

## **Chapter V**

# **Implementation, Monitoring, Evaluation, Amendments and Revisions**



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# **Implementation, Monitoring, Evaluation, Amendments and Revisions**

Chapter V describes how the Forest Plan will be implemented, how it will be monitored and evaluated to determine progress in meeting Plan direction, and how it will be kept current as the result of changing conditions or other findings.

# Implementation

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Introduction Implementation is the on-the-ground application of management practices and standards/guidelines to move toward the management prescription desired future condition.

Effective implementation of the goals and objectives in this Forest Plan requires the continued interdisciplinary integrated resource land management planning process begun during Forest-level planning, continuing down through project-level planning. This process required recognizing significant Forestwide problems that affected the Forest as a unit. To achieve the objectives of the Forest Plan, this same approach will be carried on through implementation focusing more on local interests and opportunities. This is achieved through an integrated resource management (IRM) approach, ensuring interdisciplinary teamwork and public involvement throughout the process. The major steps of the IRM approach are:

1. Selecting land areas that best provide opportunities for accomplishing the Forest Plan management direction.
2. Analyzing the situation and identifying multiresource projects that ensure an integrated approach to achieving the desired future condition.
3. Prioritizing, scheduling, and budgeting the multiresource projects that best meet the Forest Plan management direction.
4. Designing the projects to accommodate the integrated needs for all resources and values.
5. Completing the multiresource projects as designed.
6. Protecting and managing the resources and providing public health and safety.

A detailed description of the Integrated Resource Management approach is included in the USDA Forest Service Eastern Region publication, "Working Together for Multiple Use-IRM."

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Planning Levels Three levels of planning are required to carry out the integrated resource management goals and objectives for the Forest. They are:

- Forest-level planning.
- Opportunity area-level planning.
- Project-level planning.

The scope of decisions to be made, the context within which decisions are made, and the detail of information needed upon which to base decisions varies from one level of planning to the next.

However, these levels are not separate and distinct. They are linked in terms by the goals, objectives, and direction from one level to the next. For example, planning the future of a management area will build upon the direction specified for it as a result of Forest-level planning. In turn, project-level planning will build upon the direction developed during opportunity area planning. All of this planning is done under the framework of the Forest Plan.

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Planning Level  
Products

The products of this three-level planning process are:

Forest Plan - This plan sets direction across the Forest on the most efficient use of resources to address Forestwide problems. The Forest-level planning process designated management areas and assigned both long- and short-term goals and objectives for each. These goals and objectives, provided as direction, help ensure that each management area will make an appropriate contribution to the overall goals and objectives of the Forest Plan.

Implementation Schedule - An implementation schedule for all resource projects and activities will be developed and maintained. (See Forest Plan Appendix E for a partial listing). The implementation schedule is a formulation of site-specific projects and activities that will carry out the Forest Plan direction. The projects are coordinated management practices developed in an interdisciplinary manner. The schedule will include all proposed projects including names, locations, and dates of execution. The Forest Supervisor is responsible for maintaining and revising the implementation schedule, as appropriate. At least annually, the public will be notified of changes to the implementation schedule.

Project Plans - These are site-specific project plans, developed through project-level planning. They include direction on design and layout. These plans are firm projects with completed environmental analyses, ready to be scheduled into the annual program of work and executed on the ground.

During project planning, projects will be designed reflecting site-specific public interest. Specifics of each project are designed and laid out, treatments scheduled, and costs and benefits estimated.

Project plans will be completed at least three years prior to implementation of the project and be of sufficient detail to allow for inclusion into the program budgeting process and implementation of the project on the ground.

The implementation schedule of proposed projects and the associated management practices schedule will be used in building multiyear budget proposals.

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Budget  
Proposals

The budget proposal process complements the Forest planning process, providing a means of requesting and distributing funds necessary to carry out planned management direction.

Annual program budget proposals will be developed to identify and plan the needed expenditures. The final approved budget as appropriated by Congress will determine the annual program of work that will be carried out.

