Stanislaus National Forest

1994-1996 Monitoring and Evaluation Report

Land and Resource Management Plan

United States
Department of
Agriculture

Forest Service

Pacific
Southwest
Region

Stanislaus
National Forest

March 1997

United States
Department of
Agriculture

Forest
Service

Stanislaus National Forest
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File Code: 1900
Date: March 31, 1997

Dear Friends:

I am pleased to announce completion of the Stanislaus National Forest 1994-1996 Monitoring and Evaluation Report. The report documents the results of monitoring and evaluation activities accomplished during federal fiscal years 1994, 1995 and 1996 (October 1, 1993 to September 30, 1996). It also presents the Core Interdisciplinary Team's (Core Team) conclusions and recommendations based on those results.

As you will see in the report, the Forest accomplished a great deal of monitoring. I support the Core Team's findings. Full implementation of their recommendations depends on adequate funding and completion of the 5 year Forest Plan Review and Regional direction for the California Owl. Based on their evaluations and recommendations the Forest will:

1. Initiate the 5 year Forest Plan Review.

2. Complete a minor Forest Plan Amendment separating the 57 Forest Plan resource monitoring items from the 36 accomplishment and duplicate items (see Conclusions 8a and 8b). This amendment will also change the annual report completion date from November 30 to March 31 of the following year.

3. Complete Forest Plan Amendments for the Emigrant Wilderness and Motor Vehicle Travel Management.

4. Amend Forest Plan Diversity and Wildlife S&Gs (see Conclusion 4) and, amend Forest Plan Management Area Allocations for Bald Eagle Recovery Habitat (see Conclusion 5), pending Regional direction for the California Spotted Owl.

5. Amend Forest Plan Chapter V (see Conclusion 9) and the Schedule of Outputs (see Conclusion 6) pending results obtained from the 5 year Forest Plan review.

Comments received on this report will be considered in preparing future reports. Please submit comments to:

- Stanislaus National Forest
  Attn.: Monitoring
  19777 Greenley Road
  Sonora, CA 95370

Sincerely,

Janet Wold

JANET L. WOLD
Forest Supervisor

Executive Summary

This report documents the results of monitoring and evaluation activities accomplished from October 1, 1993 to September 30, 1996. It also presents the conclusions and recommendations based on those results. The Interdisciplinary Team (IDT) reviewed the results in an integrated fashion, by asking the following questions.

- Does the Forest Plan work?
- What monitoring has been done and what does it mean?
- Does monitoring relate to Forest Plan goals?
- Do managers consider monitoring results when making decisions?
- Do we monitor the right things?
- What additional monitoring is needed?
- What have we learned from outside sources (SNEP, etc.)?

Results

The Forest Plan includes 93 individual monitoring items in 22 broad categories ranging from Air Quality to Forest Standards and Guidelines (S&Gs). Accomplishments also showed monitoring of 9 individual items not included in the Forest Plan, bringing the total to 102. Monitoring activity occurred on 69 (74%) of the 93 Forest Plan items and on all 9 (100%) of the non-Forest Plan items. The Core Team reviewed the information pertaining to all 102 items, comparing conditions to monitoring limits of variability defined and established in Forest Plan Chapter V. Results show the Core Team:

A. Determined conditions are within limits of variability on 19 (20%) of the 93 Forest Plan monitoring items.

B. Determined conditions are not within limits of variability on 20 (22%) of the 93 Forest Plan monitoring items.

C. Could not determine whether conditions are within, or not within limits of variability on 24 (26%) of the 93 Forest Plan monitoring items.

D. Could not evaluate conditions because the Forest Plan does not include monitoring standards or limits of variability on 6 (6%) of the 93 Forest Plan monitoring items and 9 (100%) of the non-Forest Plan items.

E. Could not evaluate conditions because monitoring did not occur or, monitoring occurred but was not reported on 24 (26%) of the 93 Forest Plan monitoring items.

Conclusions

While evaluating the specific results of each individual monitoring activity, the Core Team developed conclusions and grouped them into the broad categories of Forest Plan Direction; and, Monitoring and Evaluation.

Forest Plan Direction

1. Applicable Forest Plan management direction and monitoring requirements are up-to-date and conditions are within limits of variability for 7 Forest Plan monitoring items.

2. Conditions are not within limits of variability, however it is likely that conditions can meet limits of variability with improved application of existing management direction, for 7 Forest Plan and 1 non-Forest Plan monitoring items.

3. Monitoring results did not show any items where applicable Forest Plan management direction is out-of-date.

4. Applicable Forest Plan S&Gs are out-of-date or do not provide specific management direction for 8 Forest Plan and 1 non-Forest Plan monitoring items.

5. Applicable Forest Plan management area allocations are out-of-date for 1 Forest Plan monitoring item.

6. Applicable Forest Plan projected outputs are out-of-date and do not accurately reflect recent or expected future accomplishments for 6 Forest Plan monitoring items.

7. Some conditions are not within limits of variability and several Forest Plan Amendments are needed. However, overall monitoring results indicate conditions are moving towards desired conditions as stated in the Forest Goals (see Appendix). In addition, the Core Team did not identify any items where applicable Forest Plan management direction, S&Gs, management area allocations and monitoring requirements are all out-of-date or, of sufficient magnitude to warrant Forest Plan revision.

8. Some Forest Plan monitoring requirements are "accomplishments", duplicates of other monitoring items, covered by project plans or, not feasible on a Forest scale.

    a. Monitoring requirements reflect "accomplishments" for 20 Forest Plan monitoring items.

    b. Monitoring requirements are duplicates of other monitoring items, covered by project plans or, not feasible on a Forest scale for 16 Forest Plan monitoring items.

9. Monitoring requirements are out-of-date, no longer feasible as written or, do not include specific indicators of resource conditions or measurable standards for 41 Forest Plan and all 9 non-Forest Plan monitoring items.

10. Not enough information exists and the information is needed to help answer questions for 10 Forest Plan monitoring items.

Monitoring and Evaluation

11. Completion of the Monitoring Report by November 30 each year is not feasible.

12. Monitoring occurs but is not consistently reported in a timely manner.

13. Managers consider monitoring information while developing and approving site specific projects.

14. Considering recent funding levels, it is impossible to achieve the full Forest Plan monitoring program.

15. The Forest Plan monitoring program is based on a much larger timber program than currently exists.

16. The Monitoring Program is not well integrated into the Forest's annual Program of Work.

17. Although the Core Team could not determine conditions on 48 Forest Plan monitoring items (see results c and e), it is unlikely that trends could be established for most, over the short 5 years since Forest Plan approval, even with more information and unlimited monitoring budgets.

Recommendations

The Core Team reviewed their conclusions and developed the following recommendations. These items are recommended to the Forest Supervisor for any further action.

Forest Plan Direction

Short-term

- No action needed (continue current monitoring) for 7 Forest Plan monitoring items.
- Improve application of management prescriptions for 7 Forest Plan monitoring and 1 non-Forest Plan items.
- Complete Forest Plan Amendments for the Emigrant Wilderness and Motor Vehicle Travel Management.
- Complete a minor Forest Plan Amendment separating the 57 Forest Plan resource monitoring items from the 36 accomplishment and duplicate items.
- Initiate the 5 year Forest Plan Review.
- Increase Monitoring/Reporting/Documentation for 10 Forest Plan monitoring items.

Long term

- Amend Forest Plan Diversity and Wildlife S&Gs and, amend Forest Plan Management Area Allocations for Bald Eagle Recovery Habitat, pending Regional direction for the California Spotted Owl.
- Amend Forest Plan Chapter V and the Schedule of Outputs pending the 5 year Forest Plan review.

Monitoring and Evaluation

Short-term

- Complete annual Monitoring and Evaluation (M&E) Report by March 31.
- Prepare a Forest Service Manual Supplement to establish tracking and reporting protocols and establish formal role of Forest and District Monitoring Coordinators.
- Develop annual monitoring programs, based on information contained in the previous M&E Report, incorporating into Programs of Work by assigning priorities and funding.
- Schedule and conduct reviews of Forest Plan Standards and Guidelines implementation.
- Add Monitoring Performance Element to manager's performance evaluation. Consider monitoring part of the normal job and address monitoring in project planning. Consider Monitoring not complete without adequate documentation and reporting.

Long-term

- Coordinate with other federal and state agencies on large scale monitoring.
- Expect a smaller overall program. Adjust monitoring and seek other funding sources to reflect reduced timber targets and budgets. Prioritize monitoring activities and concentrate annual efforts to obtain results on a watershed scale.
- Consider California Owl implications while developing future monitoring strategies.

Introduction

The Regional Forester approved the Stanislaus National Forest Land and Resource Management Plan (Forest Plan) and Environmental Impact Statement (EIS) on October 28, 1991 (USDA 1991). The Forest Plan (as amended) and EIS are both incorporated here by reference. Chapter V of the Forest Plan includes a monitoring program. As stated in the Forest Plan (page V-1) the purpose of monitoring is to:

1. Inform the decision maker of progress toward achieving Plan goals and objectives, and applying standards and guidelines.

2. Determine the costs and effects of Plan implementation.

3. Identify when Plan amendments/revisions are needed.

In addition to monitoring, the Forest Plan requires evaluation of results. Evaluation is the analysis and interpretation of monitoring data to determine whether changes in the Forest Plan, or in project implementation are necessary. Monitoring and evaluation are critical elements ensuring that the Forest Plan remains a dynamic and responsible tool for managing the Forest's land and resources in a changing social and economic climate.

This report, prepared by the Interdisciplinary Team (IDT) for the Forest Supervisor, documents the results of monitoring and evaluation activities accomplished on the Stanislaus National Forest during federal fiscal years 1994, 1995 and 1996 (October 1, 1993 to September 30, 1996). It also presents the Core Interdisciplinary Team's (Core Team) evaluation of those results. While conducting this evaluation, the Core Team also considered the previous monitoring information, conclusions and recommendations contained in the 1992-1993 Stanislaus National Forest Monitoring and Evaluation Report (USDA 1993b). Therefore, this report addresses all monitoring information obtained on the Stanislaus National Forest since Forest Plan approval (October 28, 1991).

Process

In order to prepare this report, the Forest identified District Coordinators and an IDT consisting of Core Team and Expanded Team members (see List of Preparers). Their roles, along with criteria for selection, are shown below.

