

interest in accelerating the timber harvest schedule and to meet the objectives of vegetation treatment as cost effectively as possible, 35 MMBF will be offered in 1984, and 55 MMBF will be offered annually in 1985 through 1987. See Continental Lumber Company's comment, Planning Question 8, Comment 8, and Montrose City's and County Commissioner's Resolutions Numbers 17 and 18 of the agency comment letters, Chapter VI, Final EIS. A review of the local demand situation will be made prior to the end of 1987 to determine if local demand for timber has significantly changed. If local demand for timber changes significantly, this Plan will be reanalyzed as required by NFMA Regulations, 36 CFR 219.10(c). If local demand has not significantly changed, the remainder of the 350 MMBF planned for the decade will be offered in 1988 through 1993 at a rate of 25 MMBF annually. Any of the volume offered but not sold in the first 4 years will still be available for re-offer. See Final EIS, Chapter IV, TIMBER, and Plan, Chapter III, Table III-1.

--Permit uses that do not degrade water quality below Federal, State or local water quality standards.

--Increase water yields over the first ten years to achieve 10,898 acre feet more per year over the current situation. This will be accomplished through vegetation treatment. By the fifth decade water yield will increase to 19,410 acre feet per year, .7 percent over the current situation.

--Encourage environmentally sound energy and minerals development, coordinate mineral extraction with surface resource management, integrate mineral exploration and development within the National Forest System with the use and protection of other resource values, and emphasize oil, gas, geothermal, and mineral exploration and development outside wilderness areas.

--Improve cost effectiveness and efficiency in Forest Service road management. Coordinate transportation facilities to meet the needs of the Forest, provide a safe, efficient and environmentally sound transportation system, and implement an effective travel management program. The Plan schedules construction or reconstruction for 57 miles of arterial, 45 miles of collector, 216 miles of local road and 15 bridges in the first 10 years. Roads will be open, restricted, closed, or obliterated as determined by maintenance costs, resource management objectives, and user safety.

--Ensure that National Forest System land is accessible to meet Forest Service objectives and support management activities.

--Encourage using existing utility corridors before developing new corridors.

--Analyze 89,250 acres for possible jurisdictional land transfer to the BLM. The Forest has also tentatively identified 265,280 acres of BLM administered land for possible jurisdictional land transfer to the Forest.

--There are no Ranger District boundary changes proposed in the Plan.

--Protect significant cultural resources by avoidance and/or study. Cultural resource sensitivity areas will be determined by use of a predictive model. In areas of high sensitivity, cultural resources surveys will be conducted prior to ground disturbing activities.

--Meet or exceed minimum visual quality objectives established for the Forest.

### Environmental Quality

Each alternative could produce some short-term environmental consequences. These consequences would be within legal limits where limits exist. There will be some adverse effects that cannot be avoided.

Mitigation measures are incorporated into Forest Direction, Chapter III of the Plan to minimize environmental damage.

Management direction in Alternative 1 will maintain air quality within legal limits.

Soil erosion will be within defined acceptable tolerance limits. Natural long-term soil productivity will be maintained; management emphasis will be aimed at improving or restoring previously deteriorated soil conditions.

Water quality will meet or exceed water quality standards.

Plant and animal diversity will be enhanced. Vegetation treatment programs will be designed to increase plant diversity. Management requirements specified for the management indicator species will assure adequate wildlife habitat diversity. These will improve animal diversity.

### Economic Efficiency

The Plan is economically efficient providing for an estimated incremental Present Net Value (PNV) of 145.8 million dollars using a four percent discount rate. The following displays those alternatives which come closer to maximizing PNV [36 CFR 219.12(j)].

Alternative	Million Dollars
9	183.8
2	154.1
7	152.6
5	152.6
6	152.3
8	151.0
4	148.4

Benchmark 3, as discussed in Chapter II and Appendix C of the Final EIS, provides a general indication of cost efficient levels of resource production. Based on the Benchmark 3 analysis, the following resources would be produced at cost efficient level through implementation of the Plan: winter range carrying capacity, developed recreation, downhill skiing, and wilderness.

Those levels of resources which differ from the cost efficient levels established in Benchmark 3 are: timber, which is greater than the cost efficient level; livestock grazing, which is less than the cost efficient level; and dispersed recreation, which is above the cost efficient level.

The reason for these differences are to meet goals and objectives other than cost efficiency. These other goals and objectives do not contribute directly to PNV.

## Changes in Management Direction

The Forest planning process included a determination of the need to change management direction. This was accomplished by assessing the current situation, determining output production potentials, and reviewing the public issues and management concerns. Several possible changes in management direction were identified. These changes include:

- Increasing the emphasis on vegetation treatment where it will meet multiple-use objectives and goals of the Plan and meet the needs of the vegetation.
- Opening, closing or obliterating roads will be determined by by maintenance costs, resource management objectives, and user safety.
- Increasing developed recreation capacity.
- Increasing fisheries habitat.
- Meeting demand for firewood.
- Increasing water yield.

Alternative 1 incorporates these management changes. It programs intensive vegetation treatment designed to provide and maintain a healthy, vigorous forest environment capable of producing a range of outputs of goods and services and activities.

Alternative 1 increases developed recreation capacity from 744,000 RVDs to 1,012,000 RVDs annually, increases fisheries habitat, meets the demand for firewood, and increases water yield.

## VI. DECISION PROCESS

### A. ALTERNATIVES INCLUDING THE PROPOSED ACTION

The alternative formulation process is disclosed in the Final EIS page II-3. There were no significant changes between the Draft and Final EIS. Those changes that did occur are identified in the Final EIS Page I-14 through I-17.

Nine alternatives were considered in detail. These nine, including the proposed action, were formulated through application of different combinations of management area prescriptions. Each alternative considered in detail incorporates a common set of management standards and guidelines to ensure true "multiple-use" management as well as mitigation measures which protect environmental quality. Each alternative represents a technically and legally feasible system of management for the Forest. The alternatives address the planning questions derived from the scoping process, and take into consideration anticipated changes in demand for Forest resources.