The Forest Supervisor may adjust the implementation schedule to reflect differences between the annual proposed budget and appropriated funds. Such schedule changes are considered nonsignificant amendments to the Plan unless they significantly alter the Forest Plan goals and objectives.

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Environmental  
Analysis

The decision documented in the Record of Decision and the direction included in this Forest Plan narrow the scope of future environmental analyses. The Plan direction and the Final Environmental Impact Statement information will be used through "tiering." Tiering means that reference will be made to information in the Forest Plan, the Final EIS and the planning records, rather than repeating it in project-level environmental documents. This is done in order to avoid repetition.

An environmental analysis will be completed for each project during Step 2 of the IRM approach. The analysis will focus on site-specific issues, alternatives and environmental consequences unique to the projects and activities.

The analysis may be documented in an environmental assessment or an environmental impact statement, depending on the significance of effects which may be caused by the project. Many projects may be categorically excluded from documentation if their environmental consequences are found to be insignificant. Generally, this means (1) the management area prescription and accompanying standards and guidelines can be complied with, (2) little or no site-specific environmental effects are expected beyond those identified and documented in the Forest Plan/Final EIS, and (3) the decision-maker is reasonably certain based on scoping of the project that the project will respond positively to Forestwide and local issues, concerns, and opportunities.

The public will be involved in the future decisions that implement the Forest Plan direction. People who have in writing indicated interest in management activities will be notified of the decisions.

Compliance With  
the Forest Plan

After approval of the Plan, and as soon as practical, the Forest Supervisor will ensure that all existing projects, outstanding and future permits, contracts, cooperative agreements, and other instruments for occupancy and use of affected lands, subject to valid existing rights, are consistent with the Plan.

## Management Changes

Forest Plan implementation will involve some basic changes in the way the Forest currently does business. Although many of these changes have been phased in over the past few years, they now become essential to implement the Forest Plan and result in more efficient management of the Forest.

Some of the primary changes include the following:

- Integrated Resource Management (IRM) planning processes will replace functional planning processes.
- Interdisciplinary planning teams will be utilized beginning early and continuously throughout the IRM process.
- Interdisciplinary teams will focus on the formulation of a set of common goals and objectives for projects, or areas, consistent with Forest Plan direction.
- Planning direction will flow from the Forest Plan down to project level plans incorporating local interests and opportunities.
- The level of efficiency that resource managers can achieve will improve because they will be sharing common goals at all levels of planning.

In summary, implementation of the Forest Plan represents some major changes, including the types of data and information needed and the planning products required. The overall workload will not be significantly increased. The linkage between Forestwide goals and objectives and project design will be much more clearly understood.

## Monitoring and Evaluation

The purpose of monitoring and evaluation is to determine progress in meeting Forest Plan direction. Monitoring and evaluation are separate, sequential activities that provide information to determine whether Forest programs are meeting Plan direction. This direction includes goals and objectives, management prescriptions, and standards and guidelines. It is through this process that the quality of implementation is assessed and any needed changes in the Forest Plan direction are determined.

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### Monitoring

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Monitoring is done to observe or record the results of actions. This consists of collecting information from selected sources on a sample basis. Information is used to determine:

- If Forest Plan goals and objectives are being achieved,
- If management area prescriptions are applied as directed,
- If the results of applying prescriptions address the management problems, issues, concerns, and opportunities,
- If significant effects are occurring as predicted, and
- If costs of implementing the Forest Plan are as predicted.

The role of management area prescriptions is key in monitoring. All the results of natural resource management occur through the prescriptions as they are applied.

Two considerations determine monitoring requirements. They are:

- Monitoring needs required by the National Forest Management Act, and
- Additional considerations found to be significant and linked to the resolution of specific public issues, management concerns, resource development opportunities, and the corresponding environmental effects.

Tables 5.1 and 5.2 display the monitoring requirements for the Ottawa National Forest.

Monitoring will be done on a sample basis. The frequency, precision, and reliability are based on the relative importance and identified needs. A full spectrum of data collection techniques will be used, including:

- Site-specific observations,
- Field assistance trips,
- General field observations,
- Management attainment reporting system,
- Formal management reviews on a scheduled basis, and
- Discussions with other agencies and general public users.

