

CHAPTER V

IMPLEMENTATION OF THE FOREST PLAN

INTRODUCTION

Implementation of the Fremont National Forest Plan requires moving from an existing management program, with a budget and "targets" for accomplishment, to a new management program with a budget, goals, and objectives that provide a different way of addressing the issues and concerns people have voiced about Forest management. This Forest Plan establishes direction for the Fremont National Forest for the next 10 to 15 years, when used in conjunction with Forest Service Manuals, Handbooks, and the Pacific Northwest Regional Guide.

This chapter incorporates direction under the headings of Implementation Direction, Monitoring and Evaluation Program, and Amendment. Collectively, this chapter explains methods of implementing management direction, of monitoring and evaluating implementation activities, and of keeping the plan current in light of changing conditions or other findings.

IMPLEMENTATION DIRECTION

Implementation will occur through identification, selection, scheduling, and execution of management practices to meet management direction provided in this Forest Plan. Implementation will also involve responding to proposals by others for use and/or occupancy of National Forest System lands. Additionally, this section shows consistency of this Plan with other plans or instruments, formulation of budget proposals, and environmental analysis required for implementation of specific management practices.

SCHEDULING

The schedule of activities is contained in Appendices A and B of this document. Scheduling of the activities is in response to, and consistent with, the management direction contained in this Forest Plan. These activity schedules represent a pool of possible projects from which implementation schedules are developed. Listings of possible projects to meet or accelerate the ten-year management practice schedule are maintained by the unit managers. These listings will routinely change as projects are implemented or removed from the listings for other reasons, and as new projects take their place. Projects are scheduled in response to the planned output of goods and services and the annual budgeting process.

For timber-related outputs and activities, the FORPLAN solution by major management areas is interpreted for each Ranger District of the Forest. The schedule for projects associated with wildlife habitat improvements, range improvements, and resource activities will be done in a similar manner to ensure the integration of, and compliance with, standards and guidelines.

Within each District, the approximate location of timber harvests and other treatments is identified for the first five years. In some specific instances the solution from the FORPLAN model may not be feasible since outputs were based on Working Circle averages. Also, the model did not contain complete information regarding past administrative decisions or actions. Such things as sales under contract or sales that have been granted extensions could affect specific implementation of the solution.

CONSISTENCY WITH OTHER INSTRUMENTS

This Forest Land and Resource Management Plan, upon implementation, will supersede all existing functional resource plans for the Fremont National Forest. The current Timber Management Plan (1979) will also be superseded.

Subject to valid existing rights, all outstanding and future permits, contracts, cooperative agreements, or instruments for occupancy and use of lands will be brought into compliance with the Forest Plan. This compliance will occur within three years after the Plan is enacted or as otherwise specified in the Standards and Guidelines (Chapter IV).

A listing of the existing plans superseded by this Forest Plan and those that must be brought into compliance with this Plan is contained in Appendix 9.

BUDGET PROPOSALS

The resource objectives discussed in Chapter IV are translated into multi-year program budget proposals that identify needed expenditures. The objectives are further defined by the schedule of activities and events as presented in Appendices A and B. The schedule is used for requesting and allocating the funds needed to carry out the planned management direction. Upon approval of a final budget for the Forest, the annual program of work is identified and carried out. Accomplishment of the annual program is the incremental implementation of the management direction of the Forest Plan. Outputs and activities for individual years may be different from those shown in Chapter IV. Such differences are the result of final budget constraints.

ENVIRONMENTAL ANALYSIS

Projects and activities directed through this Forest Plan are subject to analysis and compliance under the NEPA process as they are planned for implementation. If the environmental analysis for a project shows that: (1) the management area prescriptions, standards and guidelines can be complied with and (2) little or no environmental effects are expected beyond those identified and documented in the Forest Plan EIS, the analysis will probably result in a finding of no significant impact. An analysis file and/or a project file will be available for public review, but the analysis will not necessarily be documented in the form of an environmental assessment or environmental impact statement. In other instances, the District Ranger, Forest Supervisor, or Regional Forester may decide to document the analysis through an environmental assessment or impact statement.

MONITORING AND EVALUATION PROGRAM

NFMA and CEQ regulations as well as Regional Direction require that each National Forest conduct a program of monitoring and evaluation which is identified in the specifics of the Forest Monitoring Plan.

THE RESOURCES PLANNING ACT AS AMENDED BY THE NATIONAL FOREST MANAGEMENT ACT

This Act contains several report requirements that necessitate information gathering or monitoring. Section 3(d)(1) requires the examination and certification of areas reforested after the first and third

growing seasons, the reporting of areas in need of reforestation, and lands with stands of trees that are not growing at their best potential rate

NATIONAL FOREST MANAGEMENT ACT REGULATIONS (36 CFR 219)

Forest Plan monitoring requirements are described, primarily in 36 CFR 219 12(k) These requirements can be outlined as follows:

1. Specific items to be monitored for compliance (36 CFR 219 12(k)(5))
 - a Lands are adequately restocked as specified in the Forest Plan.
 - b Lands identified as not suited for timber production are to be examined at least every ten years to determine if they have become suited.
 - c Maximum size limits for harvest areas are evaluated (this may need to be monitored at the Regional level).
 - d Destructive insects and disease organisms do not increase to potentially damaging levels following management activities.
2. General items required:
 - a. First paragraph, 36 CFR 219.12(k).
 - (1) Periodic determination and evaluation of the effects of management practices
 - (2) How well objectives have been met.
 - (3) How closely management standards and guidelines have been applied
 - b. Listing under 36 CFR 219 12(k).
 - (1) Quantitative estimate of performance comparing outputs and services with those projected by the Forest Plan
 - (2) Significant changes in productivity of the land
 - (3) Costs associated with carrying out planned management prescriptions as compared with costs estimated in the Forest Plan.
- 3 Requirements for a monitoring plan (36 CFR 219.12(k)(4)).
 - a. Monitoring requirements identified in the Forest Plan shall provide for a description of the following monitoring activities
 - (1) The actions, effects or resources to be measured, and the frequency of measurements;
 - (2) expected precision and reliability of the monitoring process; and
 - (3) the time when evaluations will be reported
- 4 Other sections of the regulations set or indicate additional monitoring requirements:
 - a. 36 CFR 219.7(f).