District Coordinators

1. Familiar with sub-unit Monitoring
2. Coordinate input to Core Team
3. Assign 1 of 4 to Core Team

Core Team

1. Forest Plan Knowledge and Experience
2. Functional Expertise
3. Review Accomplishments
4. Evaluation and Recommendations

Expanded Team

1. Familiar with sub-unit Monitoring
2. Functional Expertise
3. Review Accomplishments
4. Coordinate input to Core Team

Tracking Form

The IDT developed a tracking form (see Appendix) to facilitate its evaluation of monitoring results. Tracking forms include summary information such as the project name and location, monitoring activity, dates, results and file locations. Persons responsible for monitoring activities completed tracking forms for each activity or each group of similar activities. They submitted the forms to their respective District Coordinators, who then forwarded District packages to the IDT. The IDT assigned numbers to each tracking form according to the resource and key numbers shown in Table 1 (form number 18-2-3 is the third form for item 18-2 which is Watershed S&Gs).

The accomplishments and results shown in this report are based on projects and activities reported on tracking forms and performed to the levels specified in the Forest Plan. Although more monitoring may occur, the IDT did not show accomplishments for any items without a tracking form as documentation or, conducted at less than Forest Plan levels.

Purposes of the tracking form are outlined below.

- Tracks Monitoring and Evaluation Activities
- Allows Coordination with Clavey Watershed Review (see monitoring item 19-A)
- Serves as Central Database
- Responds to Questions
- Easy to Update Information
- Facilitates Core Team Evaluation
- Subject to Change

The entire IDT reviewed this information in light of Forest Plan Chapter V requirements. Later, the Core Team completed its evaluation in an integrated fashion to develop the results, conclusions and recommendations contained in this report.

Format

The IDT compiled this report using the recently issued Forest Service Forest Plan Monitoring and Evaluation Report format shown below. This report is one of the first of to use the new format that is subject to further refinement in the future.

1. **Forest Supervisor(s) Certification**
   Forest Supervisor's signed finding on whether plan amendments are needed based on monitoring and evaluation results.

2. **Monitoring Activities**
   Brief summary of: reviews and other administrative activities undertaken during the reporting period as part of the Forest's monitoring and evaluation program; and, monitoring activities specified in the Forest Plan that were conducted during the reporting period.

3. **Evaluation of monitoring results and conclusions**
   An interdisciplinary evaluation (not single discipline viewpoints). What were the conclusions drawn from the monitoring data collected and evaluated?

4. **Proposed Action Plan**
   Based on the evaluation and conclusions, what additional monitoring activity is needed (or no longer needed) and/or what plan amendments or revisions are proposed?

5. **Status of previous years recommendations**
   Additional monitoring and or amendment/revision activity conducted during the reporting period as a result of prior years' monitoring and evaluation conclusions.

6. **Update of research needs**
   Summary of significant research findings during the reporting period related to Plan monitoring, evaluation and implementation.

7. **List of Preparers**
   Document names and disciplines of report preparers or contributors.

8. **Location of supporting documentation for monitoring activities**
   Forest or Province files, databases, etc. (Note that the report itself is not where monitoring data are found).

9. **Public participation/disclosure plan**
   How was the public involved in and going to be informed of the monitoring and evaluation report and its conclusions (e.g. outreach, request, news releases, meetings)?

10. **Appendix or reference to other records**

Monitoring Activities

The Forest Plan includes a total of 93 individual monitoring items in 22 broad categories ranging from Air Quality to Forest Standards and Guidelines (S&Gs). Table 1 shows monitoring and evaluation accomplishments as reported on tracking forms for fiscal years 1994, 1995 and 1996. It lists the 22 Forest Plan categories (Resource) and a short description of each monitoring objective (Objective). The item number (Key), is used for tracking purposes (see Tracking Form). Monitoring activities or accomplishments are shown by fiscal year and by watershed (see National Forest System Watersheds Map). Items shown as not applicable under accomplishments in Table 1 do not occur or apply in that particular watershed.

Table 1: ***Monitoring and Evaluation Accomplishments***; as reported on tracking forms; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 1 of 3 (see legend at end of table).

Resource	Key	Objective	Accomplishments FY			Location (Watershed Number)																
			94	95	96	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 **Air Quality**	**1-1**	Air quality related values																				
	1-2	Smoke emissions																				
	1-3	Air pollution (fugitive dust)																				
2 **Cultural Resource**	**2-1**	Cumulative effects; mitigation																				
3 **Diversity**	**3-1**	Acres major vegetative type*																				
	3-2	Acres forest seral stage*																				
	3-A	Vegetation treatments																				
4 **Fire and Fuels**	**4-1**	Acre control objectives																				
5 **Fish and Wildlife**	**5-1**	Wildlife: vegetation diversity*																				
	5-2	Wildlife: special habitat																				
	5-3	Wildlife: riparian areas																				
	5-4	Wildlife: stream ecosystems																				
Spotted Owl	**5-5**	S&Gs for habitat																				
	5-6	Population and habitat trend																				
	5-7	S&Gs for viable populations																				
Goshawk	**5-8**	S&Gs for habitat																				
	5-9	Population trend																				
Flycatcher	**5-10**	Population status and trend																				
	5-11	S&Gs for habitat																				
Great Gray Owl	**5-12**	Population status and trend																				
	5-13	S&Gs for habitat																				
Peregrine Falcon	**5-14**	Nesting and reproductive																				
Bald Eagle (wintering)	**5-15**	Population status and trend																				
	5-16	Condition of recovery habitat																				
Gray Squirrel	**5-17**	Population status and trend																				
Woodpecker	**5-18**	Population status and trend																				
Mule Deer	**5-19**	Population status and trend																				
Fisher	**5-20**	Population status and trend																				
Marten	**5-21**	Population status and trend																				
Resident Trout	**5-22**	Population status and trend																				
Lahontan Trout	**5-23**	Population status and trend																				
Riparian Bird	**5-24**	Habitat capability trends																				
Conifer Bird	**5-25**	Habitat capability trends																				
Meadow Bird	**5-26**	Habitat capability trends																				
Oak Bird	**5-27**	Habitat capability trends																				
	5-A	Bald Eagle nesting																				
	5-B	Amphibian timed survey																				
	5-C	Forestwide amphibian																				
	5-D	Bats																				
6 **Forest Pests**	**6-1**	Problems and damage																				
7 **Geology**	**7-1**	Mitigation measures																				

Table 1: ***Monitoring and Evaluation Accomplishments***; as reported on tracking forms; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 2 of 3 (see legend at end of table).

Resource	Key	Objective	Accomplishments FY			Location (Watershed Number)																
			94	95	96	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
8 Lands	8-1	Land adjustments																				
	8-2	Landline location priorities																				
	8-3	Right-of-way acquisition																				
	8-4	Land occupancy and use																				
9 Range	9-1	Range condition and trend*																				
	9-2	Permitted and actual AUMs																				
	9-3	Allotment management																				
	9-4	Administration and compliance																				
	9-5	Range improvements																				
	9-A	Noxious Weeds																				
10 Recreation	10-1	ROS Classes																				
	10-2	Condition of developed sites																				
	10-3	Actual use of developed sites																				
	10-4	Condition of dispersed camping																				
	10-5	Effects of OHVs																				
11 Riparian Areas	11-1	Riparian maintained/improved																				
12 Sensitive Plants	12-1	Selected populations																				
	12-2	Changes to all populations																				
	12-3	Viable populations																				
13 Soils	13-1	S&Gs for soil productivity																				
	13-2	Soil moisture conditions																				
	13-3	Tree, grass and shrub growth																				
	13-4	Effects of OHVs																				
	13-5	Soil resource improvements																				
	13-6	Soil moisture regime																				
	13-7	Soil hydrologic function																				
	13-8	Soil environmental health																				
14 Special Areas	14-1	Botanic SIA conditions*																				
	14-2	Cultural SIA conditions																				
	14-3	Cave conditions																				
	14-A	Research Natural Areas																				
15 Timber	15-1	Allowable sale quantity																				
	15-2	Forest regulation																				
	15-3	Reforestation and TSI needs																				
	15-4	Harvest unit size																				
	15-5	Timber suitability																				
	15-6	Reforestation																				
	15-7	Burn area reforestation																				
	15-8	Yield table projections*																				
	15-9	Timber stand improvements																				
	15-A	Herbicides																				

Table 1: ***Monitoring and Evaluation Accomplishments***; as reported on tracking forms; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 3 of 3 (see legend at end of table).

Resource	Key	Objective	Accomplishments																				
			FY			Location (Watershed Number)																	
			94	95	96	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
16 Transportation and Facilities	16-1	Roads closed to public vehicles																					
	16-2	Average daily traffic																					
	16-3	Road construction																					
	16-4	Trail construction																					
17 Visual Resources	17-1	Planned objectives																					
	17-2	Trends in Scenic Corridors																					
	17-3	Visual resource improvements																					
18 Water	18-1	Water quality standards (BMPs)																					
	18-2	Watershed S&Gs																					
	18-3	Water quality baseline																					
	18-4	Watershed condition																					
	18-5	Water yield predictions																					
19 Wild and Scenic Rivers	19-1	Wild and Scenic management																			*1		
	19-A	Wild and Scenic River values																			*1		
20 Wilderness	20-1	Wilderness management																					
21 Economic	21-1	Cost of practices and activity																					
	21-2	Values of goods and services																					
	21-3	Return to counties																					
	21-4	Local and area employment																					
22 Forest S&Gs	22-1	S&Gs reviews																					

Legend

Key

19-1 Forest Plan Item
19 Resource Number
1 Item Number
***** 10 Year Report Item
19-A Non-Forest Plan Item
19 Resource Number
A Item Letter

AUMs Animal Unit Months
BMPs Best Management Practices
FY Fiscal Year (10-1 to 9/30)
ROS Recreation Opportunity Spectrum
OHVs Off-Highway Vehicles
SIA Special Interest Area
S&Gs Standards and Guidelines
TSI Timber Stand Improvement