The specific monitoring action program will be included as part of the Forest Annual Program of Work, which includes the details on the schedule of monitoring actions, specific locations, costs, and responsibilities.

Table 5.1  
Ottawa National Forest Monitoring Requirements

Specific Management Problems and/or ICOs	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
<u>Transportation (Management Problem 1)</u>					
Local road densities and mix of standards	Determine if road densities and standards are being applied in with Forest Plan direction.	Transportation Vegetation Wildlife Recreation Soil Water Visual	Miles/square mile/management area and mix (%) of road standards in the management area ROS setting requirements Cost effectiveness	Annual	Moderate/Moderate
<u>Wildlife (Management Problem 2)</u>					
Coordination with Michigan DNR	Verify if coordination requirements are being followed according to Forest Plan direction.	Wildlife Fisheries Vegetation Recreation	Projects	Summer and Winter	High/High
<u>Wildlife and Vegetation Management (Management Problems 2 and 4)</u>					
Managed aspen	Verify if aspen and northern red oak are being regenerated in identified wild-life opportunity areas.	Vegetation Wildlife Transportation Recreation Visual	Location Acres Visual quality objectives	5 Years	High/High
Managed and unmanaged thermal cover	Verify if thermal cover is being maintained and/or regenerated in identified wild-life opportunity areas (includes hemlock and northern white cedar.	Vegetation Wildlife	Location Acres	5 Years	High/High

Table 5.1 (continued)

Specific Management Problems and/or ICOs	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
<u>Wildlife and Vegetation Management (Management Problems 2 and 4) (continued)</u>					
Managed old growth	Verify if old growth stands are being designated at rate and location that will permit achievement of the old growth and that the quality of old growth stands meets the guides.	Wildlife	Location (type) Acres Wildlife objectives	Annual	High/High
<u>Landownership (Management Problem 3)</u>					
Land adjustment program	Determine if lands exchanged are being done so in accordance with Forest Plan direction.	Landownership Property boundaries Transportation Recreation Wildlife Cultural resources	Acres Location	Annual	High/High
<u>Vegetation Management (Management Problem 4)</u>					
Use of chemicals	Verify that chemicals are being used and applied according to Forest Plan direction.	Vegetation Wildlife Recreation Visual quality Soil Water Landownership	Acres Location Cost effectiveness	Annual	High/High
Uneven-aged versus even-aged management of northern hardwoods	Determine if proper silvicultural system is being applied according to Forest Plan direction.	Vegetation Wildlife ECS Soil Water Visual Recreation Transportation	Location Acres Visual quality objectives	5 Years	High/High

Table 5.2  
NFMA Monitoring Requirements

National Forest Management Act (NFMA) Requirement	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
<u>NFMA Regulations (Regs.) 219.12(k)(1)</u>					
A quantitative estimate of performance-comparing outputs/services with those projected in Forest Plan.	Compare accomplishments with outputs.	Various	Various as shown in Management Attainment Report System (MARS)	Annual	High/High
<u>NFMA Regs. 219.12(k)(2)</u>					
Document measured prescriptions/effects, including significant changes in productivity of the land. 4/	Determine effects of applying Forest Plan management area prescriptions, standards, and guidelines	Plan Standards, guidelines, prescriptions, and practices which affect productivity of the land.	Soil and water impacts	Constantly	High/High
<u>NFMA Regs. 219.12(k)(3)</u>					
Document cost of actual management practices in relationship to estimated costs.	Verification of unit costs used in Plan. Build data for Plan revision.	Unit costs of major management practices.	Dollars	Annual	High/High
<u>NFMA Regs. 219.12(k)(4)</u>					
Evaluate how well management prescriptions, practices, standards, and guidelines have been applied on the ground.	Determine if Forest Plan management area prescriptions, practices, standards and guidelines are correctly being applied and adhered to.	Various	Various	Constantly	High/High

Table 5.2 (continued)