A program of monitoring and evaluation shall be conducted that includes consideration of the effects of National Forest management on land, resources, and communities adjacent to or near the National Forest, as well as, effects upon National Forest management of

activities on nearby lands managed by other Federal or other government agencies, or under the jurisdiction of local governments

b. 36 CFR 219.10(g).

The Forest Supervisor shall review the conditions on the land covered by the Plan at least every five years to determine whether conditions or demands of the public have changed significantly.

c. 36 CFR 219.19(a)(6).

Population trends of the management indicator species will be monitored and relationships to habitat changes determined.

CEQ REGULATIONS, (40 CFR 1500)

1505.2 Record of Decision in cases requiring environmental impact statements.

(c) ... A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.

1505.3 Implementing the decision:

Agencies may provide for monitoring to ensure that their decisions are carried out, and should do so in important cases.

FSM 1922.6, 12/84. AMEND 19, MONITORING AND EVALUATION

This refers to 36 CFR 219.12(k) and gives direction that Regional Foresters must develop regional monitoring standards that meet the following criteria:

1. Monitoring focuses on those activities that affect significant management systems, those activities that are responsive to stated issues, concerns, and opportunities, and those activities that affect major components of the environment.
2. Monitoring is coordinated with resource inventory needs to reduce duplication.
3. Implementation of the Forest Plan complies with applicable laws and regulations.

REGIONAL GUIDE

This gives Regional direction for monitoring. Areas to be monitored regionally are shown in Table 3-28 of the Regional Guide for the Pacific Northwest. Specific actions, effects to be monitored, frequency of measurement, reporting periods, and expected precision and reliability of the monitoring process will be identified in the individual Forest Plans.

FSH 1909.15 ENVIRONMENTAL POLICY AND PROCEDURES HANDBOOK

53 - MONITORING. (40 CFR 1505.3). Monitor actions to ensure that:

1. Environmental safeguards are executed according to plan.
2. Necessary adjustments are made to achieve desired results.
3. Anticipated results are achieved.

OTHER FSM AND FSH DIRECTION

The Forest Service Manual and Handbooks give additional direction and guidance on monitoring; however, much of this pertains to routine or ongoing monitoring not necessarily required to validate the Forest Plan.

MONITORING PLAN

The Monitoring Plan, Table 32, identifies the key activities and outputs to be tracked during implementation of this Plan to ensure that activities reasonably conform to the Management Area direction, and that outputs satisfy the objectives of the Plan. The figures following Table 32 present the proposed sequence for implementing the total monitoring program

The following definitions apply to the column headings for the Forest Monitoring Plan presented in Table 32:

Resource Area: responsible resource identified by decision variable.

Action/Effect to be Monitored. specific statement of what will be monitored.

NAS Codes: National Activity Structure (NAS) codes specific to the resource action or effect.

Monitoring Objectives. what the monitoring is intended to accomplish.

Monitoring Method. specific statement of how monitoring will be accomplished.

Unit of Measurement: a qualifiable measure of the action or effect. Where applicable, these should be tied to Management Information Handbook (MIH) code activities, and/or activity types, and/or RPA outputs

Monitoring Frequency. the schedule of sampling for the element to be monitored stated in terms of years or parts of years

Reporting Period: the frequency between reports summarizing results for the element being monitored in terms of years or parts of years.

Precision/Reliability: the level of validity and exactness in which monitoring data is collected

Precision is the exactness or accuracy of measurement. Reliability is the expected probability that information acquired through sampling will reflect actual conditions. Precision and reliability are rated as high, moderate, or low. Example ranges of precision and validity are.

| | |
|----------|--|
| high | maximum variation within +/- 10 percent of sample mean |
| moderate | maximum variation within +/- 33 percent of sample mean |
| low | maximum variation within +/- 50 percent of sample mean |

Data Storage: where the collected monitoring data, analyses, and evaluation reports for the element monitored are stored for the duration of the Forest Plan.

Monitoring Responsibility. person or persons responsible for monitoring, data collection, analysis, evaluation, and report preparation.

Cost: a column for identifying estimated costs of monitoring tasks by element subheadings.

Threshold of Variability: thresholds which, if exceeded, would trigger the need for reevaluation of the Forest Plan.

Decision Flow Diagram for the Evaluation of the Forest Plan, Fremont National Forest.

