Chapter 5

TABLE OF CONTENTS

CHAPTER 5. IMPLEMENTATION OF THE FOREST PLAN

Introduction

The three parts of this chapter describe how the Forest Plan is to be put into practice. The first section explains how the management goals and objectives described in Chapter 4, Forest Management Direction, provide the driving force for project selection and scheduling. The second section describes the monitoring and evaluation process and the specific issue-related items that will be the basis for determining how well the objectives are being met and how closely the management standards and guidelines are being followed. The final section tells about the opportunities and procedures for changing the Plan through amendments and revision.

IMPLEMENTATION DIRECTION

Implementation of a forest plan occurs through identification, selection, scheduling, and execution of management practices to meet management direction provided in the Plan. Implementation also involves responding to proposals by others for use and occupancy of National Forest System lands.

As described in Chapter 4, management direction is expressed in terms of Forest direction, Forest-wide Standards and Guidelines, and Management Area direction. Forest direction consists of goals, objectives, and management requirements, generally applicable to the entire Forest. Management area directions have management requirements specific to individual areas within the Forest in addition to the general Forest direction. All of this management direction responds to public issues and addresses concerns and opportunities with respect to the availability, suitability, and capability of the land and resources.

Implementation of this direction is the key to translating the goals, objectives, and management requirements stated in the Plan into results on the ground. The Plan is implemented through program development and budgeting, and annual work-planning processes. Through these processes, the Plan is supplemented to account for adjustments and changes in overall management direction.

The Plan provides direction for developing multi-year implementation programs. The Plan's scheduling practices, grouped as projects, are translated into multi-year program budget proposals which identify the needed expenditures. These processes complement the planning process as vehicles for requesting and allocating funds needed to carry out the planned management direction. The proposed annual Forest program budget is the basis for requested funding. Upon approval of a final budget for the Forest, the annual program of work is finalized and implemented. The accomplishment of the annual program of work is the incremental implementation of management direction in the Forest Plan.

Consistency with other Instruments

This Forest Plan serves as the single land management plan for Umatilla National Forest. All other land management plans are replaced by the direction in this Plan; a list of these appears in Chapter 1, Table 1-1.

All outstanding and future permits, contracts, cooperative agreements and other instruments for occupancy and use of lands included in the Forest Plan will be brought into agreement with the Forest Plan, subject to the valid existing rights of the parties involved. This will be done as soon as practicable, probably within 3 years of the date of the Plan.

Budget Proposals

The Forest Plan translates scheduled management practices into a multi-year program budget proposal. This schedule will be used for requesting and allocating the funds needed to carry out the planned management direction. Subsequent administrative activities (including budget proposals) which affect the Forest shall be based on the Forest management objectives in Chapter 4 and follow the project schedules in the Forest Plan, Appendix A.

Upon approval of a final budget, the Forest finalizes and implements the annual program of work. Accomplishment of this program results in incremental implementation of the management direction of the Forest Plan.

The Forest Supervisor may change the proposed implementation schedules to reflect differences between proposed annual budgets and appropriated funds. Such a schedule change shall be considered an amendment to the Forest Plan, but shall not be considered a significant amendment or require the preparation of an environmental impact statement, unless the change significantly alters the long-term relationships between levels of goods and Services projected under planned budget proposals as compared to those projected under the actual appropriations.

Environmental Projects and activities permitted through the Forest Plan are subject to site-specific Analysis environmental analyses under the NEPA process as they are planned for implementation. Site-specific project environmental analysis may rely on and utilize analyses and expected environmental effects from the FEIS and will be considered tiered to the Forest Plan. Such information or data may be incorporated by reference in project environmental assessments or environmental impact statements (EIS's). Environmental analyses for some proposed actions meeting established FSM 1950 criteria may qualify to be exempted or categorically excluded from preparation of an environmental assessment or EIS. An analysis file and/or project file must be available for public review, but it is not always necessary to document the analysis in the form of an environmental assessment or EIS.

MONITORING AND EVALUATION

Monitoring is the means of measuring and evaluating the effectiveness of the Forest Plan implementation. Monitoring provides quantitative and qualitative information on the progress and results. It is a means to determine how well assumptions used in preparing the Plan reflect actual conditions, how well objectives of the Plan are being met, and how appropriate the management standards and guidelines are. Monitoring may lead to changes in management practices, or provide a basis for minor adjustments, amendment, or possible revision of the Plan.

Monitoring is intended to help keep the Forest Plan dynamic and responsive to change. When a situation is identified as being outside the limits of acceptable variability, appropriate amendment, revision, or other changes may be made. Monitoring consists of gathering data, observations, and information. During evaluation, the data and information are analyzed and interpreted. This process provides information necessary to determine whether or not planned conditions or results are being attained and when they are within the intent of the Plan.

The monitoring and evaluation process will provide information to help determine, for example, if:

1. Laws, regulations, and policies are being followed, including those found in the Forest Plan Management Areas and Forest-wide Standards and Guidelines, the Regional Guide, and the Forest Service Manual and Handbooks.
2. The Forest Plan responsively addresses the issues, concerns, and opportunities in a publicly acceptable manner.
3 The management prescriptions are producing the predicted or desired environmental results.
4. Costs of implementing the Plan are within projected limits.

5. Projected outputs are being produced.
6. There are new issues and concerns not adequately addressed by the Plan.

There are a number of monitoring systems currently in place to comply with administrative and legal responsibilities. Forest Plan monitoring does not replace these systems, but rather complements them by addressing specific issues and concerns identified through the planning process and providing additional information for determining the effectiveness of the Plan.