National Forest Management Act (NFMA) Requirement	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
<u>NFMA Regs. 219.12(k)(5)</u>					
Lands are adequately restocked as specified in the Forest Plan.	Ensure lands adequately stocked within 5 years.	Regeneration (natural and artificial)	Acres by species	First and third year after reforestation	High/High
Lands identified as not suited for timber production are examined at least every 10 years, and if suited, are returned to timber production.	Determine availability of unsuitable lands.	Unsuitable lands	Acres	Not longer than every 10 years	Moderate/Moderate
Destructive insects/disease does not increase to potentially damaging levels.	Early determination of incipient outbreaks	Surveillance report of insect & disease presence	No. of forms 3400-1	Annual	Moderate/Moderate
	Determine extent of pest effects	Determined area & location affected by major insect & disease-detection survey	Acres and maps	Varies with presence of pests	Moderate/Moderate
	Determine need for pest suppression	Economic, biological, environmental evaluation	Reports	Variable, assessment of pest and land use	High/High
	Determine if logging practices discourage pest outbreaks	Field inspection of cutting areas	Reports of logging damage to residuals	During logging activities	High/Moderate
	Determine if prescriptions follow guidelines	Management activity review	Reports	Variable	High/Moderate
	Determine adequacy of pesticide use management	Activity review	Reports	Annual	High/High

Table 5.2 (continued)

National Forest Management Act (NFMA) Requirements	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
Determine maximum size limits for harvest areas as specified in management prescriptions, standards, and guidelines.  <u>NFMA Regs. 219.7(f)</u>	Determine if standards and guidelines are achieving the desired results.	Timber Wildlife Visual quality Recreation	Acres	Not longer than every 5 years	Moderate/Moderate
Effects of National Forest management on adjacent lands and effects upon National Forest lands by other government agencies.  <u>NFMA Regs. 219.28</u>	Identify emerging issues, concerns, and opportunities (including mutual problems resulting from agency coordination).	National Forest policies	Varies	Annual	Moderate/Moderate
Identify research needs to support or improve National Forest management.  <u>NFMA Regs. 219.19</u>	Determine research implementation progress and opportunities. Revise needs and priorities for research.	Research needs identified in Plan  <u>Management Indicator Species (MIS)</u>	Varies	Varies	Moderate/Moderate
Monitor population trends of the management indicator species and relationships to habitat changes determined in cooperation with Michigan Department of Natural Resources.	Determine how much suitable habitat is available.  Determine changes in populations resulting from management.	White-tailed deer <sup>1/</sup>  Black bear  Ruffed grouse <sup>1/</sup>	(1), (2), (3)  (2)  (1), (2)	Five year  Five year  Five year	Low/Low  Moderate/Moderate  Low/Moderate

Table 5.2 (continued)

National Forest Management Act (NFMA) Requirements	Purpose of Monitoring	Activity Effect Practice Output	Unit of Measure	Frequency of Measure	Expected Precision/Reliability
<u>NFMA Regs., 219.19 (continued)</u>		<u>MIS</u>	<u>Monitoring Type</u>		
		American bittern	(1),(3)	Five year	Low/Low
		Loon	(1) (3)	Annual	High/High
		Osprey	(3)	Annual	Moderate/High
		Goshawk	(1), (2), (3)	Five year	Low/Low
		Barred owl	(1), (3)	Five year	Moderate/Moderate
		Blackburnian warbler	(1), (2), (3)	Five year	Low/Low
		Brook trout	(2), (3)	Five year	Moderate/Moderate
		Smallmouth bass	(3)	Five year	Moderate/Moderate
		Northern pike	(3)	Five year	Moderate/Moderate
Monitor federally listed endangered species to protect, maintain, and/or enhance principle habitat(s) to achieve recovery objectives.	Determine changes in populations resulting from management.	Bald eagle 2/	(1), (3)	Annual	High/High
		Gray wolf	(1), (2)	Annual	Low/Low
		Peregrine falcon	(2)	As necessary to support species recovery plan	

1/ Relates to Forest wildlife management problem.

2/ Bald eagle is also a management indicator species on the Ottawa National Forest.