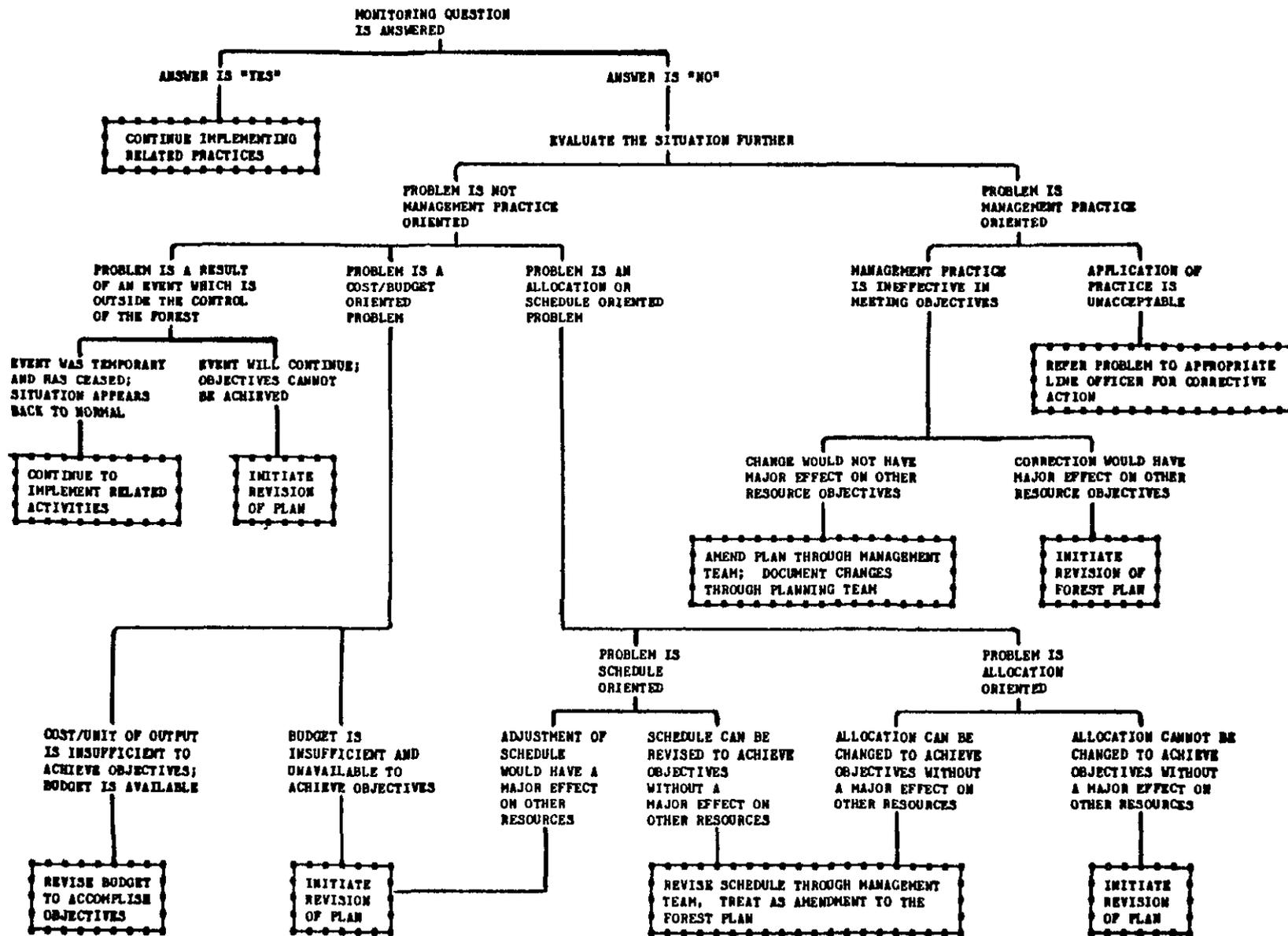


Table 32. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|--|---|-------------------------------|---|--|--------------------------------------|
| Recreation | Off-road vehicles | AN121 | Avoid resource damage and/or user conflicts | Field observation, photo points, public comment | PAOT days |
| | Dispersed sites, effects of management activities and amount of visitor use | AN122 | Maintain inventory of dispersed sites, ensure that high use sites are protected | Code-a-site, FSH 2309 RIM | |
| | Visual quality | AV12 | Ensure VQO's are met | Visual impact analysis using the Visual Contrast Rating System of management activities, project and permanent photo monitoring, statistical analysis of impacts to timber yield using standard and modified silvicultural prescriptions | |
| | Wild and Scenic Rivers | AN1224 | Maintenance of current attributes of the classified rivers | Review project plans and activities on adjacent lands | |
| | Trails, effects of management activities, and amount of visitor use | AT12 | Avoid damage to facility and record use | Visual inspection and use of trailhead registers and counters | Miles |
| Wilderness | Wilderness resource | AW12 | Ensure that limits of acceptable change are met per Gearhart Mountain Wilderness Plan, 1985 | Refer to revised Gearhart Mountain Wilderness Plan, 1986 | |
| Cultural | Ground disturbing activity and property preservation | AC12 | Preserve and protect cultural resource values | On the ground inspection in accordance with Cultural Resource Monitoring Plan, 1985 See Appendix 9, Forest Plan | Site/property |
| Fish and Wildlife⁽¹⁾ | Old-growth forest | CW1 | Amount old growth remaining in roadless, and general forest | Field/office reviews | Acres of old-growth forest |
| | Threatened, endangered, sensitive species | | | | |
| | bald eagle | CT1 | Nest/roost use and success | Oregon State University ground/aerial | Number of young |
| | | CT1 | Habitat Management | Field/office review | Habitat areas |

SEE END OF TABLE FOR FOOTNOTES.