A brief description of the nine alternatives considered in detail follows:

## Alternative 1 - Forest Plan

The Plan emphasizes intensive management for market output opportunities. This emphasis provides the opportunity to maintain or enhance the stability of industries needed to produce local and regional goods and services. Range, timber, and water exceed the current levels. Three hundred fifty million board feet of timber will be offered for sale during the period 1984 through 1993. To respond to local interest in accelerating the timber harvest schedule, 35 MMBF will be offered in 1984, and 55 MMBF will be offered annually in 1985 through 1987. A review of the local demand situation will be made prior to the end of 1987 to determine if local demand for timber has significantly changed. If local demand for timber changes significantly, the Plan will be reanalyzed as required by NFMA Regulation 36 CFR 219.10(f). If local demand has not significantly changed, the remainder of the 350 MMBF planned for the decade will be offered in 1988 through 1993 at a rate of 25 MMBF annually. Any of the volume offered but not sold in the first 4 years will be available for re-offer.

The alternative will meet 79 percent of total developed recreation demand at the end of the 50-year planning horizon. This allows the private sector to meet part of the demand for developed recreation. In this alternative 13,599 acres of Cannibal Plateau FPA are suitable; the remaining 18,391 acres of Cannibal Plateau FPA and all of Fossil Ridge WSA are unsuitable for inclusion in the National Wilderness Preservation System. Demand for dispersed recreation opportunities outside wilderness will be met. Trail management and reconstruction is emphasized. Trails, trailheads, and other improvements are constructed or reconstructed to help disperse recreationists. Vegetation treatment is planned for approximately 16,100 acres per year during the first ten years.

## Alternative 2 - (Current Program - No Action)

Alternative 2 projects current management modified by the minimum NFMA requirements and regional policy. This is the "no action" alternative required by the NEPA regulations. It responds to present program levels and provides a basis for comparison of other alternatives. The demand above existing capacity for developed recreation opportunities is not met. Current direction provides for dispersed recreation opportunities and wildlife habitat improvement. Cannibal Plateau FPA and Fossil Ridge WSA are suitable for inclusion in the National Wilderness Preservation System. Livestock grazing increases. Wood fiber production and vegetation treatment are used to meet other resource goals. Programmed timber sales offered equal 28 million board feet per year in the first ten years. Vegetation treatment would occur on approximately 14,200 acres per year during the alternative's first ten years. The current approved timber management plan annual yield on standard and special component land is 35 million board feet per year.

## Alternative 3 - (1980 RPA Program)

The RPA alternative emphasizes intensive management for market output opportunities. The Forest would meet its share of local, regional, and national demand for goods and services. The outputs are reflected in the 1980 RPA goals and objectives assigned to the Forest. The alternative would meet the increased demand for developed recreation over the planning horizon. Demand for dispersed recreation outside wilderness is met.

Cannibal Plateau FPA and Fossil Ridge WSA are unsuitable for inclusion in the National Wilderness Preservation System. Range, timber, and water exceed their current levels. Vegetation treatment would occur on approximately 16,500 acres per year during the first ten years.

#### Alternative 4 - (Non-Market Opportunities)

Alternative 4 emphasizes non-market opportunities. Market output levels are designed to complement non-market opportunities. The demand for developed recreation is met over the 50-year planning horizon. The demand for dispersed recreation opportunities outside wilderness is met. Trail management is emphasized. Trails, trailheads, and other improvements are constructed or reconstructed to help disperse recreationists. In this alternative 31,990 acres of Cannibal Plateau FPA and 47,400 acres of Fossil Ridge WSA are recommended suitable for inclusion in the National Wilderness Preservation System. The alternative schedules wildlife habitat improvement. Permitted livestock grazing and timber harvest outputs are decreased from current levels. Vegetation treatment would occur on approximately 12,800 acres per year during the first ten years.

#### Alternative 5 - (Market Opportunities)

Alternative 5 emphasizes intensive management for market output opportunities. Market outputs provide the opportunity to maintain or enhance the stability of industries needed to produce local and regional goods and services. Range, timber, and water exceed the current levels. The demand above existing capacity for developed recreation is not met. This allows the private sector to meet part of the demand for developed recreation opportunities. The alternative provides dispersed recreation opportunities and wildlife habitat improvement. Cannibal Plateau FPA and Fossil Ridge WSA are recommended unsuitable for inclusion in the National Wilderness Preservation System. Permitted livestock grazing increases by 9 percent. Programmed timber sales offered increase to 35 million board feet in the first ten years. Vegetation treatment would occur on approximately 16,100 acres per year during the first ten years.

#### Alternative 6

Alternative 6 emphasizes non-market outputs. Market output levels are designed to complement non-market opportunities. This alternative would meet 79 percent of the total developed recreation demand at the end of the 50-year planning horizon. This allows the private sector to meet part of the demand for developed recreation opportunities. The demand for dispersed recreation opportunities outside of wilderness is met. Trail management would be emphasized. Trails, trailheads, and other improvements are constructed or reconstructed to help disperse recreationists. In this alternative 13,599 acres of Cannibal Plateau FPA and 34,300 acres of Fossil Ridge WSA are recommended unsuitable for inclusion in the National Wilderness Preservation System. The alternative provides for wildlife habitat improvement. Permitted livestock grazing AUMs and timber harvest outputs are decreased from current levels. Vegetation treatment would occur on approximately 12,700 acres per year during the first ten years.

## Alternative 7

Alternative 7 emphasizes intensive management for market outputs. Market emphasis provides the opportunity to maintain the stability of industries needed to produce local and regional goods and services. Range, timber, and water exceed their current levels. The demand above existing capacity for developed recreation opportunities is not met. The alternative provides dispersed recreation opportunities and wildlife habitat improvement. In this alternative 31,990 acres of Cannibal Plateau FPA and 47,400 acres of Fossil Ridge WSA are suitable for inclusion in the National Wilderness Preservation System. Permitted livestock grazing increases by 9 percent. Programmed timber sales offered equals 30 million board feet in the first ten years. Vegetation treatment would occur on approximately 15,700 acres per year during the first ten years.