Accomplishments

Activities Occurred

None or Not Reported

Not Applicable

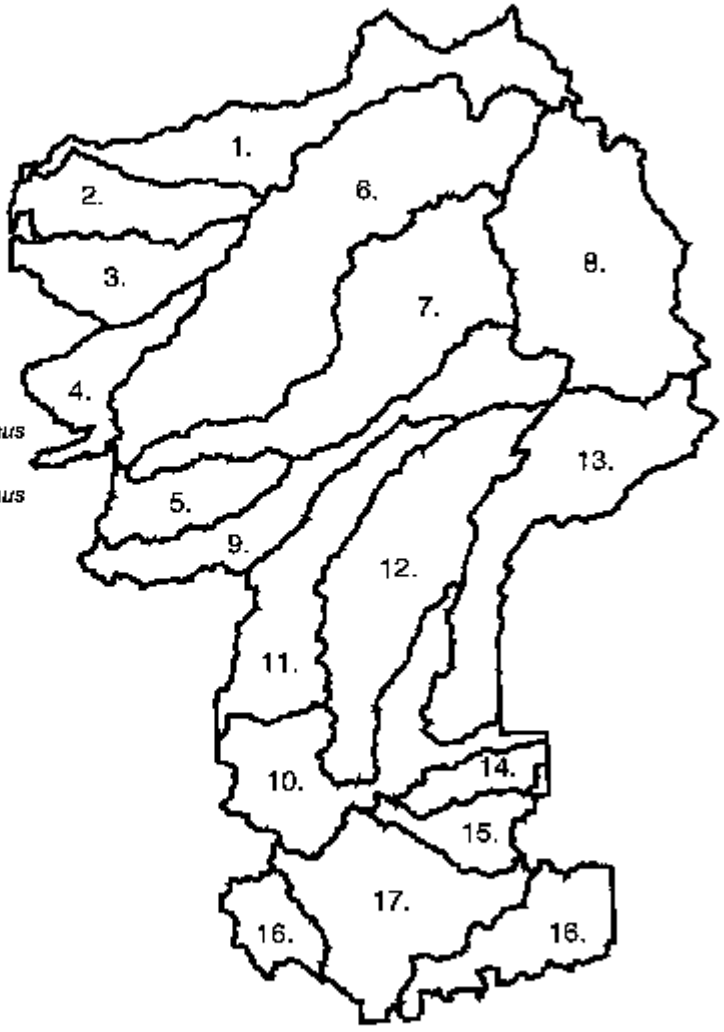
***1** The Sierra National Forest manages the Stanislaus portion of the Merced Wild and Scenic River

Watersheds

1 North Fork Mokelumne River
2 Middle Fork Mokelumne River
3 South Fork Mokelumne River
4 Calaveras River
5 Stanislaus River
6 North Fork Stanislaus River
7 Lower Middle Fork Stanislaus River
8 Upper Middle Fork Stanislaus River
9 South Fork Stanislaus River
10 Toulumne River
11 North Fork Tuolumne River
12 Clavey River
13 Cherry Creek
14 Middle Fork Tuolumne River
15 South Fork Tuolumne River
16 Merced River
17 North Fork Merced River

National Forest System Watersheds

1. *North Fork Mokelumne*
2. *Middle Fork Mokelumne*
3. *South Fork Mokelumne*
4. *Calaveras River*
5. *Stanislaus River*
6. *North Fork Stanislaus*
7. *Lower Middle Fork Stanislaus*
8. *Upper Middle Fork Stanislaus*
9. *South Fork Stanislaus*
10. *Tuolumne River*
11. *North Fork Tuolumne*
12. *Clavey River*
13. *Cherry Creek*
14. *Middle Fork Tuolumne*
15. *South Fork Tuolumne*
16. *Merced River*
17. *North Fork Merced*



Evaluation of Monitoring

The IDT reviewed the results of monitoring and evaluation activities in an integrated fashion. In order to draw conclusions and make recommendations, the team identified these questions.

- Does the Forest Plan work?
- What monitoring has been done and what does it mean?
- Does monitoring relate to Forest Plan goals (see Appendix)?
- Do managers consider monitoring results when making decisions?
- Do we monitor the right things?
- What additional monitoring is needed?
- What have we learned from outside sources (SNEP, etc.)?

Table 2 shows a summary of the results of monitoring accomplished during the reporting period. Similar to Table 1, it lists the Resources and Objectives along with the Core Team's evaluation of results and their conclusions/recommendations. The sections immediately following the table present more detailed explanations. Items shown as not applicable under results in Table 2 do not have standards or limits of variability established in the Forest Plan.

Table 2: ***Monitoring and Evaluation Results, Conclusions and Recommendations***; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 1 of 3 (see legend at end of table).

Resource	Key	Objective	Results A	B	C	D	E	Conclusions/Recommendations
1 **Air Quality**	**1-1**	Air quality related values						9 (not feasible as written)
	1-2	Smoke emissions						9
	1-3	Air pollution (fugitive dust)						1
2 **Cultural Resource**	**2-1**	Cumulative effects; mitigation						1 (natural events), 2 (management activities)
3 **Diversity**	**3-1**	Acres major vegetative type*						4 (California Owl direction), 9 (10 year report item)
	3-2	Acres forest seral stage*						4 (California Owl direction), 9 (10 year report item)
	3-A	Vegetation treatments						4 (California Owl direction), 9
4 **Fire and Fuels**	**4-1**	Acre control objectives						8a
5 **Fish and**	**5-1**	Wildlife: vegetation diversity*						8b (cover in Diversity), (10 year report item)
Wildlife	**5-2**	Wildlife: special habitat						9 (California Owl direction)
	5-3	Wildlife: riparian areas						9
	5-4	Wildlife: stream ecosystems						10
Spotted Owl	**5-5**	S&Gs for habitat						4 (review territories), (California Owl direction)
	5-6	Population and habitat trend						9 (California Owl direction)
	5-7	S&Gs for viable populations						8b (not feasible at a Forest scale)
Goshawk	**5-8**	S&Gs for habitat						4 (review territories)
	5-9	Population trend						9
Flycatcher	**5-10**	Population status and trend						9
	5-11	S&Gs for habitat						2, 9
Great Gray Owl	**5-12**	Population status and trend						9
	5-13	S&Gs for habitat						4 (review territories), 9, 10
Peregrine Falcon	**5-14**	Nesting and reproductive						1
Bald Eagle (wintering)	**5-15**	Population status and trend						1
	5-16	Condition of recovery habitat						5 (review territories), 10
Gray Squirrel	**5-17**	Population status and trend						9 (habitat focus)
Woodpecker	**5-18**	Population status and trend						9 (habitat focus)
Mule Deer	**5-19**	Population status and trend						4 (Forest Plan appeal resolution)
Fisher	**5-20**	Population status and trend						9 (habitat focus)
Marten	**5-21**	Population status and trend						9 (habitat focus)
Resident Trout	**5-22**	Population status and trend						9
Lahontan Trout	**5-23**	Population status and trend						9
Riparian Bird	**5-24**	Habitat capability trends						9
Conifer Bird	**5-25**	Habitat capability trends						9
Meadow Bird	**5-26**	Habitat capability trends						9
Oak Bird	**5-27**	Habitat capability trends						9
	5-A	Bald Eagle nesting						9
	5-B	Amphibian timed survey						9
	5-C	Forestwide amphibian						9
	5-D	Bats						9
6 **Forest Pests**	**6-1**	Problems and damage						1
7 **Geology**	**7-1**	Mitigation measures						8b (project report)

Table 2: ***Monitoring and Evaluation Results, Conclusions and Recommendations***; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 2 of 3 (see legend at end of table).

Resource	Key	Objective	Results A	B	C	D	E	Conclusions/Recommendations
8 Lands	**8-1**	Land adjustments						8a
	8-2	Landline location priorities						8a
	8-3	Right-of-way acquisition						8a
	8-4	Land occupancy and use						8b (project report)
9 Range	**9-1**	Range condition and trend*						10 (10 year report item)
	9-2	Permitted and actual AUMs						8a
	9-3	Allotment management						8b (cover conditions in 9-4)
	9-4	Administration and compliance						9
	9-5	Range improvements						8b (cover conditions in 9-4)
	9-A	Noxious weeds						9
10 Recreation	**10-1**	ROS Classes						8b (project report)
	10-2	Condition of developed sites						9
	10-3	Actual use of developed sites						8a
	10-4	Condition of dispersed camping						10
	10-5	Effects of OHVs						4, 9
11 Riparian Areas	**11-1**	Riparian maintained/improved						2, 9
12 Sensitive Plants	**12-1**	Selected populations						9, 10
	12-2	Changes to all populations						9
	12-3	Viable populations						8b (not feasible at Forest scale)
13 Soils	**13-1**	S&Gs for soil productivity						2, 9
	13-2	Soil moisture conditions						8b (cover conditions in 13-1)
	13-3	Tree, grass and shrub growth						8b (cover conditions in 13-1)
	13-4	Effects of OHVs						8b (cover in Recreation 10-5)
	13-5	Soil resource improvements						2
	13-6	Soil moisture regime						9
	13-7	Soil hydrologic function						9
	13-8	Soil environmental health						1
14 Special Areas	**14-1**	Botanic SIA conditions*						9, 10 (10 year report item)
	14-2	Cultural SIA conditions						9, 10
	14-3	Cave conditions						9
	14-A	Research Natural Areas						2, 9
15 Timber	**15-1**	Allowable sale quantity						6, 8a
	15-2	Forest regulation						8a
	15-3	Reforestation and TSI needs						8a
	15-4	Harvest unit size						8a
	15-5	Timber suitability						8a
	15-6	Reforestation						8a (standard not measurable with green and burn)
	15-7	Burn area reforestation						6, 8a (standard not feasible)
	15-8	Yield table projections*						8b (not feasible, growth faster than predictions)
	15-9	Timber stand improvements						1
	15-A	Herbicides						9

Table 2: ***Monitoring and Evaluation Results, Conclusions and Recommendations***; fiscal years 1994, 1995 and 1996; Stanislaus National Forest; page 3 of 3 (see legend at end of table).