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|------------|---------------|-----------|-------------|-----------------------------|----------------------------------|---------------------|---|
| Continuing | Annual | Low | Moderate | 2300 Files | Recreation Staff | 1.0 | NA |
| Continuing | Annual | | High | 2350 Files | Recreation Staff | 0.8 | NA |
| Continuing | Annual | Moderate | Moderate | | Recreation Staff | 1.0 | VQO not met when potential is documented |
| Continuing | Five years | Moderate | Moderate | 2350 Files | Recreation Staff | 1.0 | Resource conditions or level of activities would lower the designated intent for the Wild and Scenic Rivers |
| Continuing | Annual | Moderate | Moderate | RIM Trails | Recreation Staff | 1.0 | |
| Continuing | Annual | Low | Moderate | | Recreation Staff | 4.7 | |
| Continuing | Annual | High | High | Locked storage | Recreation Staff | 3.5 | 65% of cultural values |
| Continuing | Annual | High | High | GIS | Range, Wildlife, Watershed Staff | 1.0 | Harvest of old growth higher than expected |
| Continuing | Annual | High | High | Files | Forest FWL Staff ⁽⁵⁾ | 2.0 | Active nest site unoccupied for two years |
| Continuing | Two years | High | High | Files | District Rangers | 2.0 | 10% of habitat areas unsuitable as eagle habitat |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS₍₁₎ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure₍₂₎ |
|-------------------------------------|--|-------------------------------|--|-----------------------------|--------------------------------------|
| Fish and Wildlife, continued | Peregrine falcon | CT1 | Reintroduction/nesting success | Field review | Young birds fledged |
| | | CT1 | Habitat management | Field/office review | Habitat areas |
| | Sensitive species (plants mammals, birds, invertebrates, reptiles, amphibians) | CT1 | Habitat management/protection | Field/office review | Habitat areas |
| | | CT1 | Species density | Field Review | Number of individuals |
| | Indicator species | | | | |
| | Mule deer | CW1 | Population changes | Field surveys | Number of individuals |
| | | CW1 | Habitat management | Field/office reviews | Habitat effectiveness |
| | Resident trout | CF1 | Effectiveness of habitat improvements (structures) | Pre/post electro fishing | Number of individuals |
| | Pileated woodpecker | CW1 | Habitat management | Field/office reviews | Number of habitat areas |
| | | CW1 | Population change | Field surveys | Number of pairs |
| | Pine marten | CW1 | Habitat management | Field/office reviews | Number of habitat areas |
| Three-toed woodpecker | CW1 | Habitat management | Field/office reviews | Number of habitat areas | |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|------------|---------------|-----------|-------------|-----------------------------|---------------------------------|---------------------|--|
| Continuing | Annual | High | High | Files | Forest FWL Staff ⁽⁵⁾ | 1.0 | No young fledged from nests or reintroduction sites |
| Continuing | Five years | High | High | Files | District Rangers | 2.0 | Loss of active or potential nest site |
| Continuing | Annual | High | High | Files | District Rangers | 5.0 | Disturbance of sites or habitat outside of recommendations |
| Continuing | Five years | Low | Low | Files | Forest FWL Staff | 37.0 | Decrease greater than 10% below density |
| Continuing | Five years | Moderate | Moderate | Files | Forest FWL Staff ⁽⁶⁾ | 0.5 | Significant change in five-year period |
| Continuing | Five years | Moderate | Moderate | Files | Forest FWL Staff, District | 1.8 | Habitat effectiveness is more than 20% below management direction |
| Continuing | Periodic | High | High | Files | Forest FWL Staff ⁽⁶⁾ | 7.0 | Fish population show no improvement after structures are installed |
| Continuing | Five years | High | High | GIS | District Rangers | 2.0 | Number of habitat areas below level in Forest Plan |
| | Five years | Moderate | Moderate | Files | Forest FWL Staff | 15.0 | Woodpecker use is absent in more than 40% of habitat areas |
| Continuing | Five years | High | High | GIS | District Rangers | 2.0 | Number of habitat areas below level in Forest Plan |
| Continuing | Five years | High | High | GIS | District Rangers | 2.0 | Number of habitat areas below level in Forest Plan |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|-------------------------------------|--|-------------------------------|---|--|--------------------------------------|
| Fish and Wildlife, continued | Northern goshawk | CW1 | Habitat management | Field/office reviews | Number of habitat areas |
| | Red-naped sapsucker | CW1 | Habitat management | Field/office reviews | Number of habitat areas |
| | Primary cavity excavators (woodpeckers) | CW1 | Habitat management | Field/office reviews | Number of dead trees |
| Range | Range health | DN111 DN121 | Determination of condition and trend, compliance with S & G's on utilization | Condition and trend transects, field observations production/utilization studies | Plans |
| | Allotment management plans | DN112 | Ensure management plans are developed and problem areas receive treatment | FSH & FSM 2200, inspection | |
| | Allotment management plans | DN121 | Compliance with standards and guidelines | Utilization studies/key areas | |
| | Riparian habitat improvement | DN112 | Assure that riparian objectives are incorporated into allotment management plans | Project EA's and allotment management plans | |
| Timber | Dispersion of openings--size limitations | ET12 | Standards for size, dispersion and state of vegetation are met | Sale reviews, EA reviews by Working Circle | MMCF and MMBF |
| | Allowable timber sale quantity | ET121 | Amount sold consistent with plan by management areas (by management area #5 and the combined other management areas only) | Attainment reports, annual timber cut and sell report, 5-10 year timber sale program by Working Circle | |
| | | ET121 | Sawtimber (chargeable) | | |
| | Evaluation of silvicultural model | ET111 | Ensure correct managed stand yields from silvicultural model | Compare predicted growth with actual growth on benchmark plantations | |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|-----------------|---------------|-----------|-------------|------------------------------|----------------------------------|---------------------|---|
| Continuing | Five years | High | High | GIS | District Rangers | 2 0 | Number of habitat areas below level in Forest Plan |
| Continuing | Five years | High | High | GIS | District Rangers | 2 0 | Number of habitat areas below level in Forest Plan |
| Continuing | Annual | High | High | GIS | District Rangers | 5 0 | More than 10% of area has less than 90% of prescribed trees and snags |
| Continuing | Five years | Moderate | Moderate | Allotment management records | Range, Wildlife, Watershed Staff | 49 0 | Continued downward or static trend in problem areas |
| Continuing | Annual | High | High | Allotment management plans | Range, Wildlife, Watershed Staff | 45 5 | Six plans per year |
| | | | | Reports, studies | Range, Wildlife, Watershed Staff | 3 0 | Six reports meeting utilization guidelines |
| Continuing | Annual | High | High | | Range, Wildlife, Watershed Staff | 1 0 | Lack of riparian objectives in management plan |
| Continuing | Three years | | | FDB 2410 files | Timber Staff, District Ranger | 1 0 | Size fails objectives of Forest Plan |
| Continuing | Annual | | | 2410 files STARS data base | Timber Staff | 1 0 | Approximately 10% of Forest Plan |
| Once per decade | Five years | | | 2470 files | Timber Staff | | |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|--------------------------|---|-------------------------------|--|--|--------------------------------------|
| Timber, continued | Distribution of harvest (sell) | ET121 | Ensure that sell volume distribution by commercial thinning and by other harvest volume are as planned | Summary of timber sale reports/ Working Circle, combine pine and pine associated groups | MMCF and MMBF by Working Group |
| | Timber management suitability | ET121 | Ensure correct identification | EA reviews, sale reviews, stand exams | Acres |
| | Amount of clearcut harvest | ET121 | Monitor acreage of clearcut, in proportion to other even and unevenaged treatments | Project EAs, Silvicultural prescriptions | Acres |
| | Regeneration | ET24 | Ensure acceptable stocking | Program review, acres field sampling silvicultural accomplishment reports below prescribed stocking levels | Acres |
| | Fire, insect and disease damage | ET121 | Determine if catastrophic timber loss has occurred | Annual FPM aerial insect survey, surveys as needed following catastrophic events | Acres and severity |
| | Timber stand improvement | ET25 | Projects accomplished | Program review, silvicultural accomplishment reports | Acres |
| | Seedlings | ET24 | Superior progeny are planted | Silvicultural accomplishment reports | Acres |
| | Uneven-aged allocation | ET121 | Verify area estimate | Project EA's silvicultural diagnosis | Acres |
| | Uneven-aged yields | ET111 | Establish yield effects | Co-op study (four forests) | MBF |
| | Fertilization trials | ET25 | Establish viability | Administrative study | Cost and MBF |
| Air Quality | Visual air quality | FA1 | Assess impacts of forest activities on baseline | Field sampling | TSP |
| Soil | Soil compaction, erosion, displacement, mass movement | FW1 | Compliance standards for soil productivity | Field sampling and/or observation | Plans |