## Alternative 8

Alternative 8 is designed to increase water yield. This alternative emphasizes intensive management for market outputs. It emphasizes increasing water yield through vegetation treatment. Timber resources are managed intensively and silvicultural treatments are designed to increase water yield. Permitted livestock grazing would increase 5 percent. This alternative would meet 79.0 percent of the total developed recreation demand at the end of the 50-year planning horizon. This allows the private sector to meet part of the demand for developed recreation opportunities. The alternative provides dispersed recreation opportunities and wildlife habitat improvement. Trail management will not be emphasized. In this alternative 13,599 acres of Cannibal Plateau FPA are suitable for inclusion in the National Wilderness Preservation System; Fossil Ridge WSA is unsuitable. Vegetation treatment would occur on approximately 17,100 acres per year during the first ten years.

## Alternative 9 - (Reduced Budget)

Alternative 9 emphasizes management for market outputs under a 25 percent reduced budget when compared to fiscal year 1982. The alternative displays outputs, benefits, and costs associated with a reduced budget. Developed recreation capacity is reduced below 1981 levels. Demand for developed recreation is not met. This allows the private sector to meet part of the demand for developed recreation opportunities. The Alternative maintains dispersed recreation opportunities. Cannibal Plateau FPA and Fossil Ridge WSA are unsuitable for inclusion in the National Wilderness Preservation System. Permitted livestock grazing AUMs and timber harvest volume decrease from current levels. Vegetation treatment would occur on approximately 9,600 acres per year during the first ten years.

## B. ENVIRONMENTALLY PREFERABLE ALTERNATIVE

Every alternative considered in the Final EIS is technically feasible and capable of being implemented. Each alternative would have a different set of impacts on the environment.

Alternative 1 is the environmentally preferable alternative when the physical, biological, economic, and social factors are weighed in balance. Potential adverse physical and biological impacts will be controlled by the mitigation measures disclosed in the Final EIS, Chapter IV, "Mitigation

Summary of Environmental Consequences. These mitigation measures will ensure that when impacts occur they will be the minimum impact practical and will be within limits established by laws, regulations and policy where standards exist, and based upon best professional judgement where established standards do not exist.

### C. PUBLIC PARTICIPATION

The Forest Service has conducted an active public involvement program. Federal, State and local agencies have been informed and consulted throughout the planning effort. Forest users have had an opportunity to participate. See Chapter VI, Page VI-1 of the Final EIS.

A Notice of Intent to prepare an EIS for the Forest Plan was published in the Federal Register November 14, 1980.

The planning effort included 12 scoping meetings during September 1981, conducted in local communities and Denver. Open house meetings were conducted in November 1981, at the ranger district offices. These open houses were designed to give the public an opportunity to review preliminary alternatives, including land use allocations, output levels, and management direction.

The Forest Service has coordinated the Cannibal Plateau Further Planning Area Wilderness Suitability analysis with the Bureau of Land Management. This includes notification that on December 30, 1982, the Secretary of the Interior formally released Slumgullion Slide and Sparling Gulch-Friends Creek from further wilderness study and Interior management protection.

The Forest Service initiated the Office of Management and Budget Circular A-95 Clearing House review process twice during the planning effort. In August 1981, the Forest submitted to the State Clearinghouse the Analysis of the Management Situation for review and comment. The State Clearinghouse was contacted again on October 25, 1982. At the second contact the Clearinghouse received copies of the Draft EIS, Proposed Plan, and Draft Fossil Ridge Wilderness Study Report for review and comment.

The Draft EIS, Proposed Plan, and Draft Fossil Ridge Wilderness Study Report were filed with the Environmental Protection Agency October 25, 1982. The Notice of Availability was published in the Federal Register November 11, 1982. Other Federal Register notices included: Application of Coal Unsuitability Criteria, November 9, 1982, and Fossil Ridge Wilderness Study Hearing Notice, December 9, 1982. A conference was held for media representatives on November 8, 1982, at the Forest Supervisor's Office in Delta. The conference objective was to present a Forest planning overview for media use. Information was presented on legislative history, Draft EIS and Proposed Plan role and content, significant management changes, and how to participate during the public comment period.

Open house meetings were held at local Forest Offices and at the Regional Office in Denver. The open house objectives met were: Explain the role of Forest Planning, Proposed Plan content, management changes, and land use allocations to the public; answer questions; and explain how to comment on the Draft EIS. Open houses were conducted in Collbran, Delta, Grand Junction, Gunnison, Lake City, Lakewood, Montrose, Norwood, and Paonia, Colorado. A total of 151 persons registered at the open houses.

Two hearings were conducted dealing with wilderness suitability of Fossil Ridge Wilderness Study Area. The hearings were conducted in Gunnison and Denver, Colorado. A total of 173 people registered at the hearings; 73 made statements for the record.

A total of 324 comments were received from individuals, organizations, Federal, State, and local governments. All comments were documented and incorporated into the Forest Planning records.

Comments received on the Draft EIS and Proposed Plan, issues and concerns identified during the scoping process, and other comments have been considered in this Final EIS and used to identify the proposed action.

#### D. PLANNING RECORDS

Planning Actions are documents which contain the detailed information and decisions used in developing the Forest Plan and EIS as required in 36 CFR 219.5(b) through (k) (1979). Similar activities are required in the 1982 NFMA regulations 36 CFR 219.12.

All of the documentation chronicling the Forest Planning process is available for inspection during regular business hours at:

Forest Supervisor's Office  
Grand Mesa, Uncompahgre,  
and Gunnison National Forests  
2250 U. S. Highway 50  
Delta, Colorado, 81416  
303 - 874-7691

These records known as Planning Actions are incorporated by reference into the Final EIS and Plan.