Evaluation of results of site-specific monitoring programs will be documented in the annual evaluation report. The significance of results of monitoring programs will be analyzed and evaluated by the Forest interdisciplinary team using the evaluation process summarized on a flow chart in this chapter (Figure 5-1).

Based on evaluation, any need for further action will be recommended to the Forest Supervisor. A recommendation could include:

1. No action needed - monitoring indicates goals, objectives and standards are achieved;
2. referring recommended action to the appropriate line officer for improvement of application of Forest Plan direction;
3. modifying management area direction as a Plan amendment;
4. revising the projected schedule of outputs; or
5. initiating revision of the Plan.

The documented file of the Forest Supervisor's decisions will include the results of monitoring and evaluation and be maintained for future use in amending or revising the Plan. At least every 5years a plan evaluation will be completed and an evaluation report submitted, with recommended actions to the Supervisor for his consideration.

Monitoring worksheets which describe the monitoring/evaluation process in detail for each resource/issue are maintained on the Forest. These worksheets constitute a plan that is summarized in the table on the following pages. The plan includes the following components:

1. Monitoring Element - the resource or issue that will be monitored and evaluated.
2. Issues, Actions, Effects, to be Monitored - specific statements of what will be examined.
3. Suggested Monitoring Methods - a description of data collection methods and sources of information to be used. Many of the methods will include systems that are already in place on the Forest.
4. Reporting Frequency - the schedule of sampling or reviewing and reporting stated in years.
5. Precision/Reliability - two components are included here. First is the relative accuracy (precision) with which data are collected [precision is qualitatively rated as high (H), medium (M), or low (L)]. Second is reliability, or a measure of how accurately the monitoring measures the intent of the item (the same rating scheme as used for precision).
6. Units of Measure - the items that need to be observed in order to determine whether or not the issue is being resolved according to expectations.
7. Monitoring and Evaluation Responsibility - the line or staff person who will coordinate the monitoring activity.
8. Estimated Annual Cost - the average annual cost anticipated for all monitoring activities associated with the action, effect, or resource being monitored
9. Threshold of Variability – the variation (2) from the expected outputs or results that is permitted before corrective action is taken.

Annual Summary

An annual summary will be made of evaluations and recommendations which address the identified requirements. These could include:

1. No action needed. Monitoring indicates management direction is being achieved;
2. clarification of management direction needed, monitoring indicates that management direction is being improperly applied due to a lack of clarity;
3. amendment of management direction needed;
4. evaluation not conclusive-additional study or information needed; or
5. initiation revision of the Plan.

Annual summaries of any revisions will be prepared and incorporated into the Plan as additions.

MONITORING ELEMENT	ISSUES/ACTIONS/ EFFECTS TO BE MONITORED	SUGGESTED MONITORING METHODS	REPORTING FREQUENCY	PRECISION/ RELIABILITY	UNIT(S) OF MEASURE	MONITORING & EVALUATION RESPONSIBILITY	EST. ANNL COST (1982 $)	THRESHOLD OF VARIABILITY (For action see Figure 5-1)
GENERAL – MANAGEMENT AREAS	Determine if management area direction met; Determine if management area direction is valid.	Onsite review of selected activities; Questionnaire to Districts/publics what working/not working	Annually	M/H	Acres	District Rangers Planning Staff Officer	$5,000	Selected projects not meeting Management Area Standards and Guidelines or project results judged as acceptable but not in compliance with direction.
GENERAL – STANDARDS AND GUIDELINES	Adherence to Standards and Guidelines not covered by separate monitoring item; Goals and objectives met by Standards and Guidelines.	Review of selected activities.	Annually	H/M	All Standards and Guidelines	District Rangers Planning Staff Officer and Forest Management Team	$5,000	Selected projects judged not in compliance with the Plan Standards and Guidelines. Unacceptable deviation from stated goals and objectives.
RECREATION - Roadless Area Management - Semi-Primitive Recreation	Maintain integrity of roadless areas and meet management area direction for semi-primitive recreation.	Onsite Reviews; Review Timber Sale and other Activity Schedules	Annually	H/H	No. mi. of road and harvesting acres in roadless areas. Acres of semi-prim. Recreation.	District Rangers Planning Staff Officer	$1,000	Roadless area activities not in compliance with management area direction. Actual SP ROS within 15% planned SP ROS.
RECREATION Off-Highway Vehicle Use	Determining OHV use and effects/meeting management direction.	RIM Use Source Document, field/onsite observations, Forest Travel Plan, RIM Basic Address, FROG, public comments, complaints, and law enforcement records	Annually	M/M	Various resource effects. No. and type of public comments	District Ranger Recreation Staff Officer	$1,500	Resource effects which are beyond limits of acceptable change; Recreation or other user conflicts which are recurrent; Management ara and motorized access objectives not being met.
RECREATION Visual Resources	Effects of management activities on visual resources/meeting visual resource standards.	Activity reviews, comparing project planning and execution with VQO; Presale-postsale activity and program reviews	2, 5, 10	H/H	Acres	District Rangers Recreation Staff Officer	$1,000	> 10% of acres in management areas or allocation zone not in compliance with VQO (Retention or Partial Retention)
RECREATION Recreation Sites	Adequacy of facilities in meeting demand.	Fee compliance records, data and records onsite, and activity reviews, capital investment project data, customer surveys	Annually	M/M	Various RVD's Survey Results	District Rangers Recreation Staff Officer	$1,500	> 60% occupancy rate at any site. Frequent or recurring customer complaints. Unacceptable resource impacts at sites.
WILDERNESS Nonconforming Uses	Effects of nonconforming uses within wildernesses	Activity and onsite reviews; Annual Wilderness Report; verify amount of wilderness which meets Primitive WRS standards; AMP, GIS, photo plots	Annually	H/H	No. of uses, citations issued. Other LAC measures	District Ranger Recreation Staff	$1,000	Meet LAC Standards and Guidelines for each wilderness; Any consistent increase (or lack or reduction) of nonconforming uses.
WILDERNESS	Meeting management	Activity and onsite reviews;	Annually	H/H	Various –	District Ranger	$6,350	Meet LAC Standards and