SEE END OF TABLE FOR FOOTNOTES.

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|------------|---------------|--------------|--------------|--|--|---------------------|---|
| Annual | Three years | | | 2410 files | Timber Staff and District Rangers | 1 0 | Approximately 30% of Forest Plan |
| Continuing | Five years | | | FDB 2410 files | Timber Staff and District Rangers | 2 0 | Approximately 5% of suited acres |
| Annual | Three years | | | FDB 2410 files | Timber Staff and District Rangers | 0 5 | Approximately 25% of Forest Plan |
| Annual | Annual | | | 2470 files FDB | Timber Staff and District Rangers | 3 0 | |
| Annual | Five years | | | 2410, 2470, 3400 files, annual pest detection maps | Timber Staff and District Rangers | | More than 5% of the available and suitable forested areas |
| Annual | Three years | | | 2470 FDB | Timber Staff and District Rangers | 2 0 | |
| Annual | Three years | | | 2470, 2490 | Timber Staff and District Rangers | 1 0 | |
| Annual | | | | 2410, 2470 | Timber Staff and District Rangers | 1 0 | Approximately 25% of Forest Plan |
| Annual | | | | FCCC | Timber Staff with PNW Research Station | 24 0 | |
| Annual | | | | 2470, 2500 | Watershed and Timber Staffs | | |
| Continuing | Annual | | | | Range, Wildlife, Watershed Staff | 1 2 | Noncompliance with applicable standards |
| Continuing | Two years | Low and high | Low and high | | Range, Wildlife, Watershed Staff | 6 0 | Greater than 20% compacted or puddled |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|------------------------|--|-------------------------------|--|--|--------------------------------------|
| Soil, continued | Cumulative effects on soil productivity | FO9 | Identify and document effects on productivity | Sample representative sites following project completion | Plans |
| | Soil and water improvement projects | FO9 | Accomplished as scheduled | Attainment reports | Acres |
| Watershed | Water quality | ET113 FW121 | Compliance with State and Federal Water Quality Standards | Quantitative measurement of physical and chemical water quality parameters | |
| | Water quality | ET113 FW121 | Document implementation and effectiveness of Best Management Practices | Interdisciplinary EA and project implementation review, quantitative and qualitative measurement of effects | |
| | Water quality | ET113 | Compliance with Forest Plan objective of improving water quality | Biologic indicators (macro-invertebrates) | |
| | Watershed Impact Areas (WIA) percentage within each forest watershed | ET113 | Cummulative effects of timber harvesting on stream channel stability | Use timber stand data base and GIS to assess percentage of impact relative to standards and guidelines done in conjunction with project planning | |
| | Stream channel stability | ET113 | Validate WIA guidelines | Stream channel surveys will be done in conjunction with the previous monitoring item | |
| | Implementation of riparian standards and guidelines | DN121 FW121 CW1 CF1 | Ensure standards and guidelines | EA and project reviews | |
| | Riparian, ecological, physical and biological condition | DN121 FW121 CW1 CF1 | Meet the Forest goal of improving riparian condition | Monitor plant communities, channel cross-section, macro-invertebrates, establish camera points | |
| | Effectiveness of riparian standards and guidelines | DN121 FW121 CW1 CF1 | Assess effectiveness in contributing to enhancement of dependent resources | Project monitoring field reviews | |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|-----------------------|----------------------|-----------|------------------|-----------------------------|--|---------------------|--|
| Continuing | Five years | | | | Range, Wildlife, Watershed Staff | 6.6 | Significant productivity loss |
| Annual | Annual | | | | Range, Wildlife, Watershed Staff | 0.4 | Scheduled attainment not achieved |
| Continuing | One year | High | High | Storet | Range, Wildlife, Watershed, Fire Staff | 6.0 | Failure to comply |
| Continuing | One year | Moderate | High | Files | Range, Wildlife, Watershed, Fire Staff | 24.0 | Failure to meet planned objectives |
| Five years | Five years | Moderate | High | Files | Range, Wildlife, Watershed, Fire Staff | 2.0 | Downward trend |
| Continuing | Five years | High | High | Files, TDB, GIS | Range, Wildlife, Watershed, Fire Staff | 6.0 | Exceed Forest Plan guidelines |
| Continuing | Next planning period | Moderate | High | Files | Range, Wildlife, Watershed, Fire Staff | | Approximately 10% variance from WIA guideline with no effect on stream channel condition |
| Continuing | Two years | High | Moderate to high | Files | Range, Wildlife, Watershed, Fire Staff | 2.5 | Greater than 10% deviation |
| Once every five years | Five years | High | Moderate | Permanent files | Range, Wildlife, Watershed, Fire Staff | 3.0 | Failure to improve within prescribed time frames or downward trend |
| Continuing | Two years | Moderate | Moderate to high | Files | Range, Wildlife, Watershed, Fire Staff | 5.0 | Desired end result not occurring |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|----------------------|--|-------------------------------|---|---|--------------------------------------|
| Facilities | Roads | LT23 | Assure that the total miles of road and miles usable by passenger cars are within the Forest Plan projections | Annual review of TIS data base and road maintenance plan to determine total Forest miles, miles open to passenger car use, and miles suitable for high clearance vehicles | Miles |
| | Roads | LT21 | Assure that open road density does not exceed standards and guidelines | Project design and EA review to insure that open road density within a transportation area does not exceed standards and guidelines | Miles per square mile |
| Protection | Prescribed fire (underburning) | PF1 | Ensure the use of prescribed fire is responsible to management area direction | Fire effects evaluation--forest fuels management program plan | |
| | Fire management program | PF1 | Measure efficiency of program | Fire management efficiency index (FMEI) of R6 Fire Management Analysis Process | |
| | Wilderness fire management program | AW121 | Evaluation of program | W-W 5100-29 T post-fire review | |
| | Fuel treatment | PF1 | Ensure methods meet forest plan objectives | Timber Sale Brush Disposal reports and activity reviews | |
| Planning | Coordination with other agencies and adjacent owners | ML16 | To assure compliance with Plan intent | Review project NEPA documents | Effects |
| | Economics | ML16 | Determine accuracy of assumptions and data used in plan | Review of 2400-17 reports, unit summary reports, PNW station publications, forest KV guides, RIM, ODF&W, Census, hydrologic, and attainment reports | |
| Minerals | Exploration and extraction--locatable minerals compliance with operation plans | GM12 | Prevent, minimize and/or mitigate surface resource damage | Observations, field sampling for compliance with plans of operations, etc | Operating plans |
| | Exploration and extraction--leaseable minerals compliance with operation plans, stipulations | GM12 | To prevent, minimize or mitigate damage to surface resources | Observation, field sampling plans of operation, etc | Operating plans |