#### VII. IMPLEMENTATION AND MONITORING

The Forest Plan will be monitored to verify that scheduled activities are implemented and the anticipated outputs are produced. The goals, objectives, general direction, and standards and guidelines will be evaluated regularly to assess their validity and accomplishment.

An annual monitoring program will be prepared as part of the Forest's annual work program. This program will include the details of the monitoring to be accomplished. Monitoring will be based on the approved work program and funds available. Specific locations, sampling intensity, person-days required, and costs will be identified in the annual monitoring program. Evaluation of the results of the site-specific monitoring program will be evaluated each year. The significance of the results will be analyzed and evaluated by the Forest Interdisciplinary Team and reviewed for action by the Management Team.

All practicable means to avoid or minimize environmental harm have been adopted. See Mitigation Summary of Environmental Consequences, Chapter IV, Final EIS. The monitoring program will be used to help ensure that mitigation measures are applied and whether the mitigation is effectively minimizing environmental damage.

The Grand Mesa, Uncompahgre and Gunnison National Forest's Plan will not be implemented sooner than 30 days after the Notice of Availability of the EIS, Proposed Plan, and Record of Decision appears in the Federal Register, except for the 90-day waiting period discussed later in this section. The time needed to bring all activities into compliance with the Forest Plan will vary depending on the type of project. Most operation and maintenance activities, projects in the first year of development, new special use proposals, and transfers of existing permits can be brought into compliance with the Plan the first year of implementation. Existing projects, as well as contractual obligations, will continue as planned. However, during the implementation, the following requirements, as a minimum and subject to valid existing rights will be met:

--The Forest Supervisor will assure that annual program proposals and projects are consistent with the Plan;

--Program budget proposals and objectives are consistent with management direction specified in the Plan; and

--Implementation is in compliance with the Regional Guide and 36 CFR 219.10(e) and 219.11(d).

All National Forest System uses proposed subsequent to this decision will be reviewed for consistency with the Forest Plan. As soon as practicable, subject to valid existing rights, the Forest Supervisor will ensure that all permits, contracts, and other instruments for occupancy and use are consistent with the Forest plan management direction [16 USC 1604(i) and 36 CFR 219.10(e)].

On the portion of Cannibal Plateau FPA identified unsuitable for wilderness in this decision, the Chairman of the Senate Energy and Natural Resources Committee and the Chairman of the House Interior and Insular Affairs Committee will be notified by letter of this recommendation. No Plan activities will take place on the area determined to be unsuitable until a 90 day period while Congress is in session has passed. The 90 day period begins on the date that EPA's Notice of Availability of the Final EIS, Record of Decision, and Plan appear in the Federal Register.

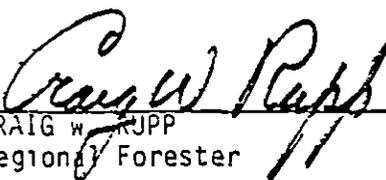
Until Congress acts, the recommended suitable portion of Cannibal Plateau FPA will be managed to maintain its existing wilderness character while still allowing existing uses. Livestock grazing and dispersed motorized recreation will continue and range structures can be maintained or constructed.

#### VIII. RIGHT TO ADMINISTRATIVE REVIEW

This decision is subject to appeal pursuant to 36 CFR 211.18 (Federal Register, Vol. 48, No. 63, March 31, 1983, pages 13420 to 13426). Notice of appeal must be in writing and submitted to:

Craig Rupp, Regional Forester  
Rocky Mountain Region  
USDA Forest Service  
11177 W. 8th Avenue  
Lakewood, Colorado 80225

Appeal notice must be submitted within 45 days from the date of this decision. A statement of reasons to support the appeal and any request for oral presentation must be filed within the 45 day period for filing a notice of appeal.

  
CRAIG W. RUPP  
Regional Forester

September 29, 1983  
Date



United States  
Department of  
Agriculture

Forest  
Service

R-2

Date: SEP 24 1984

Reply to: 1570 Appeals

Subject: Chief's Decision on NRDC Appeal

To: Forest Supervisor, Grand Mesa, Uncompahgre and Gunnison National  
Forests

Enclosed is a copy of the Chief's decision on the Natural Resource Defense Council's appeal of the Grand Mesa, Uncompahgre and Gunnison Environmental Impact Statement. In his decision, the Chief affirmed the Regional Forester's decision, but remanded the Plan and EIS for the following actions:

1. Document the process used to arrive at planned sales levels.
2. Supplement the plan and EIS with appropriate reference to the planning record for Stage 2 of the suitability analysis and note its reliability.

When item 1 is completed, you are to forward the additional information to this office for transmittal to the Chief.

The Secretary has elected to review the Chief's decision on this appeal. You should delay implementing the Chief's decision until the Secretary has completed his review.

*Staff*  
JAMES F. TORRENCE  
Regional Forester

Enclosure

cc: w/enclosure OGC

cc: w/o enclosure Natural Resources Defense Council (CERTIFIED MAIL)  
Montrose County Commissioners  
City of Montrose, Colorado  
City of Crested Butte, Colorado  
Louisiana Pacific Corporation  
Colorado Timber Industry Association  
Southwest Forest Industries  
National Forest Products Association  
Allied Forest Products  
Chief  
TFM&CFH



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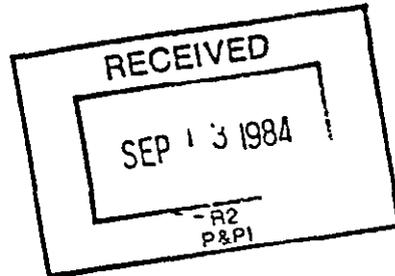


Reply to 1570  
(LMP)