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Management	direction to maintain or preserve wilderness' characteristics; Determine if Limits of Acceptable Change standards are appropriate and being met; and meeting recreation demand.	verify amount of wilderness which meets Primitive WRS standards; analyze site impact inventory, encounter surveys; review RIM use records; check fire reports verifying that Wilderness Fire Plans are consulted and followed; check AMP, GIS data, and establish photo plots.			including encounters, campsite densities, sq. foot of barren soil, no. of damaged tres, range condition, and other LAC indicators and standards.	Recreation Staff		Guidelines for each wilderness. Any reduction of amount of primitive WRS.
WILDLIFE Elk/Deer Habitat and Estimated Populations	Determine if big game habitat (effectiveness) and population trends meet management objectives.	Compile and summarize State (ODFW/WDW) wildlife agency annual (April) census and composition records to determine population trends. Use habitat relationship modeling for projects, summarizing by allocations zone and/or mgmt. Area. Field/Photo/ Landsat review of HEI components of cover, forage, & density of roads open to vehicles.	As analyzed annually and summarized on a 5-year basis	M/M	Animal population estimates and Habitat Effectiveness Index (HEI)	Forest Wildlife Biologist District Ranger District Biologists	$20,000 per year; $50,000 every 5th year for Landsat imagery, etc.	Elk habitat effectiveness indices including discounts for open roads, is more than 10% below the objective in any given allocation zone or management area. Population of a herd unit or winter range unit is more than 20% below state population index values as measured by total populations, bull/buck component, and cow/calf or doe/fawn ratios for a 3-year period.
WILDLIFE Old Growth Tree Habitat	Determine changes in inventoried old growth habitat and effects of projects on old growth (maintain integrity of old growth units). Determine if old growth habitat is meeting mgmt. Objectives (characteristics, species requirements, etc.)	Complete inventories or surveys to validate all old growth and dedicated habitat units documenting suitability (i.e., FWS Habitat Suitability Modes) and use. Validate, document, and report reduction in inventoried and dedicated old growth on a project basis. Maintain sight and use records on each indicator species for dedicated old growth units.	Summarize annually; completion/summary report – each 5 years	H/M	Acres/Habitat Condition	Forest Staff District Ranger and R.D. Staff Wildlife Biologist District Biologist	$30,000 a year for first 5 years; $10,000 a year thereafter	All designated sites identified in the Plan meet specifications. Components that provide effective habitat fall below desired levels. The old growth acreage remaining or the amount being converted in a 5-year period deviates from the planned amount by more than 20%.

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WILDLIFE Dead and/or Defective Tree Habitat	Determine if dead and down tree habitat is meeting management objectives/criteria. Determine if the expected primary excavators are occupying the habitat.	Examine habitat on 20% of timber sales within 1 year of sale closure per Ranger District. Evaluate timber inventory plot data each 10-year period. Establish and measure transects to determine longevity of snags in areas where fuelwood is cut. Conduct surveys as outlined in individual management indicator species write-ups.	Annually; 10-year Report Annl. Survey with a 5-year Report	H/M	No. of snags and live wildlife trees/acre; primary cavity excavator use (number and species observed)	Forest Wildlife Staff Forest Biologist District Biologists District Ranger	$12,000	More than 10% of the surveyed areas have < 90% of the prescribed trees, snags, and logs present. Expected primary cavity excavators are absent from more than 10% of the surveyed sites, or are 80% or less of predicted numbers.
WILDLIFE Pileated Woodpecker Populations	Determine if habitat is meeting mgmt. Objectives for pileated woodpeckers; habitat is being occupied. Determine trends in populations.	In cooperation with the ODFW/WDW and others develop or utilize predictive models (i.e., FWS Habitat Suitability Models) and field samplehabitat and populations to selected standards on an annual basis.	Annually	M/M	No. of birds and/or sites used	Forest Biologist District Biologists Forest Wildlife Staff	$6,500	> 10% variance from expectations in pileated woodpecker occupancy, use, or production within a 5-year average. Populations are on a downward trend.
WILDLIFE Pine Marten Populations	Determine if habitat is meeting objectives for pine marten. Determine if habitat is being occupied. Determine trends in populations.	Establish and read a system of sampling points for both summer and winter occurrence and use; Inventory 10% of designated units. Cooperate with ODFW and WDW on a sample design (e.g., FWS Habitat Suitability Models) to determine some normal ranges and departures from distributions.	Annually; 5-Year Summary	M/M	No. of animals and/or sites used	Forest Biologist District Biologists Forest Wildlife Staff	$6,500	More than 10% of the identified pine marten habitat is unused within the expected distribution and use zones. More than a 20% variance from accepted norms for reproductive parameters. More than 20% variance from anticipated distributions.
WILDLIFE Northern Three-Toed Woodpecker Populations	Determine if habitat is meeting objectives for northern three-toed woodpecker. Determine if habitat is being occupied. Determine trends in populations.	Establish and annually read a system of sampling points to develop population trends. Inventory 10% of designated replacement units for progression toward “suitable” lodgepole pine old growth status. Check “programmed” thinning accomplishment (to	Annually; 5-year summary	M/M	No. of birds and/or sites used	Forest Biologist District Biologists Forest Wildlife Staff	$4,000	Populations of three-toed woodpeckers are more than 20% below values expected in the Plan on a 5-year average. The number of larger diameter dead lodgepole pine is more than 15% below the objective in any given allocation zone at any point in time.