SEE END OF TABLE FOR FOOTNOTES

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|---|---------------|------------------|------------------|-----------------------------|---|---------------------|---|
| Annual | One year | High | Moderate | GIS | Engineering Staff | 0.5 | 20% above projections |
| Each timber sale or project | One year | High | Moderate | | Planning and Engineering Staff | 1.0 | 20% above S&G's |
| Continuing | Annual | Moderate | Moderate | 5100 files | Fire Staff | 10.0 | Fire prescription not responsive |
| Annual | Annual | High | Moderate | 5100 files | Fire Staff | 5.0 | |
| Annual | Three years | Moderate | Moderate | | Fire/Recreation Staff | 1.0 | |
| Annual | Two years | Moderate | Moderate | 5100 TRI | Fire Staff | 3.0 | Failure to meet objectives |
| Continuing | Varies | Moderate | Moderate | GIS | Planning Staff | 1.0 | If effects such that an issue is developing |
| Various | Annual | Moderate | Moderate | 1920 | Planning Staff | 2.0 | |
| Intermittent to daily during operations | Varies | Moderate to high | Moderate to high | 2810 Files | Land and Management Staff/District Ranger | Varies | Approximately 15% of Forest Plan |
| Intermittent to daily during operations | Varies | Moderate to high | Moderate to high | 2820 Files | Land and Management Staff | Varies | Approximately 15% of Forest Plan |

SEE END OF TABLE FOR FOOTNOTES.

Table 32 Continued. Summary of Monitoring and Evaluation Program

| RESOURCE AREA | Action or Effect of Monitoring | NAS⁽¹⁾ Code | Objective of Monitoring | Method of Monitoring | Unit of Measure⁽²⁾ |
|-----------------------------------|--|-------------------------------|---|--|--|
| | Sale and extraction – common varieties | GM12 | Compliance with permit | Field observation compliance with pit development plan | Permits |
| Land Ownership Adjustments | Compatibility with landownership adjustment plan and forest objectives | JL123 JL123 | Ensure that project is in public interest | Review by IDT; relation to landownership adjustment plan NEPA, and Forest objectives | Cases |
| Special Land Uses | Private use of National Forest System Lands | JL122 | Compliance with permit and FSM, FSH | Field inspection | Permits |
| Community Effects | Changes in local income | | Measure community cohesion and stability | U.S. Census, State publications County and local agency reports, etc. | Dollars |
| | Changes in local population | | Measure community cohesion and stability | U.S. Census, State publications County and local agency reports, etc | Thousands of persons |
| | Changes in local employment patterns | | Measure community cohesion and stability | U.S. Census, State publication, County and local agency reports, etc | Thousands of persons by industry of occupation |
| | Changes in payments to counties | | Measure community cohesion and stability | Review payments to counties reports | Dollars |
| | Changes in lifestyles, attitudes, beliefs or values | | Measure community cohesion and stability | Interviews with key publics and opinion leaders in communities, observation, etc (See FSH 1909 17) | Various |
| | Changes in Forest contribution to area forest products industries | | Measure community cohesion and stability | Tracking of raw material flow to mills, industry mix | MMCF/year percent industry distribution |
| Forest Budget | Annual Forest budget | | Are the annual programs and budgets projected in the Forest Plan being realized? Are funds available to monitoring activities adequate to perform the needed monitoring tasks within Forest Plan projections? | Review budgets and programs of work in relation to Forest Plan projections | Dollars |