Date SEP 10 1984

CERTIFIED RECEIPT REQUESTED

Messrs. Ronald J. Wilson and  
F. Kaid Benfield  
Natural Resources Defense Council  
1350 New York Avenue, N.W.  
Suite 300  
Washington, D.C. 20005



Dear Sirs:

Pursuant to 36 CFR 211.18, this letter is our decision on your clients' appeal of the Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests Plan (LRMP) and its accompanying Final Environmental Impact Statement (FEIS). Appellants are the Natural Resources Defense Council, Inc., the Wilderness Society, the Colorado Mountain Club, the Colorado Open Space Council, the National Audubon Society, the Audubon Society of Western Colorado, the Colorado Wildlife Federation, the Public Lands Institute, the Western Slope Energy Research Center and the High County Citizens Alliance. The intervenors are the National Forest Products Association, Louisiana-Pacific Corporation, Colorado Timber Industry Association, Southwest Forest Industries, the City of Montrose, the County of Montrose, the Town of Crested Butte, and Allied Forest Products.

On September 29, 1983, Craig W. Rupp, Regional Forester, Rocky Mountain Region, approved Alternative 1 in the FEIS as the Land and Resource Management Plan for the GMUG National Forests. Your clients requested the withdrawal of that decision, alleging both the FEIS and LRMP needed to be redrafted to correct deficiencies in the timber program which contradict the requirements of the National Forest Management Act (NFMA) (16 U.S.C. 1601-1614) and basic principles of economic and environmental management.

**BACKGROUND:**

The GMUG planners prepared the FEIS and LRMP under the authority of the Multiple Use-Sustained Yield Act (16 U.S.C. 528-531); the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the NFMA and the implementing regulations of NFMA, 36 CFR Part 219 (1979); and the National Environmental Policy Act of 1969 (42 U.S.C. 4321-4335) (NEPA) and its implementing regulations, 40 CFR Parts 1500-1508.

On October 29, 1982, a draft EIS and LRMP were published for review and comment by the public. The Regional Forester signed the Record of Decision for the FEIS and LRMP on September 29, 1983. On September 29, 1983, Messrs. Wilson and Benfield, on behalf of ten organizations, hereafter



referenced as appellants, submitted a notice of appeal and a request for an oral presentation and extension of time to submit their statement of reasons. Thereafter, under the Freedom of Information Act, Messrs. Wilson and Benfield requested extensive planning documentation. They submitted their statement of reasons on December 5, 1983. On December 28, 1983, Regional Forester Rupp was granted an extension of time in which to file the responsive statement. He submitted the responsive statement to appellants January 24, 1984. Appellants were granted an additional 10 days to reply to the responsive statement. On April 13, 1984, appellants made their oral presentation. A list of all major documents in the appeal record, in order of receipt, is attached to this decision.

#### ISSUES:

This appeal presents the following issues:

1. Is the plan an ambitious expansion of the timber program?
2. Does the plan's procedure for determining the suitability of land for timber management meet the requirements of NFMA?
3. Will the plan's timber program significantly harm the environment?
4. Do the plan and the process by which it was formulated violate NFMA, administrative law, and NEPA?

DISCUSSION OF ISSUE 1: Is the plan an ambitious expansion of the timber program?

First, it is important to note that allowable sale quantities in the plan are upper limits for the plan period, not actual proposals for timber sale offerings. The annual timber sale offerings depend on budget appropriations and market conditions. On the GMUG for example, the sales level allowed by previous plans was 58.44 MMBF in 1983 while the actual offering was 29.7 MMBF for that year.

The allowable sale quantity established by the plan is well below the estimated long-term sustained-yield capacity of the forest. In the first decade, the allowable sale quantity is 350 MMBF; by the fifth decade it rises to 411 MMBF. The long-term sustained-yield capability of the forest under the management described in the plan is 1049 MMBF in each decade. The allowable sale quantity for the first decade is 40 percent below the potential yield, which is the similar measure of allowable sale quantity in previous timber management plans.

The sale levels established by the plan seem consistent with the demand for timber that is expected to exist over the planning horizon. The FEIS documents this demand on pages II-13, II-84, II-92, and IV-56. It is noted that the first decade sales level on the Forest is less than the installed mill capacity in the market area, and there is evidence in the appeal record that private sector investments will increase milling capacity in the first decade.

Although the Region's response about timber demand is reasonable, the record does not contain sufficient detail to review the decision. The Regional Forester is to supplement the FEIS with further documentation of the market demand for timber during the planning horizon.

We find that the plan does not violate long-term sustained yield principles or decadal limits on harvest volume by announcing an intention to offer 55 MMBF per year for the years 1986-1988 (FEIS II-19). Although this quantity exceeds the average annual sale quantity of 35 MMBF, there are no plans to exceed the decadal limit of 350 MMBF. The sale offering schedule change was in response to public comments on the draft environmental impact statement (FEIS page VI-104, 278, 279, and 291) with the rationale documented in the FEIS (page II-13, II-14, II-19, II-23, III-91, IV-60, and VI-61). Such annual variations in the annual sale quantity are explicitly allowed by Section 13 of NFMA (16 USC 1611). --

CONCLUSION OF ISSUE 1: We conclude the data supporting the timber demand analysis is insufficiently set forth in the record. The Regional Forester is to provide further documentation on sales level determination. Then, he is to forward the additional information on this issue to the Chief's office for review.

DISCUSSION OF ISSUE 2: Does the plan's procedure for determining the suitability of land for timber production meet the requirements of NFMA? We will discuss this issue in two parts: (A) the plan's relationship to the regulation, 36 CFR 219.12, and (B) the relationship of the regulations to NFMA.

A. Does the plans procedure meet the requirement of the regulations?

To identify lands suitable for timber production, the forest followed the procedures in Section 219.12 of the planning regulations in effect in 1979. In 1982, the regulations were revised and this section was renumbered 219.14. At that point, the forest was not required by the regulations to conform to the new regulations since the draft had been released for public review. (36 CFR 219.29(b)(1)). All references here are to the 1979 version of the regulations.