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		develop the larger diameter snags).						
WILDLIFE Threatened/ Endangered/ Sensitive Species Wildlife Populations and Habitat	Evaluate conditions of existing and potential nest or roost sites or other important habitats. Determine trends in populations.	Use descriptions from the approved Recovery Plans and other appropriate documents for habitat evaluations. Note changes in conditions from previous surveys. Conduct interagency population trend surveys and mid-winter surveys. Record use of individual roost sites. Review all project management plans to insure Management Standards are being met. Check projects onsite.	Annually	M/M	Sites Populations	Forest Wildlife Staff Forest Biologist District Ranger District Biologists	$5,000	Any nests, roosting sites, or important habitats compromised as a result of Forest Service management activities. Any delays in developing individual site management plans for reintroduction sites or for active nests. T&E species management guides to be completed within 5 years of Forest Plan implementation. Sensitive species guides will be completed within 10 years.
DIVERSITY Plant and Animal	Determine if plant and animal diversity is being maintained; the number os species and their distribution is not being diminished.	Use various resource inventories described elsewhere in Monitoring Plan to determine acres by successional stage and population trends of animal species.	Annually; 5-year summary	M/M	Acres by successional stage and MIS population trends.	District Biologists and Silviculturists and Forest Wildlife staff	$6,000	No established thresholds of variability for the Forest except as noted above for MIS species.
PLANTS Threatened/ Endangered/ Sensitive Species Population levels of T/E/S Plants	Insure that T/E/S plant species are protected and management standards are met.	Summarize annual inventories f all proposed site-specific projects. Review all project management plans. Onsite review of projects with identified T/E/S plants.	Annually	M/M	Acres; Population totals per species; No. of existing species mgmt. Guides	District Ranger Botanist Wildlife Biologist Range Specialist Resource Staff	$4,000	Any population compromised as a result of Forest Service management activities. Any delays in developing species management guides or biological evaluations for management of individual species.

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RIPARIAN/ WATER	Effects of Forest Management Activities on Riparian and water Resources; determine if riparian mgmt. Objectives are being met.	Implementation and Effectiveness Monitoring. Suggested minimum sample size per District: Two timber sales per year; - two allotment manage-ment plans per year; and one fish habitat and watershed restoration.	Annually with detailed effectiveness reports at 5-year intervals	H/M	Various	District Ranger Wildlife, Fish, Range & Watershed Staff Officer	$16,300	Non-attainment of Forest Plan Standards and Guidelines for riparian area management.
WATER Quantity	Effects of Forest Management Activities on Water quantity, Low Flows and Timing of Water Yields	Intensively monitored paired watershed studies on Umatilla Barometer Watershed. Intensively monitored south-end watershed study (Heppner District). Cooperation with PNW and local university research groups on studies defining the relation of runoff processes to Forest management activities.	Periodic basis upon completion of analyses within next 3 years. Every 3 years and at conclusion (south-end).	H/L	Flow	Walla Walla RD Heppner RD Watershed Staff Officer	$28,500	Any decline in water yield in critical drainages or water yield or flow rate during critical late season periods not attributable to natural causes. Any change in timing of spring snowmelt which would cause detrimental impact to stream channel stability or deleteriously effect downstream water users.
WATER Quality	Effects of forest management activities on water quality to determine if standards are being met. Ascertain changes in critical water quality parameters relative to mine treatment operations.	Establishment of long term ambient general water quality monitoring stations. Establishment of heavy metal monitoring locations in Clear Creek and adjacent mine drainage treatment areas. Establishment of 12 macro-invertebrate sampling stations to monitor trends in biotic responses to water quality.	Annually with a report at 5-year intervals.	M to H/M	Various	District Ranger Resources Staff Officer	$11,800	Exceeds State water quality standards or Forest water quality goals.
FISH Anadromous	Determine fish population trends for management	Anadromous fish numbers obtained from ODWF and	Annually with report at 5-	M/L	Steelhead Smolts	District Ranger Range, Wildlife,	$12,600	A declining trend in population, for a specific species, over a period

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and Resident Fisheries	indicator species. Assess the attainment of fish habitat capability desired future conditions.	WDF. Resident fish population trends coordinated with the WDW and ODFW. Baseline stream inventory of selected fish habitat parameters. Baseline smolt counts using Hankin & Reeves (1988) methodology/ smolt trapping techniques.	year intervals; Annually Annually with report at 5-year intervals		Steelhead Redds Smolt habitat capability Resident trout habitat capability	Fish, and Watershed Staff Officer		of 5 or more years in a drainage. A decrease of 10% or greater in fish habitat capability in a subwatershed.
WATER/FISH	Effects of Forest management activities on stream water temperatures; identification of major fish bearing waters which exceed desired maximum temperatures during late season low flow. Determine if standards and guidelines are being met.	Ocular estimate of stream surface shade using Hankin & Reeves physical stream survey methods. Application of riparian classification site potential to determine potential shade production during critical temperature periods. Application of temperature prediction model to determine the achievable low stream temperature during critical periods. Use of continuously recording thermographs and thermometers to identify problem streams and to monitor baseline temperature regimes, long-term trends in stream temperature and project level impacts on stream temperature.	Annual with a report at 5-year intervals	H/M	% stream surface shade. H_20 temp.	District Ranger Range, Wildlife, Fish, and Watershed Staff Officer	$14,600	Non-attainment of Forest Plan Standards and Guidelines for stream surface shade and/or instream water temperatures.