3/ Three Types of Monitoring:

- (1) Population trend expected from changes in availability of suitable habitat. Sampling involves about 5% of Forest per year through integrated resource surveys including the Timber Management Information System.
- (2) Population trends based upon Michigan DNR or United States Fish & Wildlife Service (USFWS) harvest, hunter, trapper, fisherman, and/or nonstatistical observations.
- (3) Preplanned, standardized field surveys, and counts of animals or their sign by Forest Service, Michigan DNR, USFWS and others.

4/ Focus on relationship to Forest Management Problems and ICOs.

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Evaluation

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Evaluation determines how well actual results are meeting Forest Plan direction. Information obtained through monitoring is analyzed with respect to Forest Plan implementation.

Results from various monitoring techniques provide input for the evaluation task. Figure 5.1 shows the organizational responsibilities in monitoring and evaluating the Forest Plan. Figure 5.2 displays recommendations that may occur, based on findings during the monitoring and evaluation process.

A review and evaluation of monitoring results will be conducted by the Forest Supervisor on an annual basis. The review and evaluation will focus on the monitoring requirements in Tables 5.1 and 5.2, using input from the various monitoring techniques described earlier. Based on this evaluation, the Forest interdisciplinary team will make recommendations to the Forest Supervisor on proposed amendments, revisions, or changes in management direction to the Forest Plan. The Forest Supervisor's decisions resulting from monitoring, review, and analysis will be documented in an annual evaluation report and maintained for future use in amending or revising the Forest Plan.

During revision of the Forest Plan, normally from 10 to 15 years after the Plan is approved, an overall evaluation of the annual evaluation reports will be used as one measure to analyze the management situation and identify a need for change. This analysis will be submitted to the Regional Forester for review prior to revision of the Plan. The same procedure will be used for significant amendments to the Plan that may require the filing of an EIS.

Management  
Review  
System

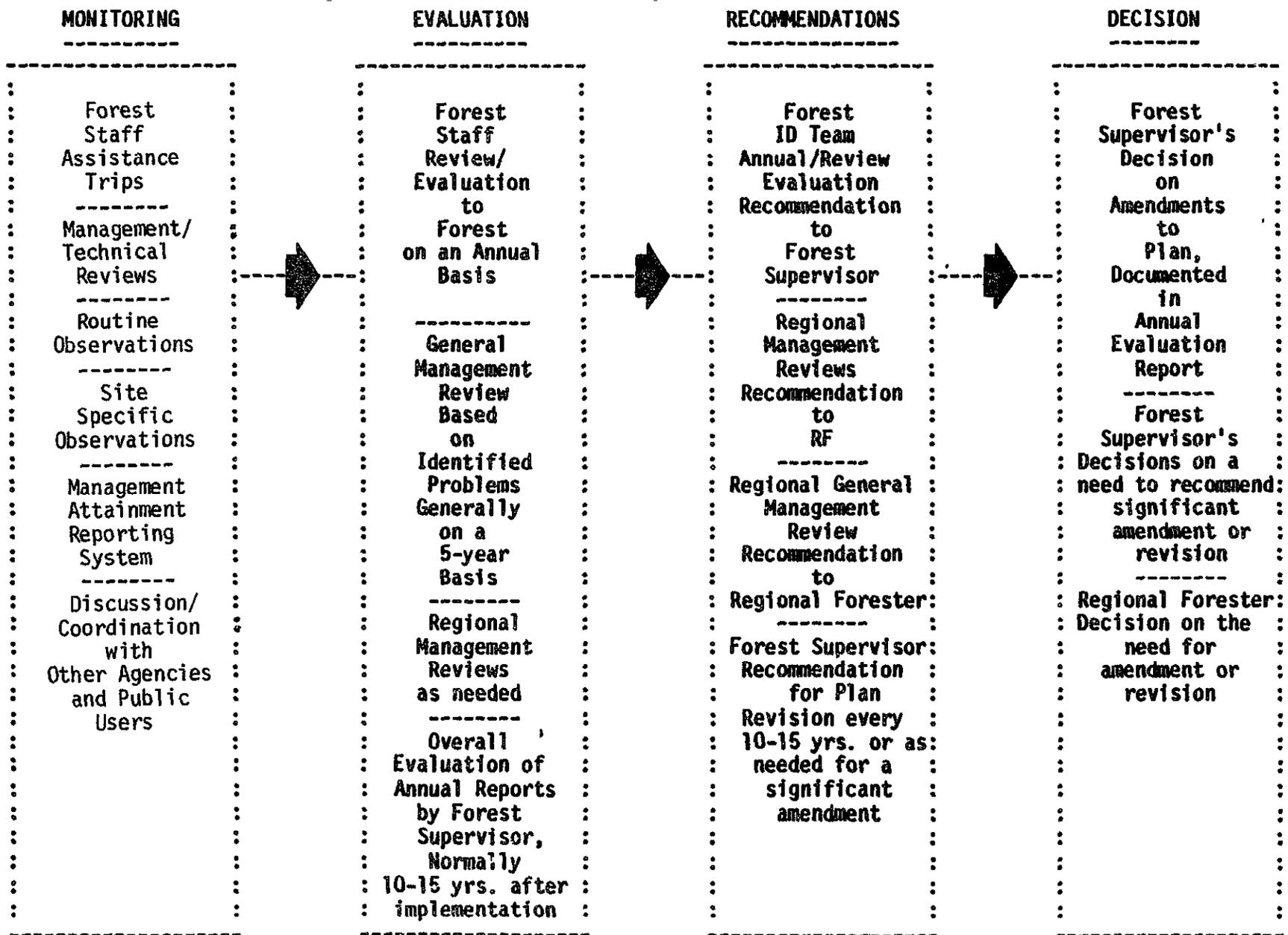
The management review system (Forest Service Manual 1410) is an important part of the monitoring and evaluation process. Management reviews are performed periodically by the Forest Supervisor and Regional Forester, focusing on information found during monitoring and evaluation.

