wilson, Grand Ronde Tribe/PAC Member

TS#8

Team Leader: Chris Pazzula, Forest Service
Members: Jim Rice, Forest Service
John Davis, US Fish and Wildlife Service
Cole Gardiner, PAC Member
Tom Haswell, PAC Member
Charley Thompson, Bureau of Land Management

TS#9

Team Leader: Chris Pazzula, Forest Service
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John Davis, US Fish and Wildlife Service
Cole Gardiner, PAC Member
Tom Haswell, PAC Member
Wayne Logan, Bureau of Land Management

TS#10

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TS#11

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Clay Penhollow, Confederated Tribes of the Warm Springs Reservation/PAC
Boyd Wickman, USFS, PNW Research Station/PAC member
Dede Steele, US Fish and Wildlife Service
Jeff Dillon, US Fish and Wildlife Service
Sue Livingston, US Fish and Wildlife Service
Susan Skakel, Forest Service

TS#12

Team Leader: Bob Gunther, Bureau of Land Management

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Lynn Gemlo, US Fish and Wildlife Service
Jim McConnell, Bureau of Land Management
Gary Varner, Bureau of Indian Affairs

TS#13

Team Leader: Bob Gunther, Bureau of Land Management

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Anita Ward, Special Forest Products/PAC Member
Brendan White, US Fish and Wildlife Service
John Royce, Bureau of Land Management

TS#14

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Margaret McHugh, Forest Service
Keith Wilkinson, Fisheries/PAC Member
Craig Tuss, US Fish and Wildlife Service
Mark Buckbee, Bureau of Land Management

TS#15

Team Leader: Bob Gunther, Bureau of Land Management

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Jim Buck, COE
David Leal, US Fish and Wildlife Service
Ray Bosch, US Fish and Wildlife Service
David Hill, Timber Industry/PAC Member
Tom Link, Forest Service
Don Morrison, Forest Service

TS#16

Team Leader: Bob Gunther, Bureau of Land Management

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Ray Bosch, US Fish and Wildlife Service
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John Royce, Bureau of Land Management
Chuck Anderson, Forest Service
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TS#17

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Scott Center, US Fish and Wildlife Service
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TS#18

Team Leader: Laura Chapman, Forest Service

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Sue Livingston, US Fish and Wildlife Service
Doug Laye, US Fish and Wildlife Service
Leonard LeCaptain, US Fish and Wildlife Service
Dave Busch, USGS, REO

TS#19

Team Leader: Laura Chapman, Forest Service

Members: Doug Laye, US Fish and Wildlife Service
Dave Busch, USGS, REO

TS#20

Team Leader: Laura Chapman, Forest Service

Members: Tricia Bratcher, US Fish and Wildlife Service
Paul Roush, Bureau of Land Management

TS#21

Team Leader: Laura Chapman, Forest Service

Member: Gene Graber, Forest Service

TS#22

Team Leader: Lynda Karns, Forest Service

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Laura Finley, US Fish and Wildlife Service
Cliff Oakley, US Fish and Wildlife Service
Nadine Kanim, US Fish and Wildlife Service

TS#23

Team Leader: Ken Coop, Forest Service

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Joseph Bower, PAC Member
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Jim Pena, Forest Service
Fred Ritchey, Forest Service
Jeff Paulo, Forest Service
Donna Harmon, Forest Service
Duane Lyon, Forest Service
Joe Miller, Forest Service
Tom Quinn, Forest Service

TS#24

Team Leader: Michelle Light, Forest Service

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