(1) NAS = National Activity Structure

(2) PAOT = Persons At One Time, MMCF = Millions of Cubic Feet, MMBF = Millions of Board Feet, MBF = Thousands of Board Feet; TSP = Total Suspended Particulates

(3) RIM = Recreation Information Management, GIS = Geographic Information System; FDB = Forest Data Base, FCC = Fort Collins; TIS = Transportation Inventory System, TRI = Total Resource Inventory

Table 32 Continued. Summary of Monitoring and Evaluation Program

| Frequency | Report Period | Precision | Reliability | Data Storage ⁽³⁾ | Responsibility | Cost ⁽⁴⁾ | Threshold Variability |
|------------------------------|--------------------|------------------|-------------|-----------------------------------|---------------------------|---------------------|--|
| Start and close of operation | Annual | High | High | 2850 files | Land and Management Staff | Varies | Approximately 5% of permit |
| Upon receipt of proposal | Annual | Moderate | High | 5420 5430 files | Land and Management Staff | | Approximately 20% of Forest Plan |
| Annual to three years | Annual | Moderate to high | High | 2720 2730 2740 files | Land and Management Staff | Varies | Approximately 5% of permit |
| Annual | Annual | High | High | Files | Planning Staff | Minimal | Approximately 15% in three years (corrected for inflation) |
| Annual | Annual | High | High | Files | Planning Staff | Minimal | Approximately 15% in three years |
| Annual | Annual | High | High | Files | Planning Staff | Minimal | Approximately 15% in three years |
| Annual | Annual | High | High | Files | Planning Staff | Minimal | Fails to meet Forest Plan objectives |
| Quarterly monitoring | Biannual reporting | Low | Low | Files, newspapers, anecdotal data | Planning Staff | Minimal | Established trend toward Forest-community conflict or identification of problems |
| Annual | Annual | Moderate | Moderate | TSA reports | Planning Staff | Minimal | Fails to meet Forest Plan objectives |
| Annual | 3, 6 and 9 years | High | High | Report Files | Forest Supervisor | 10 | Approximately 10% of planned budget |

(4) Thousand dollars spent annually for monitoring (estimate)

(5) In cooperation with Oregon Department of Fish and Wildlife and U S Fish and Wildlife Service

(6) In cooperation with Oregon Department of Fish and Wildlife

EVALUATION

At intervals established in this Plan implementation will be evaluated to determine how well objectives have been met and how closely management standards and guidelines have been applied. Based upon this evaluation, the interdisciplinary team shall recommend to the Forest Supervisor such changes in management direction, revisions, or amendments to the Forest Plan as deemed necessary. The results of this monitoring and evaluation may also be used to analyze the management situation during revision of the Plan

The Forest Planning Staff Officer has the Forest's overall coordination responsibility for accomplishment of the monitoring program. District Rangers and others will have supporting monitoring responsibilities within Ranger Districts. In most instances it will be necessary to develop resource-specific monitoring plans describing monitoring techniques and locations.



PROJECT LEVEL

ACTIVITY
Project position statement & initial analysis

OBJECTIVES
Evaluate resource data base for:
Currency
Accuracy
Retrievability
Effectiveness for planning & management purposes

Is data accurate, current, & effective?

YES NO



ACTIVITY
Final project CE, EA, EIS

OBJECTIVE
Review decision for compliance with forest plan direction.
Inclusion of appropriate Standards & Guidelines
Adherence to plan schedule of outputs & area allocations
Functional costs by project element

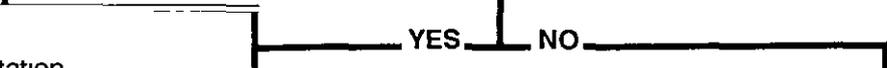
Design inventory or study to determine project feasibility

..... Feasible Not feasible

.....
Cancel project & substitute feasible project

Does decision comply with Forest Plan direction?

YES NO



ACTIVITY
Project implementation

OBJECTIVE
Monitor implementation & effects of Management practices & prescriptions
Standards & Guidelines
Mitigating activities

Redesign project & CE, EA, or EIS to comply with Forest Plan direction

..... CONTINUE IMPLEMENTATION

Are objectives being implemented?

YES NO



ACTIVITY
Post project review

OBJECTIVE
Monitor accomplishments, costs, & effect of Standards & Guidelines
Management practices & prescriptions
Mitigating activities

Modify project to ensure implementation of objectives

..... CONTINUE IMPLEMENTATION

Is the actual effect of implementation of objectives as predicted?