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WATER/ FISH Stream Sedimentation	Impacts on Water Qualiyt, Fish Habitat, and other resources from Forest management activities; determine if standards and guidelines are being met; effectiveness of interim instream sediment guidelines for estimating desired condition for the Forest.	Ocular estimates of percent surface fines and/or cobble embeddedness in spawning habitat using Hankin/Reeves physical survey technique. Automatic daily composited samples analyzed for suspended sediment concentrations and/or turbidity. Watershed surveys to determine sources of above normal sediment loads. Macro-invertebrate population sampling using techniques developed by Dr. Fred Mangum, USFS Aquatic Ecology Lab, Provo, UT.	Annually; On year taken with report at 5-year intervals	M/M	% surface fines; % cobble embedded-ness; Mg/l sediment; JTU turbidity			
WATER/FISH Stream Channel Morphological Features	Determine if standardsa and guidelines are met; effects of management activities on stream morphology.	Ocular estimate of pool frequency using Hankin/Reeves physical stream survey. Ocular estimate of in-channel and floodplain large woody debris levels using Hankin/Reeves physical stream survey methodology.	Annually with report at 5-year intervals	H/M	Pools per miles of stream; in-channel large wood pieces per mile	District Ranger Range, Wildlie, Fish, and Watershed Staff Officer	$30,100	Non-attainment of expected stream channel pool frequency. Non-attainment of expected instream large wood levels
WATER FISH RIPARIAN Riparian Vegetation	Assure that riparian vegetation condiiton and trend is stable or improving	Forage utilization measured as Range monitoring. Ocular estimate of percent stream surface shade using Hankin A Reeves stream survey methodology. Riparian community classification/mapping of 90 miles of stream per year of non-wilderness class I, II, and III stream riparian areas. Classification will include estimates for stream surface shde potential, future potential large woody debris	Annually with report at 5 year intervals	M/M	Various	District Ranger Range, Wildlife, Fish, and Watershed Staff Officer	$17,100	Non-attainment of Forest Plan standards for riparian area management and stream surface shade. Riparian vegetation trends moving away from the attainment of desired future conditions.

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		frequency by decade, and hardwood and shrub recovery potential.						
SOIL Soil Productivity	Maintain long-term soil productivity; meet Forest-wide Standards and Guidelines for soils	Intensive measurement of detrimental soil factors using techniques in "Howes, Hazard, and Geist" (1985), on 3 harvest units per District per year. Extensive measurement of compaction using less intensive methods. Monitoring of 2 sites per year for foliar and soil nutrient levels. Cooperation with PNW practical research on long-term site productivity.	Annually; 5 Years reports	M/M	Various	District Ranger Range, Wildlife, Fish, and Watershed Staff Officer	$13,800	Exceedance of regional guidelines for soil compaction, displacement, puddling, and erosion.
RANGE Condition and Trend	Determine if range condition and trend are improving and if areas are in satisfactory condition.	Condition and trend transects (permanent and paced), photopoints and photographs, field exams, stream channel cross sections, streambank condition measurements, water temperature readings	Annually	M/M	Range condition acres by allotment	District Staff Resource Staff Officer	$9,000	By year 2000, at least 85% of suitable primary and secondary range is in satisfactory condition with no more than 5% of the allotments classified as PD. By year 2000, no more than5% of allotments are classified as PC indicating riparian problem allotments.
RANGE Allotment Planning	Assure that allotment management plans are completed and improved range management implemented on schedule.	Attainment reporting, annual work planning. Allotment management planning reviews, comparison with Forest Plan standards. Review of budget planning, SAI plans, and annual operating plans, comparison with allotment management plans.	Annually	H/M	Plans	Resource Staff Officer	$3,500	AMP planning schedule varies by more than 2 years for 10% or more of the plans. Any of the revised and approved AMP's fail to contain objectives and standards that fully implement the Forest Plan. More than5% of the annual operating plans and budget requests, and KV sale area improvement plans, etc. are not supported by standards or development schedules from allotment management plans.