Description of the Process for Determining Suitability

In general terms the suitability process has three stages as described in 36 CFR 219.12(b). In Stage 1, land is identified as not suited if any of four conditions exist:

1. The land has been withdrawn from timber production by Congress, the Secretary of Agriculture, or the Chief of the Forest Service.
2. The biological growth potential of the land is less than the minimum established in the regional plan (in this case, 20 cubic feet per acre per year).

3. Technology is not available to ensure that timber production would not cause irreversible damage to soil productivity or watershed conditions.
4. There is no reasonable assurance that harvested land can be restocked with trees within 5 years of harvest.

All the land that survives these four tests passes on to Stage 2. In the planning records, this land is commonly called the "tentatively suitable" land.

Stage 2 develops information about the economic returns to timber management on the tentatively suitable land. The land is stratified into categories with similar costs and return. For each category of land a variety of timber management regimes of different intensities are developed and analyzed. The management intensity that yields the greatest excess of discounted benefits over discounted costs must be identified. Benefits are defined as receipts to the Government from the sale of timber, and costs are defined as direct management costs including mitigation of environmental effects. This information is for later use in the development of alternatives; no land is identified as unsuitable in Stage 2.

The description of the Stage 3 suitability process is found in the regulations at 36 CFR 219.12(b)(3). The regulations state that land will be identified as "not suitable" where any of these conditions exist:

- 1) Land is proposed for uses incompatible with timber production, such as wilderness.
- 2) The requirements of nontimber objectives preclude the achievement of minimum acceptable standards for silvicultural practices.
- 3) Land is not cost-efficient in meeting forest objectives which include timber production.

The first condition, where land uses incompatible with timber production is determined, occurs in the process of formulating alternatives. The amount of tentatively suitable land used for timber production and the amount of land on which timber production is incompatible with other uses will vary from one alternative to another. When one alternative is chosen as preferred, the amount of unsuitable land based on incompatible land use is determined.

The second condition, where requirements of nontimber objectives preclude achievement of acceptable silvicultural standards, is determined when management prescriptions (36 CFR 219.3(u)) are developed. Each category of land will have a set of management prescriptions available. Each prescription represents a different intensity of management (36 CFR 219.3(s)) or a different set of management objectives. When each prescription is developed the possibility of timber production is considered, and the conditions under which it could proceed are established. If the conditions preclude sound silviculture, timber production is eliminated as a feature of that prescription.

The third and final condition in Stage 3, cost efficiency in meeting objectives, is determined by the way in which management prescriptions are assigned to categories of land. Cost-efficiency combines the concepts of cost-effectiveness or the least cost method of achieving objectives with economic efficiency or those methods where benefits outweigh costs. It is used to describe the condition in which levels of resource outputs or use are achieved at minimum cost and other resource outputs are provided at levels that maximize present net value while meeting legally required conditions. Each alternative may have target levels and limitations designed to respond to the issues, concerns, and opportunities addressed by the alternative. Prescriptions are assigned to categories of land in each alternative in such a way that the overall pattern of land management is cost-efficient.

To summarize, stage 3 interacts with the planning steps that develop alternatives, which are described in section 219.5(f) of the regulations. All of the tentatively suitable land identified in stage 1 is available for consideration for timber production as the alternatives process begins. Alternatives depict different ways of responding to public issues, management concerns, and resource opportunities found on the forest. Different alternatives schedule timber sale offerings in different ways on different portions of the tentatively suitable land. The full range of benefits, costs, and environmental effects associated with each alternative is computed by use of a linear mathematical program whose objective is to maximize net benefits. Based on this information and evaluation by the interdisciplinary team a preferred alternative is recommended which becomes the basis for the Forest Plan (36 CFR 219.5(h)). That portion of the tentatively suitable land that is scheduled for timber production in the preferred alternative becomes the suitable timber land. All of the remaining acreage is designated "not suited."

The key point is that each alternative considered in the planning process is the most cost-efficient way of achieving the objectives of the alternative based on the limitations in the alternative. If an alternative has a timber production objective, the land scheduled for timber sale represents the most cost-effective way of achieving the objective, or if the objective can be easily exceeded, the land scheduled for timber sale will be the land that maximizes present net value. Thus, the final economic determination of the entire suitability process is made.

#### Suitability Process followed by Region

The record shows that the actions taken by the forest with respect to suitability are in compliance with the requirements of the regulations. These actions are summarized in the Regional Forester's responsive statement on pages II-33 to II-40. The forest's description of the suitability process is found in the EIS, pages IV-54 and IV-55. The general process for developing alternatives is also in the EIS, pages II-1 to II-19. The tentatively suitable acres common to all alternatives are in the EIS, page III-89, and the plan, page F-3. For the plan, the acres in

each category of suitability are shown on page F-4. The results of the Stage 1 analysis are shown on page F-3 of the plan.

The appeal record contains no evidence that the Stage 2 analysis required by 219.12 (b)(2) was performed. The responsive statement states that such an analysis was performed, but gives no references to the planning records. Since the Stage 2 analysis does not result in the designation of any land as not suited and is developed for information purposes only, the error is one of documentation rather than substance. The Regional Forester is to supplement the plan and EIS with the appropriate reference to the planning record for the Stage 2 analysis and assure it is available for public inspection.

The results of the Stage 3 analysis are shown on page IV-55 of the EIS. The amount of land classified as tentatively suitable in Stage 1 but not suited under the provision of 219.12 (b)(3) is different in each of the alternatives. Suited timber land ranges from 303,158 acres in Alternative 6 to 507,210 acres in Alternative 3.

Alternative 1 was selected as the preferred alternative. The total acreage for this alternative, 476,251, is displayed in the plan, page F-4, as the final determination of the land suitable for timber production.