YES NO

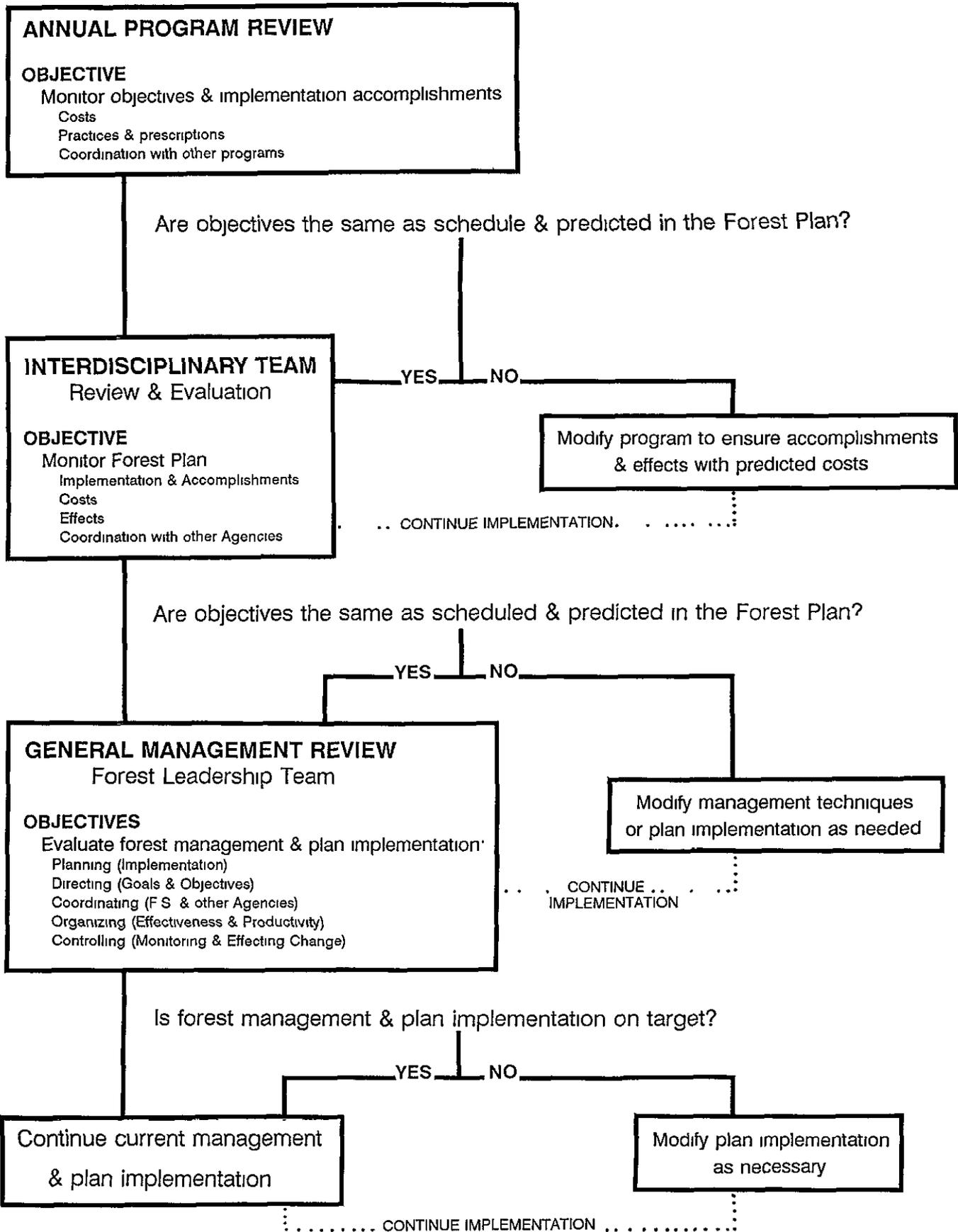


ANNUAL PROGRAM REVIEW

Modify standards, guidelines, practices, or prescriptions, or modify allocation of above

..... CONTINUE IMPLEMENTATION

Continue with PROGRAM LEVEL ----->



AMENDMENT

The Forest Plan incorporates legal mandates, professional judgment, and the public's stated concerns into a future vision of the Forest. It charts a path for getting there by developing management goals and objectives and by translating them into management direction in the form of standards and guidelines for management areas on the Forest. National Forest planning is a dynamic process, and the products -- Forest Plans -- are similarly dynamic. Forest Plans can and should be modified if conditions warrant. As management goals are applied on the ground or as new information is learned about resources, the Plan's goals and objectives or activities the goals generate may no longer be appropriate. In such instances, activities may be tailored to fit the resource or planning objectives, as stated in the Plan, may be amended. Plans do not apply direction in site-specific management activities. It would be unrealistic and wrong to try to identify, analyze, and schedule the myriad projects or activities that occur on a National Forest. Instead, this type of site-specific planning occurs at the project-level planning stage, such as allotment management planning.

The following actions must be taken when a management action or proposal is not consistent with the Forest Plan and the proposal is to be considered further for implementation

1. Prepare a proposed amendment to the Forest Plan.
2. Make a determination of the significance of the change to the Forest Plan under 16 U.S.C. 1604(f)(4), 36 CFR 219.10(f), and FSM 1922.5. It is important to distinguish between significance of the change to a Forest Plan and significance of the environmental impacts of the proposed action (as defined by Council on Environmental Quality regulations found under 40 CFR 1500 to 1508).
3. Consider the following factors when determining whether a proposed change to a Forest Plan is significant or not significant, based on NFMA planning requirements. Other factors may also be considered, depending on the circumstances.
 - a. Timing
 - b. Location and size
 - c. Goals, objectives, and outputs
 - d. Management prescription
4. If the amendment is determined not to be a significant change to the Forest Plan, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory compliance with Forest Service environmental policies and procedures for the project or action.
5. If the change to the Forest Plan is determined to be significant, the required 10 step planning process found at 36 CFR 219.12 will be followed. Preparation of an environmental impact statement (EIS) is mandatory (16 U.S.C. 1604(f)(4), 36 CFR 219.10(f), and 36 CFR 219.12). The Forest Supervisor shall determine the issues, concerns, and opportunities to be addressed in the amendment and will normally concentrate on those issues that have generated the need for change.