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RANGE Outputs	Determine if produced outputs are meeting planned outputs for grazing use.	Annual Grazing Statistical Report. Evaluation of permit transactions and adjustments to determine cause.	Annually	H/H	AUM's	Resource Staff	$500	Annual outputs (AUM's) for permitted domestic livestock increase more than3% above or fall more than10% below Forest Plan levels.
RANGE Forage Utilization	Levels of forage utilization in riparian zones, upland area, and transitory range areas of allotment are meeting standards.	Key area measurements, field exams, utilization and distribution studies, photo points. Reviews of AMP's and field reviews of actual utilization with emphasis on riparian utilization. Intensity: Sample at least 20% of allotments annually with emphasis on allotments with riparian problems.	Annually	M/H	Acres	District Resource Staff SO Resource Staff Resource Staff Officer	$12,000	More than 10% of the allotments reviewed experience utilization by any species of animal exceeding the Forest Plan or allotment plan standards by more than 5% as average of use in key areas of an allotment.
RANGE Noxious Weeds	Control the spread of noxious weed populations, especially onto adjacent private lands.	Review of annual attainment report, annual budget requests, and review treatment plans/EA's and onsite review of problem areas and accomplishment.	Annually	M/M	Acres of new treatment; Acres of retreatment	District Resource Staff SO Resource Staff Resource Staff Officer	$1,000	Assigned targets are not met by 20% or more.
RANGE Improvement	Assure that range improvements are accomplished as planned	Review annual budget process and annual attainment reports.	Annually	M/M	Acres; Structures	Resource Staff Officer District Resource Staff	$500	Accomplishment of annual range improvement targets falls more than10% below the assigned output.
TIMBER Silvicultural Regeneration Method	Assure that harvested areas are regenerating to standard.	Use silvicultural reporting systems such as TRACS	Annually, summary every 5 years	M/H	Acres	District Rangers Timber Staff Officer	$1650	Variance from planned method of more than25% on an annual basis, 15% on a decade basis. Compare actual levels by method to Table 4.1 of Plan.
TIMBER Size and Dispersal of Created Openings	Determine if NFMA requirements are being met.	Use TRACS and STARTS to monitor average unit size on a Forestwide basis by two categories: Even-aged units, and uneven-aged units. Note: Monitor and report average unit size by even and uneven-aged categories for management strategies A3, A4, A5, and C5.	Annually Each Decade	M/M	Acres	District Rangers Timber Staff Officer	$4,150	Average unit size exceeds size standard by more than 10%
TIMBER Stand	Determine if regeneration standards and guidelines	Use TRACS report to determine acres reforested	Annually	M/H	Acres and Years	District Rangers Timber Staff	$1,650 - $3,300	> 15% deviation from Plan level for acres treated during a 5-year

MONITORING ELEMENT	ISSUES/ACTIONS/ EFFECTS TO BE MONITORED	SUGGESTED MONITORING METHODS	REPORTING FREQUENCY	PRECISION/ RELIABILITY	UNIT(S) OF MEASURE	MONITORING & EVALUATION RESPONSIBILITY	EST. ANNL COST (1982 $)	THRESHOLD OF VARIABILITY (For action see Figure 5-1)
Management – Natural Regeneration	are being met; determine if targets are being accomplished at planned levels.	using natural regeneration. Field reviews and reports from Districts on the length of regeneration lag on natural shelterwood regeneration units.				Officer		period. > than 1 10-year lag between time of harvest and attainment of at least minimum stocking levels.
TIMBER Stand Management – Artificial Regeneration	Determine if regeneration standards and guidelins are being met; determine if targets are being accomplished at planned levels.	Use TRACS report to determine acres reforestd using artificial regeneration practices. Use Annual Survival, Stocking, and Growth Report to determine acres successfully stocked after 3 growing seasons.	Annually with check at years 5 and 10	H/H	Acres	District Ranger Timber Staff Officer	$1,560	> 15% deviation from the Plan level for acres treated during a 5-year period. < 90% of the acres at least minimally stocked after 3 growing seasons.
TIMBER Stand Management – Ponderosa Pine Regeneration	Determine if regeneration efforts are restoring ponderosa pine growing stock to planned levels.	Monitor level of ponderosa pine reforestation using TRACS	Annually with check at years 5 and 10	M/M	Acres	District Rangers Timber Staff Officer	$1,250	If after 10 years pine is reforested on < 35% of the acres regenerated.
TIMBER Reforestation With Genetically Improved Tree Stock	Determine if targets are being accomplished at planned levels.	Monitor using TRACS report.	Annually	H/H	Acres	District Rangers Timber Staff Officer	$1,240	More than a 10% reduction from levels assumed in the Plan over a 5-year period.
TIMBER Stand Management – Precommercial Thinning	Determine if targets are being accomplished at planned levels.	Monitor amount of stocking level control using TRACS. Compare stocking level needs vs. stocking level accomplished using TRACS.	Annually with check at years 5 and 10	H/H	Acres	District Rangers Timber Staff Officer	$1,560	> 20% deviation from planned levels as indicated on Plan Table 4.1. Fewer than 80% of the acres needing stocking level control actually received it.
TIMBER Land Suitability For Timber Management	Meet NFMA requirements for tracking suitable lands.	Silvicultural stand examinations, diagnosis and prescriptions. Review of unsuitable lands which may have been incorrectly typed.	Ongoing	M/M	Acres	District Rangers Timber Staff Officer Planning Staff Officer	$4,130	More than a 5% change in the suitable land base.
TIMBER Managed Yield Projection	Determine if yield projection assumptions are consistent with actual managed stand growth.	Monitored by managed stand survey conducted on a representative sample of managed stands.	Every 10 years	H/H	MCF/AC	RO Timber Management/ Timber Staff Officer	Periodic cost, every measureme nt period	Deviations likely to effect timber yields by more than 15%