Resource	Key	Objective	Results A	B	C	D	E	Conclusions/Recommendations
16 Transportation and Facilities	**16-1**	Roads closed to public vehicles				■		8b (project report)
	16-2	Average daily traffic				■		8b (project report)
	16-3	Road construction				■		8a
	16-4	Trail construction	■					8a
17 Visual Resources	**17-1**	Planned objectives					■	8b (project report)
	17-2	Trends in Scenic Corridors					■	9
	17-3	Visual resource improvements					■	8a
18 Water	**18-1**	Water quality standards (BMPs)		■				2, 9
	18-2	Watershed S&Gs		■				2, 9
	18-3	Water quality baseline					■	9
	18-4	Watershed condition		■				9
	18-5	Water yield predictions					■	8b (not feasible)
19 Wild and Scenic Rivers	**19-1**	Wild and Scenic management			■			10
	19-A	Wild and Scenic River values				■		9
20 Wilderness	**20-1**	Wilderness management			■			4, 9
21 Economic	**21-1**	Cost of practices and activity		■				6, 8a
	21-2	Values of goods and services		■				6, 8a
	21-3	Return to counties		■				6, 8a
	21-4	Local and area employment		■				6, 8a
22 Forest S&Gs	**22-1**	S&Gs reviews					■	9, 10

Legend

Key

19-1 Forest Plan Item
19 Resource Number
1 Item Number
***** 10 Year Report Item
19-A Non-Forest Plan Item
19 Resource Number
A Item Letter

AUMs Animal Unit Months
BMPs Best Management Practices
FY Fiscal Year (10-1 to 9/30)
ROS Recreation Opportunity Spectrum
OHVs Off-Highway Vehicles
SIA Special Interest Area
S&Gs Standards and Guidelines
TSI Timber Stand Improvement

Results

A Conditions within limits of variability
B Conditions not within limits of variability
C Not enough information
D Not Applicable (no standards)
E None Conducted or Reported

Conclusions/Recommendations

1 No action needed (continue current monitoring)
2 Improve application of management prescriptions
3 Amend Forest Plan management prescriptions
4 Amend Forest Plan S&Gs
5 Amend Forest Plan management area allocations
6 Amend Forest Plan schedule of outputs
7 Revise Forest Plan
8 Amend (minor) Forest Plan Monitoring
a. Accomplishment
b. Duplicate or Not Feasible
9 Amend Forest Plan Monitoring (and S&Gs if needed)
10 Increase Monitoring/Reporting/Documentation

Results

The Forest Plan includes a total of 93 individual monitoring items in 22 broad categories ranging from Air Quality to Forest Standards and Guidelines (S&Gs). Accomplishments also showed monitoring of 9 individual items not included in the Forest Plan, bringing the total to 102. Monitoring activity occurred on 69 (74%) of the 93 Forest Plan items and on all 9 (100%) of the non-Forest Plan items. The Core Team reviewed the information pertaining to all 102 items, comparing conditions to monitoring limits of variability defined and established in Forest Plan Chapter V.

This Section provides a summary of the results obtained from monitoring activities conducted on the Stanislaus during fiscal years 1994, 1995 and 1996. While conducting this portion of the evaluation, the Core Team also considered the monitoring results contained in the 1992-1993 Stanislaus National Forest Monitoring and Evaluation Report (USDA 1993b).

Results show each item falling into one of the following categories (see Table 2 for notes and legend).

A. Conditions Within Limits of Variability

The Core Team determined conditions are within limits of variability on 19 (20%) of the 93 Forest Plan monitoring items:

4 Fire and Fuels	**4-1**	Acre control objectives	
5 Fish and Wildlife	**5-5**	Spotted Owl S&Gs for habitat	
Peregrine Falcon	**5-14**	Nesting and reproductive	
Bald Eagle (wintering)	**5-15**	Population status and trend	
Mule Deer	**5-19**	Population status and trend	
6 Forest Pests	**6-1**	Problems and damage	
8 Lands	**8-1**	Land adjustments	
	8-2	Landline location priorities	
	8-3	Right-of-way acquisition	
	8-4	Land occupancy and use	
9 Range	**9-2**	Permitted and actual AUMs	
	9-5	Range improvements	
10 Recreation	**10-1**	ROS Classes	
13 Soils	**13-8**	Soil environmental health	
14 Special Areas	**14-3**	Cave conditions	
15 Timber	**15-4**	Harvest unit size	
	15-5	Timber suitability	
	15-9	Timber stand improvements	
16 Transportation	**16-4**	Trail construction	

B. Conditions not Within Limits of Variability

The Core Team determined conditions are not within limits of variability on 20 (22%) of the 93 Forest Plan monitoring items:

2 Cultural Resource	**2-1**	Cumulative effects; mitigation	
5 Fish and Wildlife	**5-11**	Flycatcher S&Gs for habitat	
9 Range	**9-4**	Administration and compliance	
10 Recreation	**10-2**	Condition of developed sites	
	10-3	Actual use of developed sites	
	10-5	Effects of OHVs	
11 Riparian Areas	**11-1**	Riparian maintained/improved	
13 Soils	**13-1**	S&Gs for soil productivity	
	13-4	Effects of OHVs	
	13-5	Soil resource improvements	
14 Special Areas	**14-2**	Cultural SIA conditions	
15 Timber	**15-7**	Burn area reforestation	
	15-8	Yield table projections*	
18 Water	**18-1**	Water quality (BMPs)	
	18-2	Watershed S&Gs	
	18-4	Watershed condition	
21 Economic	**21-1**	Cost of practices and activity	
	21-2	Values of goods and services	
	21-3	Return to counties	
	21-4	Local and area employment	

The following information provides some details for each item listed above.

2 Cultural Resource 2-1 Cumulative effects; mitigation

The limit of variability allows no visible degradation, although no definition exists for acceptable limits to damage or loss of cultural resources. Monitoring of 522 sites shows 58 (11%) with some form of degradation from both natural causes and management activities. The criteria of adverse effect in 36 CFR 800.3 and the implementing regulations for the National Historic Preservation Act, requires an evaluation for each site experiencing degradation. This is an expensive and time-consuming proposition, rarely funded, especially for non-project related damage.

5 Fish and Wildlife 5-11 Willow Flycatcher S&Gs for habitat

Effects of grazing in Ackerson Meadow, a known repeated Willow Flycatcher nesting area, do not meet the limit of variability for this activity.

9 Range 9-4 Range Administration and compliance

At times, 6 allotments were not in total compliance with the terms of their permits.

10 Recreation 10-2 Condition of developed sites

Due to budget limitations and a previously identified $12.5 million rehabilitation backlog, achieving the limit of variability for this activity is not feasible.

10 Recreation 10-3 Actual use of developed sites

Due to budget limitations and a previously identified $12.5 million need for new construction, achieving the limit of variability for this activity is not feasible.

10 Recreation 10-5 Effects of OHVs

The limit of variability for this activity allows no unacceptable (not specifically defined) soil or resource damage. Approximately 20 miles of OHV trails needing major reconstruction are considered in "unacceptable" condition. These trails will be reconstructed or closed and relocated due to poor location or high erosion hazard.

11 Riparian 11-1 Riparian maintained/improved

Monitoring conducted using the Water Quality Best Management Practices Evaluation Program (BMPEP), a Pacific Southwest Region protocol, indicates most projects are within the limit of variability. However, some grazing, mining and vegetative manipulation projects are not within the limit of variability.

13 Soils 13-1 S&Gs for Soil productivity

This item includes four soil quality standards: Soil Cover, Soil Porosity, Soil Organic Matter, and Surface Organic Matter. Contour tilling for some site preparation projects are not within the limit of variability for soil cover or soil organic matter. Due to wet soil conditions (winter logging), a Cut to Length project is not within the limit of variability for soil porosity. Some areas do not meet the surface organic matter limits of variability, possibly due to older plantations, such as Wrights Creek or Granite Burn, that did not require retention of large woody debris.

13 Soils 13-4 Effects of OHVs

Essentially the same as 10-5, the limit of variability allows no unacceptable (not specifically defined) soil or resource damage. Findings in the Middle Fork Mokelumne and Deer Creek indicate that most trails are in fairly good condition. However, some trails are not within the limit of variability.

13 Soils 13-5 Soil improvement practices

In order to meet soil porosity limits of variability, tilling occurs on some compacted skid trails. This practice causes unacceptable erosion on some soils.

14 Special Areas 14-2 Cultural SIA conditions

Similar to 2-1, the limit of variability allows no visible degradation, although no definition exists for acceptable limits to damage or loss of cultural resources. Monitoring of cultural resource sites within several SIAs shows some form of degradation from both natural causes and management activities. The criteria of adverse effect in 36 CFR 800.3 and the implementing regulations for the National Historic Preservation Act, requires an

evaluation for each site experiencing degradation. This is an expensive and time-consuming proposition, rarely funded, especially for non-project related damage.

15 Timber **15-7** Burn area reforestation

Due to budget limitations, with only 23% of the 5 year goal of 70,000 acres complete, achieving the limit of variability is not feasible.

15 Timber **15-8** Yield table projections

Actual measured growth, from the Sawmill Project, is higher than the yield table projections. Similar results , if obtained in other areas, would indicate that projections are too low.

18 Water **18-1** Water quality (BMPs)

Similar to 11-1, BMPEP monitoring indicates most projects are within the limit of variability. However, some grazing, mining and vegetative manipulation projects are not within the limit of variability. Monitoring conducted with other protocols shows: herbicide application not impairing beneficial water uses; potable water at administrative and recreation sites meets state water quality objectives; and, Burned Area Emergency Rehabilitation practices are effective.

18 Water **18-2** Watershed S&Gs

Similar to 11-1 and 18-1, BMPEP monitoring indicates most projects are within the limit of variability. However, some grazing, mining and vegetative manipulation projects are not within the limit of variability.

18 Water **18-4** Watershed condition

Although not significantly less than the limit of variability, most watersheds do not meet the current limit of variability.

21 Economic
21-1 Cost of practices and activity
21-2 Values of goods and services
21-3 Return to counties
21-4 Local and area employment

Conditions are not within the limit of variability due to rising costs and reduced timber program.

C. Not Enough Information

Although monitoring occurred at Forest Plan specified levels, the Core Team could not determine whether conditions are within, or not within limits of variability on 24 (26%) of the 93 Forest Plan monitoring items:

1 Air Quality	**1-3**	Air pollution (fugitive dust)	
3 Diversity	**3-1**	Acres major vegetative type*	
5 Fish and Wildlife	**5-4**	Wildlife: stream ecosystems	
Spotted Owl	**5-6**	Population and habitat trend	
Goshawk	**5-8**	S&Gs for habitat	
	5-9	Population trend	
Flycatcher	**5-10**	Population status and trend	
Great Gray Owl	**5-12**	Population status and trend	
	5-13	S&Gs for habitat	
Fisher	**5-20**	Population status and trend	
Resident Trout	**5-22**	Population status and trend	
Lahontan Trout	**5-23**	Population status and trend	
Riparian Bird	**5-24**	Habitat capability trends	
7 Geology/Minerals	**7-1**	Mitigation measures	
9 Range	**9-1**	Range condition and trend*	
	9-3	Allotment management objectives	
10 Recreation	**10-4**	Condition of dispersed camp	
12 Sensitive Plants	**12-1**	Selected populations	
	12-2	Changes to all populations	
13 Soils	**13-6**	Soil moisture regime	
	13-7	Soil hydrologic function	
15 Timber	**15-3**	Reforestation and TSI needs	
19 Wild and Scenic	**19-1**	Wild and Scenic management	
20 Wilderness	**20-1**	Wilderness management	

D. Not Applicable

The Core Team could not evaluate conditions because the Forest Plan does not include monitoring standards or limits of variability on 6 (6%) of the 93 Forest Plan monitoring items and 9 (100%) of the non-Forest Plan items:

3 Diversity	**3-A**	Vegetation treatments	
5 Fish and Wildlife	**5-A**	Bald Eagle nesting	
	5-B	Amphibian timed survey	
	5-C	Forestwide amphibian	
	5-D	Bats	
9 Range	**9-A**	Noxious weeds	
14 Special Areas	**14-A**	Research Natural Areas	
15 Timber	**15-1**	Allowable sale quantity	
	15-2	Forest regulation	
	15-6	Reforestation	
	15-A	Herbicides	
16 Transportation and Facilities	**16-1**	Roads closed to vehicles	
	16-2	Average daily traffic	
	16-3	Road construction	
19 Wild and Scenic	**19-A**	Wild and Scenic River values	

E. None Conducted or Reported

The Core Team could not evaluate conditions because monitoring did not occur or, monitoring occurred but was not reported on 24 (26%) of the 93 Forest Plan monitoring items:

1 Air Quality	**1-1**	Air quality related values	
	1-2	Smoke emissions	
3 Diversity	**3-2**	Acres forest seral stage*	
5 Fish and Wildlife	**5-1**	Wildlife: vegetation diversity*	
	5-2	Wildlife: special habitat	
	5-3	Wildlife: riparian areas	
Spotted Owl	**5-7**	S&Gs for viable populations	
Bald Eagle (wintering)	**5-16**	Condition of recovery habitat	
Gray Squirrel	**5-17**	Population status and trend	
Woodpecker	**5-18**	Population status and trend	
Marten	**5-21**	Population status and trend	
Conifer Bird	**5-25**	Habitat capability trends	
Meadow Bird	**5-26**	Habitat capability trends	
Oak Bird	**5-27**	Habitat capability trends	
12 Sensitive Plants	**12-3**	Viable populations	
13 Soils	**13-2**	Soil moisture conditions	
	13-3	Tree, grass and shrub growth	
14 Special Areas	**14-1**	Botanic SIA conditions*	
17 Visual Resources	**17-1**	Planned objectives	
	17-2	Trends in Scenic Corridors	
	17-3	Visual resource improvements	
18 Water	**18-3**	Water quality baseline	
	18-5	Water yield predictions	
22 Forest S&Gs	**22-1**	S&Gs reviews	

Conclusions

While evaluating the specific results of each individual monitoring activity, the Core Team developed conclusions and grouped them into the broad categories of Forest Plan Direction; and, Monitoring and Evaluation. While conducting this portion of the evaluation, the Core Team also considered the conclusions contained in the 1992-1993 Stanislaus National Forest Monitoring and Evaluation Report (USDA 1993b).

A detailed listing by category follows (see Table 2 for notes and legend). Several monitoring items appear in more than one category; therefore, totals and percentages are not shown.

Forest Plan Direction

1. Applicable Forest Plan management direction and monitoring requirements are up-to-date and conditions are within limits of variability for 7 Forest Plan monitoring items:

1 Air Quality	**1-3** Air pollution (fugitive dust)	**6 Forest Pests**	**6-1** Problems and damage
2 Cultural Resource	**2-1** Natural events	**13 Soils**	**13-8** Soil environmental health
5 Fish and Wildlife	**5-14** Peregrine Falcon nesting	**15 Timber**	**15-9** Timber stand improvements
Bald Eagle (wintering)	**5-15** Population status and trend		

2. Conditions are not within limits of variability, however it is likely that conditions can meet limits of variability with improved application of existing management direction, for 7 Forest Plan monitoring items and 1 non-Forest Plan item:

2 Cultural Resource	**2-1** Management activities	**14 Special Areas**	**14-A** Research Natural Areas
5 Fish and Wildlife	**5-11** Flycatcher S&Gs for habitat	**18 Water**	**18-1** Water quality (BMPs)
11 Riparian Areas	**11-1** Riparian maintained/improved		**18-2** Watershed S&Gs
13 Soils	**13-1** S&Gs for soil productivity		
	13-5 Soil resource improvements		

3. Monitoring results did not show any items where applicable Forest Plan management direction is out-of-date.

4. Applicable Forest Plan S&Gs are out-of-date or do not provide specific management direction for 8 Forest Plan monitoring items and 1 non-Forest Plan item. Forest Plan Amendments for OHVs and Wilderness are already in progress. Detailed changes to Diversity and Wildlife S&Gs should occur only after completion of the California Spotted Owl direction:

3 Diversity	**3-1** Acres major vegetative type*	**10 Recreation**	**10-5** Effects of OHVs
	3-2 Acres forest seral stage*	**20 Wilderness**	**20-1** Wilderness management
	3-A Vegetation treatments		
5 Fish and Wildlife	**5-5** Spotted Owl S&Gs for habitat		
Goshawk	**5-8** S&Gs for habitat		
Great Gray Owl	**5-13** S&Gs for habitat		
Mule Deer	**5-19** Population status and trend		

5. Applicable Forest Plan management area allocations are out-of-date for 1 Forest Plan monitoring item. Insect mortality, is causing major changes within established Bald Eagle territories. Possible resolution may include boundary adjustments or relocations; however, detailed changes should occur only after completion of the California Spotted Owl direction:

5 Fish and Wildlife	**5-16** Bald Eagle recovery habitat

6. Applicable Forest Plan projected outputs are out-of-date and do not accurately reflect recent or expected future accomplishments for 6 Forest Plan monitoring items; however, detailed changes should occur only after completion of the 5 year Forest Plan review:

15 Timber	**15-1** Allowable sale quantity	**21 Economic**	**21-1** Cost of practices and activity
	15-7 Burn area reforestation		**21-2** Values of goods and services
			21-3 Return to counties
			21-4 Local and area employment

7. Some conditions are not within limits of variability and several Forest Plan Amendments are needed. However, overall monitoring results indicate conditions are moving towards desired conditions as stated in the Forest Goals

(see Appendix). In addition, the Core Team did not identify any items where applicable Forest Plan management direction, S&Gs, management area allocations and monitoring requirements are all out-of-date or, of sufficient magnitude to warrant Forest Plan revision.

8. Some Forest Plan monitoring requirements are "accomplishments", duplicates of other monitoring items, covered by project plans or, not feasible on a Forest scale. Minor changes to these Forest Plan required monitoring items can occur almost immediately.

a. Monitoring requirements reflect "accomplishments" for 20 Forest Plan monitoring items. These "accomplishments are best addressed within existing "accomplishment" reports rather than in an interdisciplinary monitoring report:

4	**Fire and Fuels**	**4-1**	Acre control objectives	**16** **Transportation**	**16-3** Road construction
8	**Lands**	**8-1**	Land adjustments		**16-4** Trail construction
		8-2	Landline location priorities	**17** **Visual Resources**	**17-3** Visual resource improvements
		8-3	Right-of-way acquisition	**21** **Economic**	**21-1** Cost of practices and activity
9	**Range**	**9-2**	Permitted and actual AUMs		**21-2** Values of goods and services
10	**Recreation**	**10-3**	Actual use of developed sites		**21-3** Return to counties
15	**Timber**	**15-1**	Allowable sale quantity		**21-4** Local and area employment
		15-2	Forest regulation		
		15-3	Reforestation and TSI needs		
		15-4	Harvest unit size		
		15-5	Timber suitability		
		15-6	Reforestation		
		15-7	Burn area reforestation		

b. Monitoring requirements are duplicates of other monitoring items, covered by project plans or, not feasible on a Forest scale for 16 Forest Plan monitoring items:

5	**Fish and Wildlife**	**5-1**	Wildlife: vegetation diversity*	**13** **Soils**	**13-2** Soil moisture conditions
	Spotted Owl	**5-7**	S&Gs for viable populations		**13-3** Tree, grass and shrub growth
7	**Geology/Minerals**	**7-1**	Mitigation measures		**13-4** Effects of OHVs
8	**Lands**	**8-4**	Land occupancy and use	**15** **Timber**	**15-8** Yield table projections*
9	**Range**	**9-3**	Allotment management objectives	**16** **Transportation**	**16-1** Roads closed to public vehicles
		9-5	Range improvements	**and Facilities**	**16-2** Average daily traffic
10	**Recreation**	**10-1**	ROS Classes	**17** **Visual Resources**	**17-1** Planned objectives
12	**Sensitive Plants**	**12-3**	Viable populations	**18** **Water**	**18-5** Water yield predictions

9. Forest Plan monitoring items do not consistently identify specific indicators of resource conditions that are measurable or subject to change. Standards and limits of variability are not consistently defined or even identified for several items. Some standards are not measurable, or not achievable; however, detailed changes and full integration of new monitoring requirements should occur only after completion of the 5 year Forest Plan review. Monitoring requirements are out-of-date, no longer feasible as written or, do not include specific indicators of resource conditions or measurable standards for 41 Forest Plan and all 9 non-Forest Plan monitoring items:

1 Air Quality	**1-1**	Air quality related values	
	1-2	Smoke emissions	
3 Diversity	**3-1**	Acres major vegetative type*	
	3-2	Acres forest seral stage*	
	3-A	Vegetation treatments	
5 Fish and Wildlife	**5-2**	Wildlife: special habitat	
	5-3	Wildlife: riparian areas	
Spotted Owl	**5-6**	Population and habitat trend	
Goshawk	**5-9**	Population trend	
Flycatcher	**5-10**	Population status and trend	
	5-11	S&Gs for habitat	
Great Gray Owl	**5-12**	Population status and trend	
	5-13	S&Gs for habitat	
Gray Squirrel	**5-17**	Population status and trend	
Woodpecker	**5-18**	Population status and trend	
Fisher	**5-20**	Population status and trend	
Marten	**5-21**	Population status and trend	
Resident Trout	**5-22**	Population status and trend	
Lahontan Trout	**5-23**	Population status and trend	
Riparian Bird	**5-24**	Habitat capability trends	
Conifer Bird	**5-25**	Habitat capability trends	
Meadow Bird	**5-26**	Habitat capability trends	
Oak Bird	**5-27**	Habitat capability trends	
	5-A	Bald Eagle nesting	
	5-B	Amphibian timed survey	
	5-C	Forestwide amphibian	
	5-D	Bats	
9 Range	**9-4**	Administration and compliance	
	9-A	Noxious weeds	
10 Recreation	**10-2**	Condition of developed sites	
	10-5	Effects of OHVs	
11 Riparian Areas	**11-1**	Riparian maintained/improved	
12 Sensitive Plants	**12-1**	Selected populations	
	12-2	Changes to all populations	
13 Soils	**13-1**	S&Gs for soil productivity	
	13-6	Soil moisture regime	
	13-7	Soil hydrologic function	
14 Special Areas	**14-1**	Botanic SIA conditions*	
	14-2	Cultural SIA conditions	
	14-3	Cave conditions	
	14-A	Research Natural Areas	
15 Timber	**15-A**	Herbicides	
17 Visual Resources	**17-2**	Trends in Scenic Corridors	
18 Water	**18-1**	Water quality (BMPs)	
	18-2	Watershed S&Gs	
	18-3	Water quality baseline	
	18-4	Watershed condition	
19 Wild and Scenic	**19-A**	Wild and Scenic River values	
20 Wilderness	**20-1**	Wilderness management	
22 Forest S&Gs	**22-1**	S&Gs reviews	

10. Not enough information exists and the information is needed to help answer questions for 10 Forest Plan monitoring items:

5 Fish and Wildlife	**5-4**	Wildlife: stream ecosystems	
Great Gray Owl	**5-13**	S&Gs for habitat	
Bald Eagle (wintering)	**5-16**	Condition of recovery habitat	
9 Range	**9-1**	Range condition and trend*	
10 Recreation	**10-4**	Condition of dispersed camp	
12 Sensitive Plants	**12-1**	Selected populations	
14 Special Areas	**14-1**	Botanic SIA conditions*	
	14-2	Cultural SIA conditions	
19 Wild and Scenic	**19-1**	Wild and Scenic management	
22 Forest S&Gs	**22-1**	S&Gs reviews	

Monitoring and Evaluation

11. Completion of the Monitoring Report by November 30 each year is not feasible. Much of the needed information is compiled independently at the end of each calendar year to meet other agency reporting requirements. In other cases, additional time is needed after the end of the field season to compile results.