Normally every five years, a General Management Review will be conducted by the Regional Forester. This review will evaluate the results of the Forest's implementation, monitoring, and evaluation efforts and will make recommendations on needed improvements.

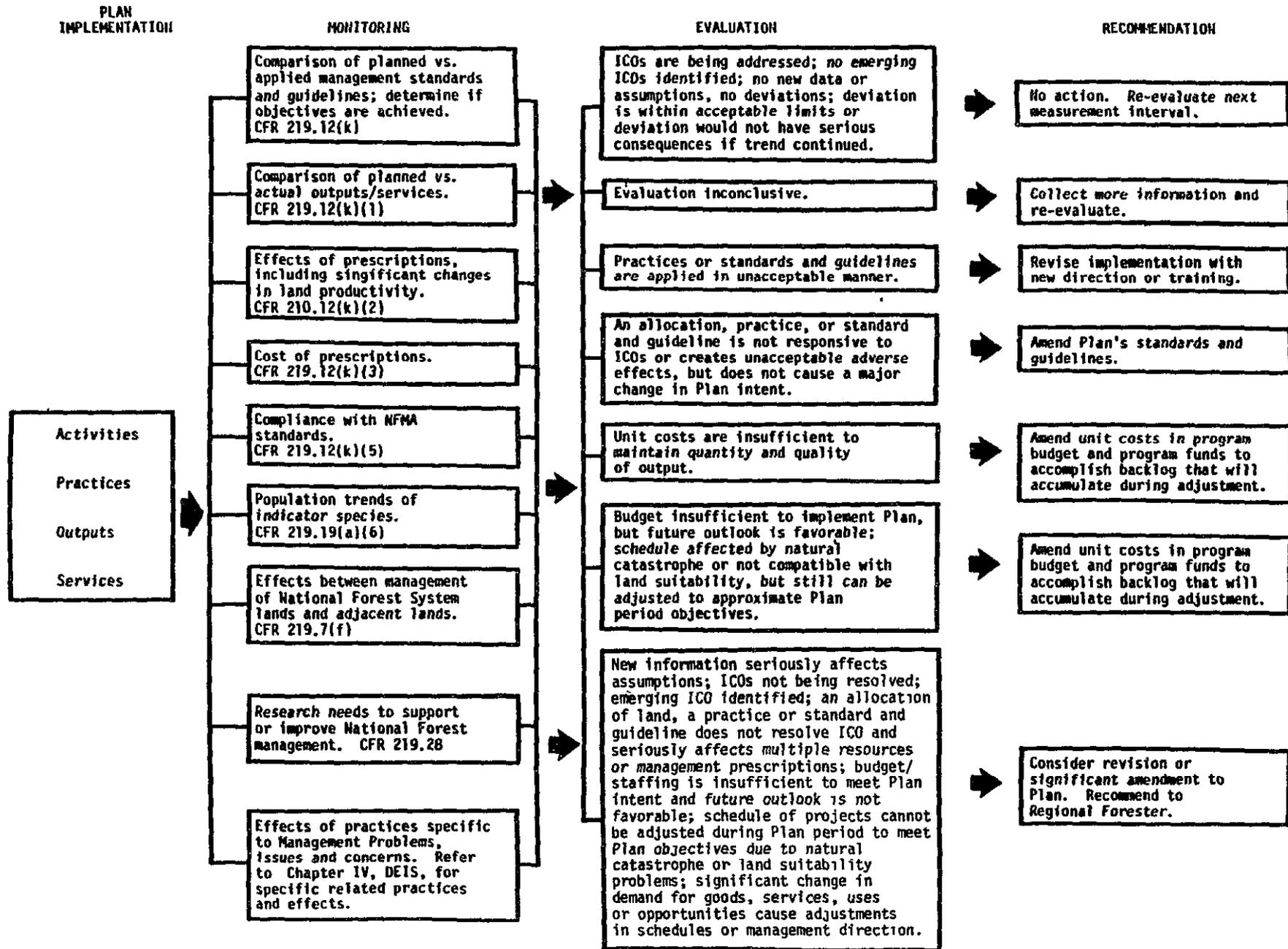
**FIGURE 5.1**

**Steps in Monitoring/Evaluation/Updating of Forest Plan**

Implementation, Monitoring, Evaluation, Amendments & Revisions V-15



**FIGURE 5.2**  
**Monitoring and Evaluation Process**



## Amendments and Revisions

The Forest Plan will be kept valid and current through the use of amendments and revisions. The guidance for making these changes is 36 CFR 219.10(e)(f) and (g) and Forest Service Manual 1922.

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### Plan Amendments

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The need to amend the Forest Plan may come from several sources, such as recommendations of the interdisciplinary team based on monitoring and evaluation, changes in implementation schedules based on actual funding received, or changes in conditions.

The Forest Supervisor will determine whether proposed changes in the Forest Plan are "significant" or "nonsignificant." This determination will be based on an analysis of the goals, objectives, standards, guidelines, and other content of the Forest Plan. The determination of "significant" or "nonsignificant" will be documented. Appropriate public notification will be made prior to implementing the changes. The determination of the significance or nonsignificance of an amendment is an integral part of the decision-making process. As such it is appealable under the National Forest System appeal procedures as described in 36 CFR 211.18.

If the change resulting from the proposed amendment is determined to be significant, the Forest Supervisor will follow the same procedure as that required for development and approval of a Forest Plan. These changes will require approval by the Regional Forester.

If the proposed change is determined to be nonsignificant, the Forest Supervisor may implement the amendment following appropriate public notification and completion of NEPA procedures.

An annual summary of Forest Plan amendments will be prepared and incorporated into the Plan as additions, and will be made available to interested parties. This is to ensure that the Plan will remain current. A summary of Forest Plan amendments will be submitted to the Regional Forester with the year-end attainment report information, which is due about October 20 each year.

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### Plan Revisions

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The National Forest Management Act requires revision of the Forest Plan at least every 15 years. However, the Plan may be revised sooner if physical conditions or demands on the land and resources have changed sufficiently to affect overall goals or uses for the entire Forest.

The Forest Supervisor will review the physical conditions and demands on the land, based on results of monitoring and evaluation. Any recommendations for Plan revision will be forwarded to the Regional Forester for approval. If a Plan revision is warranted, the Chief will approve the revision schedule.