MONITORING ELEMENT	ISSUES/ACTIONS/ EFFECTS TO BE MONITORED	SUGGESTED MONITORING METHODS	REPORTING FREQUENCY	PRECISION/ RELIABILITY	UNIT(S) OF MEASURE	MONITORING & EVALUATION RESPONSIBILITY	EST. ANNL COST (1982 $)	THRESHOLD OF VARIABILITY (For action see Figure 5-1)
TIMBER Empirical Yield Projections	Determine if yield projections portraying actual results are consistent with most recent inventory	Timber inventory will be updated on a 10-year cycle. Empirical yields will be recalculated when new inventory data is available. FORPLAN will be re-run based on new yield tables.	Periodically when inventory completed	H/H	MCF/AC	RO Timber Management/ Forest supervisor	$3,000	Deviations likely to effect timber yields by more than 15% (Review when data available.
TIMBER Timber Offered For Sale	Determine if planned timber outputs by category (TSPQ, ASQ, PP ASQ) are being offered. Determine if adjustments in planned sales for the remaining years in the decade can reasonably be made to ensure decade compliance.	Use STARS system data base and report. Annually calculate the running average for each category and compare to thresholds.	Annually	H/H	MBF and MCF	District Ranger Timber Staff Officer	$2,480	TSPQ: > 10% ± deviation from planned cu. Ft. volume ASQ: Deviation > +15% or –20% of planned ASQ. Ponderosa pine: >than 25% ± deviation from planned ponderosa pine sawlogs volume.
FUELWOOD Availability of Firewood	Determine if firewood supply is meeting demand.	Customer surveys and comments, field observations, number of permits issues.	Annually	L/M	No. of permits, survey results	District Rangers Timber Staff Officer	$2,000	Estimated demand exceeds supply by more than 10%
MINERALS Mineral Development and Rehabilitation	Determine if the Standards and Guidelines are being implemented correctly. Evaluate the effectiveness of Standards and Guidelines in meeting goals.	Review and evaluation of 10% of current projects each year.	3 Years	M/M	Subjective	Minerals Staff Officer District Ranger	$1,000	Selected projects judged to have unacceptable deviation from stated objectives, or projects not in compliance with standards.
MINERALS Accessibility to Claim and Lease Sites	Determine if access to mineral and energy exploration and development meets Forest Plan objectives and proponent needs.	Review EA's, project and Operating Plans. Field observations.	3 Years	M/M	Acres	Minerals Staff Officer	$1,000	Reduction in lands open to mineral activities is > 2%
TRANSPORTA-TION Forest Road System	Transportation system meeting established Forest Plan objectives	Review and inspection to determine total Forest road miles, roads open to passenger car use (miles) and roads suitable for high clearance vehicles (miles).	Annually	H/H	Miles	Engineering Staff Officer	$1,000	Any variance from existing standards and guidelines.
TRANSPORTA-TION Open Road	Determine if management area direction and Motorized Access	Compare actual densities with projected density and objectives. Conducting area	Annually As projects	H/H	Miles of open road per square mile	Engineering Staff Officer District Rangers	$150	Any open roads causing a failure in meeting HEI and recreation objectives.

MONITORING ELEMENT	ISSUES/ACTIONS/ EFFECTS TO BE MONITORED	SUGGESTED MONITORING METHODS	REPORTING FREQUENCY	PRECISION/ RELIABILITY	UNIT(S) OF MEASURE	MONITORING & EVALUATION RESPONSIBILITY	EST. ANNL COST (1982 $)	THRESHOLD OF VARIABILITY (For action see Figure 5-1)
Density	Management Plan direction is being met (management objectives).	analysis on subwatershed basis.	identify needs					
TRANSPORTA-TION Trail System	Trail system meeting user needs and projected demands. Meeting management plans, development, maintenance, and objectives of the trail system. Changes in the system due to projects.	Trails Inventory (RIM-TRIS), condition surveys, RIM-trail use data, activity and onsite reviews, review timber sale and other activity schedule, review trail management plans, review capital improvement project data, management attainment reports, user surveys.	Annually Summary every 5 years	H/H	Trail miles/ established/ maintained or changes	District Ranger Recreation Staff Officer	$1,000	< 80% managed at standard service level. < 80% of trail construction/reconstruction target accomplishment. 10% of trails on the system lost to resource development activities.
CULTURAL RESOURCE Protection of Sites	Determine if cultural resource properties (unevaluated or eligible for inclusion to the National Register of Historic Places) are being adequately protected.	Annually visit all unevaluated or eligible cultural resources in active project areas and those subject to natural or human related damage. Monitor all reports of condition of eligible properties and measures taken to repair damage.	Annually	H/H	Sites	Recreation Staff Officer	$2,000	No acceptable variability. Issue is tied to Federal law and regulation.
SPECIAL INTEREST AREAS – BOTANICAL	Effect of activities on sensitive and unique plan populations and special landforms. Determine if management standards are being met.	Conduct annual examinations of Special Interest Areas.	5 years	M/M	Areas	District Ranger Sensitive Species Coordinator Resource Staff Wildlife Biologist Range Specialist	$2,000	Any population or landform compromised as a result of Forest Service management activities or public use, any delays in developing management plans for individual areas.
RESEARCH NATURAL AREAS	Effects of management activities on integrity of RNA's (ecosystems).	Onsite examination of Research Natural Areas	5 Years	M/M	Areas	District Ranger Recreation Staff Officer	$2,000	Any deviation from RNA management objectives and intent.
PROTECTION Fire	Determine effectiveness of prevention, detection, suppression, and fuels management program in meeting NFMA Standards.	Review individual fire reports and annual fire management reports, keeping updated with current and recent fire reports and trends.	Annually	H/H	No. of fires; dollars ($/acre protected) Acres Burned	District Rangers Fire Staff Officer	$1,500	+ 25% increase in most efficient level (MEL) in any year or > 10% increase in MEL of 5-year average. 20% departure from the Fire Management Action Plan.
PROTECTION Fire Effects	Determine ecological effects of prescribed fire on project areas.	Sample one project/district/ year, before/after burn. On-site measurements of effect being monitored. Use photographs; involve research PNW.	Annually	H/H	Ecological effect	District Ranger & Staff Officers Forest Staff Officers	$500/project	Prescriptions not being met by 20% or more of areas.