12. Monitoring occurs but is not consistently reported in a timely manner.

13. Managers consider monitoring information while developing and approving site specific projects.

14. Considering recent funding and staffing levels, it is impossible to achieve the full monitoring program as outlined in the Forest Plan. Forest Plan monitoring program requirements are not fully implemented for several reasons: the program is overly ambitious and based on a much larger overall Forest program than exists; lack of funding and staffing; and, other priorities and emergencies.

15. The Forest Plan monitoring program is based on a much larger timber program than currently exists. Even during the period covered by this report, the timber program funded most monitoring activities. This is unlikely to continue with reduced timber targets and budgets.

16. The Monitoring Program is not well integrated into the Forest's annual Program of Work. A greater commitment of resources is needed as well as accountability by key staff.

17. Although the Core Team could not determine conditions on 48 Forest Plan monitoring items (see results c and e), it is unlikely that trends could be established for most, over the short 5 years since Forest Plan approval, even with more information and unlimited monitoring budgets.

Recommendations

The Core Team reviewed their conclusions, and the recommendations contained in the 1992-1993 Stanislaus National Forest Monitoring and Evaluation Report (USDA 1993b), to develop the following recommendations. These items are recommended to the Forest Supervisor for any further action. Table 3 (see Proposed Action Plan) lists the specific actions needed to implement these recommendations.

Forest Plan Direction

Short-term

- No action needed (continue current monitoring) for 7 Forest Plan monitoring items (see Conclusion 1).
- Improve application of management prescriptions for 7 Forest Plan monitoring items and 1 non-Forest Plan item (see Conclusion 2).
- Complete Forest Plan Amendments for the Emigrant Wilderness and Motor Vehicle Travel Management (see Conclusion 4).
- Focus monitoring program on resource conditions rather than accomplishments. Complete a minor Forest Plan Amendment separating the 57 Forest Plan resource monitoring items from the 36 accomplishment and duplicate items (see conclusions 8a and 8b).
- Initiate the 5 year Forest Plan Review (see conclusions 6 and 9).
- Increase Monitoring/Reporting/Documentation for 10 Forest Plan monitoring items (see Conclusion 10).

Long term

- Amend Forest Plan Diversity and Wildlife S&Gs (see Conclusion 4) and, amend Forest Plan Management Area Allocations for Bald Eagle Recovery Habitat (see Conclusion 5), pending Regional direction for the California Spotted Owl.

- Amend Forest Plan Chapter V (see Conclusion 9) and the Schedule of Outputs (see Conclusion 6) pending results obtained from the 5 year Forest Plan review.

Monitoring and Evaluation

Short-term

- Complete annual Monitoring and Evaluation (M&E) Report by March 31.

- Prepare a Forest Service Manual Supplement to establish tracking and reporting protocols and establish formal role of Forest and District Monitoring Coordinators.

- Develop annual monitoring programs, based on information contained in the previous M&E Report, incorporating into Programs of Work by assigning priorities and funding.

- Schedule and conduct reviews of Forest Plan Standards and Guidelines implementation.

- Add Monitoring Performance Element to manager's performance evaluation. Consider monitoring part of the normal job and address monitoring in project planning. Consider Monitoring not complete without adequate documentation and reporting.

Long-term

- Coordinate with other federal and state agencies on large scale monitoring.

- Expect a smaller overall program. Adjust monitoring and seek other funding sources to reflect reduced timber targets and budgets. Prioritize monitoring activities and concentrate annual efforts to obtain results on a watershed scale.

- Consider California Owl implications while developing future monitoring strategies.

Proposed Action Plan

Based on the evaluation and conclusions, the Core Team developed a proposed schedule to implement their recommendations (see Table 3). The Proposed Action Plan identifies the additional monitoring needed (or no longer needed) and the Forest Plan amendments proposed. . Full implementation depends on adequate funding, Forest Leadership approval, completion of the 5 year Forest Plan Review and, completion of Regional direction for the California Owl. The National Environmental Policy Act (NEPA) process and regulations apply to all proposed Forest Plan Amendments.

Table 3: ***Proposed Action Plan***; Core Team Recommendations; Key refers to Conclusions; Stanislaus National Forest (see Table 1 or Table 2 for legend).

Key	Action	Who	When
1	Continue current monitoring	District Rangers	ongoing
2	Improve application of prescriptions:		
	2-1 Cultural Resource (management activities)	District Rangers	
	5-11 Willow Flycatcher (Ackerson Meadow)	Groveland District Ranger	
	11-1 Riparian maintained/improved	District Rangers	
	13-1 S&Gs for soil productivity	District Rangers	on-going
	13-5 Soil resource improvements	District Rangers	
	14-A Research Natural Area (Bell Meadow)	Summit District Ranger	
	18-1 Water quality BMPs	District Rangers	
	18-2 Watershed S&Gs	District Rangers	
4	Amend Forest Plan Standards and Guidelines:		
	3-1 Acres major vegetative type*	Resource Management Staff	pending California Owl
	3-2 Acres forest seral stage*	Resource Management Staff	pending California Owl
	3-A Vegetation treatments	Resource Management Staff	pending California Owl
	5-5 Spotted Owl	Resource Management Staff	pending California Owl
	5-8 Goshawk	Resource Management Staff	pending California Owl
	5-13 Great Gray Owl	Resource Management Staff	pending California Owl
	5-19 Mule Deer	Resource Management Staff	pending California Owl
	10-5 Motor Vehicle Travel Management	Public Service Staff	9/30/97
	20-1 Emigrant Wilderness Direction	Summit District Ranger	12/31/97
5	Amend Forest Plan Management Area Allocation:		
	5-16 Bald Eagle designated recovery habitat	Resource Management Staff	pending California Owl
6	Amend Forest Plan Schedule of Outputs	Core Team and Forest Leadership Team	pending 5 year review
6, 9	Initiate 5 year Forest Plan Review	Core Team and Forest Leadership Team	7/1/97
8	Amend (minor) Forest Plan Monitoring	Land Management Planning	Prior to 1997 Report
8	Accomplishment Report	Public Affairs	12/1 annual
9	Amend Forest Plan Monitoring	Core Team and Forest Leadership Team	pending 5 year review
10	Increase monitoring and/or documentation:		
	5-4 Stream ecosystems	District Rangers	
	5-13 Great Gray Owl S&Gs for habitat	District Rangers	
	5-16 Bald Eagle designated recovery habitat	District Rangers	
	9-1 Range condition and trend*	District Rangers	
	10-4 Condition of dispersed camping	District Rangers	on-going
	12-1 Sensitive plants selected populations	District Rangers	
	14-1 Botanic SIAs*	District Rangers	
	14-2 Cultural SIAs	District Rangers	
	19-1 Wild and Scenic management (Tuolumne)	Groveland District Ranger	
	22-1 S&Gs reviews	Forest Leadership Team	
11	Monitoring and Evaluation Report	Core Team	3/31 annual
12	Manual supplement for tracking and reporting	Land Management Planning	6/30/97
16	Incorporate monitoring into Programs of Work	Forest Leadership Team	10/1 annual
16	Forest Plan S&Gs reviews	Forest Leadership Team	at least 4 per year
16	Monitoring element in performance ratings	Forest Leadership Team	Fiscal 1998

Previous Recommendations

While conducting this evaluation, the Core Team also considered the previous monitoring information, conclusions and recommendations contained in the 1992-1993 Stanislaus National Forest Monitoring and Evaluation Report (USDA 1993b). That report identified the need for additional monitoring information and Forest Plan Amendments addressed during the period covered by this report.

1. Previous evaluation recommended additional study for the items listed below. Additional monitoring completed and results are now known (see Evaluation).

- Peregrine Falcon
- Effects of Management Activities on the Soil Resource (Tilling for bear clover control)
- Water Quality Best Management Practices (BMPs) Monitoring
- Water Quality Cumulative Watershed Effects
- Herbicides in the Soil Environment
- Range Condition and Trend Surveys
- Permitted and Actual AUMs
- Allotment Administration and Permit Compliance

2. Previous evaluation recommended several Forest Plan Amendments that are now available in draft form.

- Emigrant Wilderness Direction (USDA 1996a)
- Mokelumne Wilderness Direction (USDA 1995)
- Motor Vehicle Travel Management (USDA 1996b)

Research Needs

The Forest Plan (Appendix B) identified the following two research needs.

- **Marketing Research for Recreation**: determine public wants in terms of recreation activities and experiences. **Status**: No activity.
- **Bear Clover Research**: increase knowledge of the physiological properties of this plant as an aid in control in tree plantations. **Status**: Complete (see Wolfe Tract Herbicide Trials).

Research Findings

Recently completed research projects, with findings applicable on the Stanislaus, are shown below.

Vegetation Classification

Sampling and classification work completed on the upper montane forests for the central and southern Sierra Nevada (Potter 1994). Classifications underway for Giant Sequoia forests, mixed conifer forests, riparian vegetation, and forest succession. Baseline sampling and classifications form part of the basic information needed to manage vegetation in forested settings for a variety of resources. They are used to provide detailed information on plant communities across the landscape as part of ecosystem management. Baseline sampling and classification work should be included as a basic component of future Forest Plans. No other method currently provides a fine grained description of plant diversity across large areas.