CONCLUSION ON ISSUE 2A: With the exception of an incomplete reference to the Stage 2 analysis, we conclude the process used by the Region to determine lands suitable for timber production is consistent with 36 CFR 219.12(b).

B. Does the suitability process in the regulations comply with NFMA?

When each draft of the planning regulations was published in the Federal Register, an accompanying report and environmental impact statement explained how the requirements of law were met. The relevant citations are Federal Register, Vol. 43, No. 170--Thursday, August 31, 1978, p.39046-39059; Vol. 44, No. 88--Friday, May 4, 1979, p. 26554-26657; Vol. 44, No. 181--Monday, September 17, 1979, p. 53928-53999; and Vol. 47, No. 190--Thursday, September 30, 1982, p. 43026-43052. We will recapitulate briefly.

#### Requirements of NFMA

The key requirement of NFMA is in Section 6(k):

"(k) In developing land management plans pursuant to this Act, the Secretary shall identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors to the extent feasible, as determined by the Secretary, and shall assure that, except for salvage sales or sales necessitated to protect other multiple-use values, no timber harvesting shall occur on such lands for a period of 10 years."

referenced as appellants, submitted a notice of appeal and a request for an oral presentation and extension of time to submit their statement of reasons. Thereafter, under the Freedom of Information Act, Messrs. Wilson and Benfield requested extensive planning documentation. They submitted their statement of reasons on December 5, 1983. On December 28, 1983, Regional Forester Rupp was granted an extension of time in which to file the responsive statement. He submitted the responsive statement to appellants January 24, 1984. Appellants were granted an additional 10 days to reply to the responsive statement. On April 13, 1984, appellants made their oral presentation. A list of all major documents in the appeal record, in order of receipt, is attached to this decision.

#### ISSUES:

This appeal presents the following issues:

1. Is the plan an ambitious expansion of the timber program?
2. Does the plan's procedure for determining the suitability of land for timber management meet the requirements of NFMA?
3. Will the plan's timber program significantly harm the environment?
4. Do the plan and the process by which it was formulated violate NFMA, administrative law, and NEPA?

#### DISCUSSION OF ISSUE 1: Is the plan an ambitious expansion of the timber program?

First, it is important to note that allowable sale quantities in the plan are upper limits for the plan period, not actual proposals for timber sale offerings. The annual timber sale offerings depend on budget appropriations and market conditions. On the GMUG for example, the sales level allowed by previous plans was 58.44 MMBF in 1983 while the actual offering was 29.7 MMBF for that year.

The allowable sale quantity established by the plan is well below the estimated long-term sustained-yield capacity of the forest. In the first decade, the allowable sale quantity is 350 MMBF; by the fifth decade it rises to 411 MMBF. The long-term sustained-yield capability of the forest under the management described in the plan is 1049 MMBF in each decade. The allowable sale quantity for the first decade is 40 percent below the potential yield, which is the similar measure of allowable sale quantity in previous timber management plans.

The sale levels established by the plan seem consistent with the demand for timber that is expected to exist over the planning horizon. The FEIS documents this demand on pages II-13, II-84, II-92, and IV-56. It is noted that the first decade sales level on the Forest is less than the installed mill capacity in the market area, and there is evidence in the appeal record that private sector investments will increase milling capacity in the first decade.

Although the Region's response about timber demand is reasonable, the record does not contain sufficient detail to review the decision. The Regional Forester is to supplement the FEIS with further documentation of the market demand for timber during the planning horizon.

We find that the plan does not violate long-term sustained yield principles or decadal limits on harvest volume by announcing an intention to offer 55 MMBF per year for the years 1986-1988 (FEIS II-19). Although this quantity exceeds the average annual sale quantity of 35 MMBF, there are no plans to exceed the decadal limit of 350 MMBF. The sale offering schedule change was in response to public comments on the draft environmental impact statement (FEIS page VI-104, 278, 279, and 291) with the rationale documented in the FEIS (page II-13, II-14, II-19, II-23, III-91, IV-60, and VI-61). Such annual variations in the annual sale quantity are explicitly allowed by Section 13 of NFMA (16 USC 1611). --

CONCLUSION OF ISSUE 1: We conclude the data supporting the timber demand analysis is insufficiently set forth in the record. The Regional Forester is to provide further documentation on sales level determination. Then, he is to forward the additional information on this issue to the Chief's office for review.

DISCUSSION OF ISSUE 2: Does the plan's procedure for determining the suitability of land for timber production meet the requirements of NFMA? We will discuss this issue in two parts: (A) the plan's relationship to the regulation, 36 CFR 219.12, and (B) the relationship of the regulations to NFMA.

A. Does the plans procedure meet the requirement of the regulations?

To identify lands suitable for timber production, the forest followed the procedures in Section 219.12 of the planning regulations in effect in 1979. In 1982, the regulations were revised and this section was renumbered 219.14. At that point, the forest was not required by the regulations to conform to the new regulations since the draft had been released for public review. (36 CFR 219.29(b)(1)). All references here are to the 1979 version of the regulations.

#### Description of the Process for Determining Suitability

In general terms the suitability process has three stages as described in 36 CFR 219.12(b). In Stage 1, land is identified as not suited if any of four conditions exist:

1. The land has been withdrawn from timber production by Congress, the Secretary of Agriculture, or the Chief of the Forest Service.
2. The biological growth potential of the land is less than the minimum established in the regional plan (in this case, 20 cubic feet per acre per year).

3. Technology is not available to ensure that timber production would not cause irreversible damage to soil productivity or watershed conditions.
4. There is no reasonable assurance that harvested land can be restocked with trees within 5 years of harvest.

All the land that survives these four tests passes on to Stage 2. In the planning records, this land is commonly called the "tentatively suitable" land.

Stage 2 develops information about the economic returns to timber management on the tentatively suitable land. The land is stratified into categories with similar costs and return. For each category of land a variety of timber management regimes of different intensities are developed and analyzed. The management intensity that yields the greatest excess of discounted benefits over discounted costs must be identified. Benefits are defined as receipts to the Government from the sale of timber, and costs are defined as direct management costs including mitigation of environmental effects. This information is for later use in the development of alternatives; no land is identified as unsuitable in Stage 2.