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PROTECTION Air Quality	Projects meeting smoke management plans and management standards and guidelines.	Data collection on all prescribed burns: Ton/ac by size classes, fuel bed depth and amount of duff, weather observations, post burn survey use of consume program, ER Plan and state reporting forms.	Annually	H/M	Acres burned and particulates produced	District Ranger Fire Staff Officer	$3,200	Deviations from compliance with state smoke management plans and smoke management measures used to reduce emissions from prescribed burning.
PROTECTION Insect and Disease Control	Meet NFMA requirements for insect and disease monitoring.	Annual aerial survey; pheromone plots as recommended by entomologists; observations by silviculturists and area and Regional forest pest specialists.	Annually	L-M/M-H	Acres	RO Forest Pest Management, District Rangers Silviculturists Area Forest Pest Specialists Regional Forest Pest Specialists	$1,650	Evidence of insect or disease buildups at or above epidemic levels. (Note: As recommended by forest pest specialists given the agent's intensity and magnitude.)
ECONOMICS Forest Budgets	Assure that annual budgets necessary to implement the Forest Plan are being provided.	Review budgets and programs of work in relationship to the Forest Plan levels. Compare actual budget in preceding 3 years with budget needed for Plan implementation.	Annually	H/H	Dollars	Administrative Officer, Budget and Finance Officer, Planning Staff Officer	$3,000	Budget more or less than 20% from Forest Plan level. Budget ± 20% of 3-year average Forest budget.
ECONOMICS Costs and Values of Forest Plan Implementation	Effects of changes in cost and values used in the Forest Plan.	Review project plans (2400-17) reports, PAMARS, Forest attainment reports. Determine average annual costs and values for all major resource activities and outputs.	Annually	H/M	Dollars	Planning Staff Officer	$500	- 20% difference between actual expenditures and those projected in the Plan. – 20% difference between actual resource values and those projected in the Plan.
ADMINISTRA-TIVE NEPA NFMA	Project compliance with NFMA	Review all decisions for NEPA adequacy and tiering to and consistency with the Forest Plan.	Annually	M/M	Resource decisions	District Ranger Forest NEPA Coordinator, Planning Staff Officer	$70,000	Failure to ues appropriate procedures (including documentation) or to meet Plan requirements for implementation (100% of projects must meet these requirements).
COMMUNITY EFFECTS Changes in Local Income Levels	Determine if local income levels are changing.	U.S. Census, state publications, county, and local agency reports.	Annually	H/H	Dollars	Forest Planning Staff Officer	$500	± 15% in 3 years
COMMUNITY EFFECTS	Determine if local population is changing.	U.S. Census, state publications, county, and	Annually	H/H	People	Forest Planning Staff Officer	$500	± 15% in 3 years

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Changes in Local Employment Populations		local agency reports.						
COMMUNITY EFFECTS Changes in Local Employment Patterns	Determine if local employment pattern is changing.	U.S. Census, state publications, county, and local agency reports.	Annually	H/H	People	Forest Planning Staff Officer	$500	± 15% in 3 years.
COMMUNITY EFFECTS Changes in Payments to Counties	Determine if there are changes in payments made by Forest Service to local counties.	Review payments to counties reports.	Annually	H/H	Dollars	Forest Planning Staff Officer	$100	Failure to meet Plan levels.
COMMUNITY EFFECTS Changes in Life Styles, Attitudes, Beliefs, and Values	Determine if local life styles, attitudes, beliefs, or values are changing.	Interviews with key publics and opinion leaders in communities plus observations by Forest personnel.	Annually	H/M	Various	Forest Planning Staff Officer	$500	Establishment of a trend toward FS – community conflicts or identification of problems.
COMMUNITY EFFECTS Changes in Forest Contributions to Forest Products Ind.	Determine if changes are occurring in levels of Forest contributions to local Forest products industry.	Track flow of raw materials to mills.	Annually	H/H	MMCF per year; % industry distribution	Timber Staff Officer	$200	Failure to meet plan objectives.

AMENDMENT AND REVISION

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 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, the 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 such as range (grazing) allotment management planning occurs at the project-level planning stage.

The Forest Supervisor may amend the Forest Plan. Based on an analysis of the Objectives, standards, and other contents of the Plan, the Forest Supervisor shall determine if a proposed amendment would result in a significant change. If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a forest plan If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures. Figure 5-1 is a flow diagram that shows how these changes can occur.

The Forest Plan shall ordinarily be revised on a 10-year cycle or at least every 15 years. It may also be revised whenever the Forest Supervisor determines that conditions or demands in the area covered by the Plan have changed significantly or when changes in Resource Planning Act policies, goals, or objectives would have a significant effect on Forest level programs. In the monitoring and evaluation process, the Interdisciplinary Team may recommend a revision of the Forest Plan at any time. Revisions are not effective until considered and approved in accordance with the requirements for the development and approval of the Forest Plan. The Forest Supervisor shall review the conditions on the land covered by the Plan at least every 5 years to determine if conditions or demands of the public have changed significantly.