Old Growth Study

Baseline sampling for, and definitions of, old growth completed for 7 major forest types in the central and southern Sierra (Potter 1992). Definitions provide details on the range of variability for the large tree component of old growth stands. In conjunction with mapping efforts completed as part of the SNEP process, these definitions can be used to make decisions regarding the number of large trees to maintain within specific stands. Old growth forests are a significant resource to be managed as part of National Forest systems. The definitions should be included as a component of future Forest Plans.

Bourland Burn Fire Effects

Fire effects in the plant communities studied were consistent with patterns developed by examination of stand structures in other studies (Sugihara 1997). Hypotheses can now be formalized as to the effects of prescribed or wildfires on species composition and structure in upper montane forests. This information can be used in developing models of succession in these forests. Further detailed study is needed to formally establish fire effects in upper montane forests. This study established a baseline from which to conduct such efforts. Future planning efforts should include this information.

Avalanche Study

Significant differences exist in cover and species richness between on site and off site avalanche paths (Russell 1995). No difference noted for seedling recruitment between sites. Avalanches covered between 10 and 46 percent of the slopes adjacent to transects established to examine frequency of avalanche paths on the landscape. Avalanche is an important disturbance element in regulating cover and species abundance in high elevation forests of the central and southern Sierra Nevada. Knowledge of avalanche occurrence and frequency should be included in discussions of plant community structures and species diversity of high elevation forests.

Wolfe Tract Herbicide Trials

All of the herbicides studied controlled bear clover to some degree (Potter 1997). A few were better than the others. The most important observation however, was the dynamics of population recovery for three major species groups in the study area. In the majority of cases sites were dominated by bear clover, white leaf manzanita, and grass species at the end of the study. Single treatments of herbicides to control bear clover following site preparation are relatively ineffective. Multiple treatments will be needed to control the species complexes in pine plantations at these elevations. Effective control of bear clover requires adequate site preparation in conjunction with properly applied herbicides and follow-up treatments for several years early in the life of a plantation.

Fire History of Kings River Management Area

Fire return interval on a 2 acre plot in mixed conifer stands was 3.5 to 5.6 years during the time period of 1770 to 1870 (Phillips 1997). Fire return interval on a 1 acre ponderosa pine plot was between 2 and 4 years. Fire frequencies were the same between 1840 and 1870 as they were in pre-European times. Due to extensive logging activity, pre-European fire intervals in ponderosa pine could not be determined. Historic fire intervals were extremely short in both mixed conifer and ponderosa pine. Re-introducing the same fire return interval would be extremely difficult. Incorporate, where appropriate, this information into ecosystem management and planning.

Sierra Nevada Ecosystem Project

The following items summarize important specific conclusions of the Sierra Nevada Ecosystem Project (SNEP 1996) that relate to future management of the Stanislaus National Forest.

1. **Climate Change**: Recent climate is much wetter, warmer, and more stable than climates of the past 2,000 years. Successful ecosystem evaluations and planning must factor climate change into analyses.

2. **People and Resources**: Between 1970 and 1990, population doubled in the Sierra. The 1990 population of 650,000 will triple by 2040. Population growth and its accompanying effects are causing significant impacts on resources.

3. **Fire and Fuels**: Fire is a natural evolutionary force , influencing biodiversity, plant reproduction, vegetation development, insect outbreak and disease cycles, wildlife habitat relationships, soil functions and nutrient cycling, gene flow, selection, and, ultimately, sustainability. Fire suppression in concert with changing land-use practices dramatically changed the fire regimes of the Sierra, altering ecological structures and functions in Sierra plant communities.

4. **Plants, Plant Communities, and Terrestrial Wildlife**: About 50% of California's 7,000 vascular plant species, occur in the Sierra. More than 400 plants grow only in the Sierra, and 200 are rare. About 300 terrestrial vertebrate species (including mammals, birds, reptiles, and amphibians) use the Sierra as a significant part of their range.

5. **Late Successional and Old-Growth Forests**: Late successional old-growth forests of middle elevations constitute 7% to 30% of the forest cover, depending on forest type. On average, national forests contain 25% of the amount contained in national parks, which is an approximate benchmark for pre-contact forest conditions.

6. **Rangelands and Grazing**: Historic unregulated grazing, which ended in the early 1900s, created widespread, profound, and, in some places, irreversible ecological impacts. Current livestock grazing practices continue to exert reduced but significant impacts on the biodiversity and ecological processes even though properly managed grazing can be compatible with sustainable ecological functions.

7. **Watersheds and Aquatic Organisms**: Aquatic and riparian systems are the most altered and impaired habitats of the Sierra.

8. **Air Quality**: Some of the cleanest air in the nation, and even in the world, is found in the Northern Sierra and in most remote Sierra areas during the winter. Central Valley sources cause some of the nation's poorest air quality in the westside Southern Sierra.

Current Research

Several research projects, with potential application on the Stanislaus, are in progress.

- Amphibian Trout Relationships
- Fisher Distribution
- Goshawk Bio-region
- Mokelumne River Collaborative Watershed Study
- Spotted Owl Demographics
- Water Supply Forecasting
- Yosemite Toad

Future Research Needs

The Core Team identified the following future research needs on the Stanislaus.

- Amphibian Life History
- Bat Habitat Relationships
- Cultural Resources and Fire
- Cultural Resources and Recreation
- Historic Site Evaluation Procedures
- Mokelumne River Archeologic District
- Small Mammals and Grazing
- Western Pond Turtle Demographics

List of Preparers

Tom Beck	Core Team			
	Experience	Forest Wildlife Biologist	Stanislaus National Forest	1984 to Present
		District Resource Officer	Stanislaus National Forest	1975 to 1984
		Forest Wildlife Biologist	Stanislaus National Forest	1969 to 1975
	Education	CSU, Humboldt	B.S.	1964
Mike Brown	Core Team			
	Experience	Forest Silviculturist	Stanislaus National Forest	1986 to Present
		Forest Logging Engineer	Stanislaus National Forest	1983 to 1986
		District Timber Management	Stanislaus National Forest	1980 to 1983
		Timber Sale Planner	Willamette National Forest	1977 to 1980
	Education	Southern Illinois University	B.S.	1969
Gary Cones	Core Team			
	Experience	Deputy Fire Management Officer	Stanislaus National Forest	1995 to Present
		District Fire Management Officer	Stanislaus National Forest	1982 to 1995
		Fuels Specialist	Stanislaus National Forest	1978 to 1982
Tom Durston	Expanded Team			
	Experience	Transportation Planner	Stanislaus National Forest	1988 to Present
		Timber Management	Region 6	1986 to 1988
		Civil Engineer	G. Pinchot National Forest	1980 to 1986
		Civil Engineer Technician	Toiyabe National Forest	1975 to 1979
	Education	Oregon State University	M.S.	1988
		UC, Davis	B.S.	1980
Bill Ferrell	Expanded Team			
	Experience	Lands Assistant	Stanislaus National Forest	1988 to Present
		Forester	Idaho Panhandle Nat. Forest	1979-1988
	Education	Washington State University	B.S.	1971
Gail Firebaugh	Expanded Team			
	Experience	Heritage Resource Manager	Stanislaus National Forest	1992 to Present
		Forest Archeologist	Salmon National Forest	1989 to 1992
		Archeologist	Ozark National Forest	1988 to 1989
	Education	University of Colorado	M.A., Anthropology	1981
		University of Colorado	B.S., Anthropology	1975
Jim Frazier	Core Team			
	Experience	Forest Hydrologist	Stanislaus National Forest	1986 to Present
		Hydrologist	Stanislaus National Forest	1974 to 1986
	Education	CSU, Humboldt	M.S.	1973
		CSU, Long Beach	B.A.	1968

Alex Janicki	Expanded Team		
Experience	Forest Soil Scientist	Stanislaus National Forest	1992 to Present
	Soil Scientist	Stanislaus National Forest	1982 to 1992
	Soil Scientist	Plumas National Forest	1980 to 1982
Education	Cal Poly, San Luis Obispo	M.S., Soil Science	1982
	University of Florida	B.S., Geology	1970
John Maschi	Team Leader		
Experience	Land Management Planner	Stanislaus National Forest	1996 to Present
	Assistant Recreation Officer	Stanislaus National Forest	1991 to 1996
	Landscape Architect	Stanislaus National Forest	1980 to 1990
Education	University of Illinois	M.L.A.	1978
	Rutgers University	B.S., Landscape Architecture	1976
Katie Phillips	Expanded Team		
Experience	Assistant Zone Ecologist	Stanislaus National Forest	1996 to Present
	RNA Ecologist	Region 5	1993 to 1996
Education	UC, Berkeley	M.S., Range Management	1993
	CSU, Humboldt	B.S., Range Management	1976
Jim Schmidt	Core Team		
Experience	Land Management Planner	Stanislaus National Forest	1995 to Present
	Economist	Stanislaus National Forest	1981 to 1995
Education	Oregon State University	M.F.	1977
	University of Santa Clara	B.S.	1972
Tracy Stelman	Core Team		
Experience	Timber Sale Planner	Stanislaus National Forest	1996 to Present
	Recreation Assistant	Jefferson National Forest	1993 to 1996
	Engineering Technician	Jefferson National Forest	1987 to 1993
	Forestry Technician	National Forests in Florida	1985 to 1993
Education	Virginia Polytechnic Institute	B.S.	1993
Denise Van Keuren	Expanded Team		
Experience	Forest Range Conservationist	Stanislaus National Forest	1988 to Present
	Range Conservationist	Tonto National Forest	1985 to 1988
	Range Conservationist	Coronado National Forest	1979 to 1985
Education	Arizona State University	B.S., Range Management	1979

Location of Supporting Documentation

Supporting documentation for this monitoring report is part of the Planning Records. Tracking and summary information is on file at:

- **Stanislaus National Forest Supervisor's Office**
  19777 Greenley Road
  Sonora, CA 95370
  (209) 532-3671

Project specific files are located at the appropriate Ranger District office:

- **Calaveras Ranger District**
  Highway 4
  P.O. Box 500
  Hathaway Pines, CA 95232
  (209) 795-1381

- **Groveland Ranger District**
  24525 Old Highway 120
  Groveland, CA 95321
  (209) 962-7825

- **Mi-Wok Ranger District**
  Highway 108
  P.O. Box 100
  Mi-Wuk Village, CA
  (209) 586-3234

- **Summit Ranger District**
  Highway 108
  #1 Pinecrest Lake Road
  Pinecrest, CA 95364
  (209) 965-3434

Public Participation

This report is available by request. The Forest will inform the public of its availability by:

- News Release

- Notice in the Forest's Environmental Analysis Quarterly

- Notice on the Forest's World Wide Web site (http://www.r5.pswfs.gov/stanislaus/stanhome.htm)

Comments received on this report will be considered in preparing future reports. Please submit comments to:

- Stanislaus National Forest
  Attn.: Monitoring
  19777 Greenley Road
  Sonora, CA 95370

Appendix

References

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Sugihara, N. et al. 1997. Draft Legend of Potential Natural Vegetation for the Central and Southern Sierra Province. Unpublished.

Russell, W. and A. Brazinski. 1995. Draft. The impact of snow avalanche on vegetation structure and composition in the sub-alpine and red fir forest types of the Sierra Nevada.

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USDA Forest Service. 1996b. Proposed Motor Vehicle Travel Management Forest Plan Amendment Environmental Assessment. Stanislaus National Forest, Sonora, CA.

Forest Goals

(Forest Plan pages IV-3 to IV-6)

A. Social Environment

1. **Community Stability**: manage the Forest in an economically efficient and cost-effective manner while responding to economic and social needs of the public and local communities.

2. **Urban Interface**: private property holder and permittee needs will be taken into consideration in all planning and management activities occurring adjacent to private lands. Effort will be made to communicate information about proposed Forest Service projects, during the initial stages of project development in order to be responsive to public issues and concerns. Regular communication will be maintained with local County Planning Departments to insure long-term coordination and understanding.

B. Economic Environment

1. **Economic**: manage the Forest in an economically efficient and cost-effective manner while responding to economic and social needs of the public and local communities.

C. Resource Environment

1. **Air Quality**: maintain air quality that complies with all applicable regulations. Carry out forest management activities in a manner consistent and compatible with the attainment of State and Federal air quality objectives.

2. **Cultural Resources**: inventory, evaluate, enhance and manage cultural resources to prevent loss of, or damage to cultural values; to integrate significant resources into multiple use management; to gain scientific knowledge and management data about them; and to interpret for public benefit and appreciation.

3. **Diversity**: maintain or increase diversity of plants and animals, with a balance of vegetation types currently represented on the Forest which best provide for meeting the resource goals and objectives of the Forest Plan.

4. **Fire and Fuels**: provide a cost-effective fire management program to protect Forest resources, life and property, from the effects of wildfire. Maintain natural and activity fuels at levels commensurate with minimizing resource losses from wildfire. In Wilderness, fire is allowed to play as nearly as possible its natural ecological role.

5. **Fish and Wildlife**: provide habitat for viable populations of all native and desired non-native wildlife, fish and plants. Maintain and improve habitat for Threatened and Endangered species and give special attention to sensitive species to see that they do not become Federally listed as Threatened or Endangered.

6. **Forest Pests**: provide an integrated pest management program to prevent or control insect and disease attacks on forest and range resources.

7. **Geology and Minerals**: encourage mineral exploration and development in compliance with applicable laws, regulations and orders. In areas identified as susceptible to slope instability, analyze risks of management activities so as to avoid initiation or acceleration of slope movement and to protect human safety and Forest resources. Prevent degradation of groundwater quality and develop groundwater sources to meet domestic livestock and wildlife needs.

8. **Lands**: implement land adjustments that improve ownership patterns, to increase public benefit and the efficiency of National Forest management. Acquire rights-of-way needed to manage the resources. Consider special uses of the

National Forest where public needs cannot be met on private lands and where such uses conform to management direction for the area.

9. **Range**: manage livestock to utilize available forage while avoiding adverse impacts on soil, vegetation, water quality, wildlife, fisheries and riparian zones.

10. **Recreation**: provide a wide range of recreation opportunities directed at various experience levels to meet current and projected demand, including campgrounds, hiking trails, picnic areas, OHV trails, etc. Develop recreation management plans for existing and potential areas of concentrated public use. These plans shall address such aspects as: planned mixes of summer and winter activities for public and private sector responsibility, development scales, site locations, number of units and PAOTs (people at one time), family and group facilities, existing or potential on-site problems, facilities needed to serve dispersed activities, lake or reservoir surface activity management, as well as implementation and/or expansion phasing. Develop and implement programs to inform Forest users about recreation opportunities. Interpret Forest management activities and the forest environment for visitors. Provide a variety of off-highway vehicle (OHV) recreational opportunities in a manner consistent with protection of wildlife and other resources, and with non-motorized recreation.

11. **Riparian Areas**: manage riparian areas to protect or improve riparian area-dependent resources while allowing for management of other compatible uses.

12. **Sensitive Plants**: Manage sensitive plants to ensure continued population viability and prevent them from becoming Federally listed as Threatened or Endangered.

13. **Soils**: maintain and, where feasible, improve soil productivity.

14. **Special Areas**: preserve the integrity of the botanic, cultural, geologic, scenic, and recreation features for which the areas were established.

15. **Timber**: manage the timber resource to provide a sustained yield of commercial saw-timber, public fuelwood, and miscellaneous wood products, while considering environmental factors and other resource values. Achieve a regulated forest on lands managed for timber harvest.

16. **Transportation and Facilities**: provide facilities, including transportation system and administrative sites, needed to efficiently and safely manage the National Forest.

17. **Visual Resources**: meet adopted Visual Quality Objectives (VQOs) on all projects. Maintain high visual quality in areas of concentrated public use and in areas seen from major travel routes. Allow management activities in certain areas to dominate the surrounding characteristic landscape, but they shall borrow from natural forms and appear as natural occurrences when viewed from background distances. Consider private land concerns during the evaluation of proposed management activities adjacent to privately developed subdivisions and recreation areas. Particular attention will be given to visual quality in the foreground view areas of these private developments as well as any other values relating to their attendant use and enjoyment of the National Forest.

18. **Water**: maintain or improve water quality and watershed condition to meet applicable state and federal requirements. Realize feasible increases in the quantity of water yield and delays in the timing of runoff by including water yield modification as an objective in the design and manipulation of commercial and non-commercial vegetation.

19. **Wild and Scenic Rivers**: manage Wild and Scenic Rivers and their immediate environments to preserve their free flowing condition and to protect their outstandingly remarkable values. Provide opportunities for public recreation and other resources based on the classification of each river segment.

20. **Wilderness**: manage Wilderness to preserve its character and values and to allow recreational, scenic, scientific, educational, conservation and historic uses consistent with these objectives.

Stanislaus National Forest
Land and Resource Management Plan
Monitoring and Evaluation Tracking

(See Instructions)

TYPE	DESCRIPTION
☐ **Monitoring** ☐ Effectiveness ☐ Implementation ☐ Validation ☐ _____	Project Name: Resource: Activity: Start Date: End Date: Sub-Unit: Location: Key Contact: DG: Phone: File Location: Costs:
☐ **Evaluation** ☐ Program ☐ Project ☐ On-going Activity ☐ _____	**DOCUMENTATION** ☐ Decision Memo ☐ Photos ☐ EA ☐ Report ☐ EIS ☐ Study ☐ Maps ☐ _____
	STATUS ☐ Complete ☐ In Progress ☐ Discontinued ☐ _____
REQUIRED BY	**FOREST PLAN GOALS AND OBJECTIVES**
☐ Forest Plan ☐ Forest Plan Action Plan ☐ Project Plan ☐ On-going Activity ☐ _____	☐ Community Stability ☐ Forest Pests ☐ Special Areas ☐ Urban Interface ☐ Geology and Minerals ☐ Timber ☐ Economic ☐ Lands ☐ Transportation ☐ Air Quality ☐ Range ☐ Visual Resources ☐ Cultural Resources ☐ Recreation ☐ Water ☐ Diversity ☐ Riparian Areas ☐ Wild and Scenic ☐ Fire and Fuels ☐ Sensitive Plants ☐ Wilderness ☐ Fish and Wildlife ☐ Soils ☐ _____

Purpose or Objective:

Results:

Conclusions:

Recommendations:

Was the Monitoring and Evaluation information considered in subsequent management decisions?

☐ **Yes** (describe how and refer to documentation)

☐ **No** (explain)

FOREST PLAN ID TEAM REVIEW (ID Team Use Only)	
☐ Continue Current ☐ Increase Monitoring ☐ Discontinue ☐ Amend Forest Plan ☐ Revise Forest Plan ☐ _____	Project Number: Comments:

Stanislaus National Forest
Land and Resource Management Plan
Monitoring and Evaluation Tracking

INSTRUCTIONS

Complete a tracking form for each individual monitoring or evaluation activity using the following definitions.

Monitoring: collection of data obtained with designed procedures and objectives. Intended to be repeated to determine status and trends. Also used to determine whether standards are met. One-time inventories are not included (soil resource inventory, EUI, etc.). Repeating inventories are included, especially those that establish baseline information which will be compared with future information to determine trends (timber, vegetation, recreation, etc.).

Evaluation: usually administrative reviews judging implementation or effectiveness of a program, project or on-going activity (range management, developed recreation, etc.). Evaluations are conducted with pre-determined objectives, usually by a team. Individual or group field observations without specific objectives are not included (these often set the stage for a later monitoring or evaluation).

Check all boxes that apply. Spaces are provided for entering items not listed. Return completed forms to your sub-unit coordinator, along with any comments and suggestions for improving the form. The coordinators will submit all forms and comments to the Forest ID Team.

Line-by-Line instructions, for the items that are not self-explanatory, are shown below.

Project Name: the name of the monitoring or evaluation activity (if any), or the name of the applicable program, project or on-going activity.

Resource: the key resource(s) being monitored or evaluated.

Activity: the type of program, project or on-going activity generating the need for the monitoring or evaluation.

Start Date: the date the monitoring or evaluation started.

End Date: the date the monitoring or evaluation ended.

Sub-Unit: the name of the sub-unit responsible for conducting the monitoring or evaluation.

Location: the specific location where the activity is located (Ranger District, site name, etc.) along with a legal description if applicable.

Key Contact: the name of the key person or staff to contact for more information. Include DG address and phone number.

File Location: the location of project files and supporting documentation. Include file designations if applicable.

Costs: the approximate costs incurred to date, directly attributable to the monitoring or evaluation activity.

Forest Plan Goals and Objectives: refer to Forest Plan pages IV-3 to IV-6. Check all that apply to the monitoring or evaluation activity.

NFS Watersheds: check all National Forest System watersheds where the activity occurred.

Purpose or Objective: state the key purpose or objective of the monitoring or evaluation activity (may be in the form of a question).

Results: briefly describe actual vs. expected results, cause and effect, deviation, areas affected or other considerations.

Conclusions: briefly compare actual conditions to standards. Does deviation exceed acceptable limits or established standards?

Recommendations: briefly describe recommendations for further action along with consequences of delay and impacts from implementation of these recommendations.