The description of the Stage 3 suitability process is found in the regulations at 36 CFR 219.12(b)(3). The regulations state that land will be identified as "not suitable" where any of these conditions exist:

- 1) Land is proposed for uses incompatible with timber production, such as wilderness.
- 2) The requirements of nontimber objectives preclude the achievement of minimum acceptable standards for silvicultural practices.
- 3) Land is not cost-efficient in meeting forest objectives which include timber production.

The first condition, where land uses incompatible with timber production is determined, occurs in the process of formulating alternatives. The amount of tentatively suitable land used for timber production and the amount of land on which timber production is incompatible with other uses will vary from one alternative to another. When one alternative is chosen as preferred, the amount of unsuitable land based on incompatible land use is determined.

The second condition, where requirements of nontimber objectives preclude achievement of acceptable silvicultural standards, is determined when management prescriptions (36 CFR 219.3(u)) are developed. Each category of land will have a set of management prescriptions available. Each prescription represents a different intensity of management (36 CFR 219.3(s)) or a different set of management objectives. When each prescription is developed the possibility of timber production is considered, and the conditions under which it could proceed are established. If the conditions preclude sound silviculture, timber production is eliminated as a feature of that prescription.

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CONCLUSION ON ISSUE 2A: With the exception of an incomplete reference to the Stage 2 analysis, we conclude the process used by the Region to determine lands suitable for timber production is consistent with 36 CFR 219.12(b).

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The law requires consideration of "physical, economic, and other pertinent factors to the extent feasible." These factors are further detailed in NFMA Section 6(g)(3)(E), which requires planning regulations to include guidelines that will:

(E) insure that timber will be harvested from National Forest System lands only where-

(i) soil, slope, or other watershed conditions will not be irreversibly damaged; [Treated in regulations at 36 CFR 219.12(b)(1)(iii)]

(ii) there is assurance that such lands can be adequately restocked within 5 years after harvest; [Treated in regulations at 36 CFR 219.12(b)(1)(iv)]

(iii) protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment, where harvests are likely to seriously and adversely affect water conditions or fish habitat. [Treated in regulations at 36 CFR 219.12(b)(3)(i) and (iii)-the development of alternatives]

(iv) the harvesting system to be used is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber. [Treated in regulations at 36 CFR 219.12(b)(3)(iii)-cost efficiency for the objectives of alternatives]

More generally, Section 4(d) of NFMA states that:

(1) It is the policy of the Congress that all forested lands in the National Forest System shall be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and conditions of stand designed to secure the maximum benefits of multiple use sustained-yield management in accordance with land management plans.

Section 6(e) requires that plans:

(1) provide for multiple use and sustained-yield of the products and services obtained therefrom in accordance with the Multiple-Use Sustained-Yield Act of 1960, and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness; and

(2) determine forest management systems, harvesting levels, and procedures in the light of all of the uses set forth in subsection (c)(1), the definition of the terms 'multiple use' and 'sustained yield' as provided in the Multiple-Use Sustained-Yield Act of 1960, and the availability of lands and their suitability for resource management.

The Multiple-Use Sustained-Yield Act defines the terms multiple use and sustained yield as follows:

Sec. 4. As used in this Act, the following terms shall have the following meanings:

(a) "Multiple use" means the management of all the various renewable surface resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output. (Emphasis added.)

(b) "Sustained yield of the several products and services" means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forests without impairment of the productivity of the land. (16 U.S.C. 531)

#### Relationship of Regulations to NFMA

In response to the requirements of Sections 4(d), 6(e), and specifically 6(k), the Secretary of Agriculture established the timber land suitability process in 36 CFR 219.12(b) as the feasible method to consider all factors.

The crucial phrase in the suitability process is generally regarded to be the reference in Section 6(k) to ". . . physical, economic, and other pertinent factors to the extent feasible . . ." In the regulations, the Stage 1 analysis emphasizes the physical factors: whether the land is legally and administratively available for consideration. The Stage 2 and Stage 3 analyses use economic factors to the extent feasible. The direct timber dollar costs and benefits are calculated and displayed for information purposes in Stage 2. As noted in A, the availability of this information was not well documented in the FEIS and plan and we remand those documents for further action.

In Stage 3 where decisionmaking occurs, the regulations follow the principles established in NFMA whereby economics is only one of many factors to be considered. All factors are construed so as to include the full range of costs and benefits rather than dollar costs and benefits alone.

#### Appellants' Proposed Changes

The appellants propose that these procedures be changed in several ways. Among other things, appellants propose that. (a) only timber benefits be

included in the suitability analysis, (b) that categories of land be required to have a positive present net value for timber benefits alone in order to be considered suitable, (c) that the calculation be done on categories of land considered individually, and (d) that the area of land considered suitable be the same in all alternatives (statement of reasons, p. 101). In effect, the appellants would replace the Stage 2 and Stage 3 analyses of the regulations with a single economic test that would be completed prior to the formulation of alternatives. The result would be that the suitable land would be the same in all alternatives.

#### Points a, b, c - Relationships between Resources and Areas

Points a, b, and c advocated by the appellants overlook two fundamental interrelationships in forest management: the interrelationship between timber and other outputs of the forest in the same geographic area and the interrelationship between geographic areas in determining the total goods and services from the entire forest.

The first interrelationship is widely recognized. As a practical matter, it is impossible to manipulate an area of the forest for a single resource, even though one may be favored, without effecting one or more of the other resources. Any time vegetation is altered, roads are built, fires are controlled, or any other management action is taken, there will be a variety of effects on the different forest resources. We are not aware of a situation where management directed toward a single resource in isolation from others can be carried out. Multiple-use management recognizes this natural interrelationship of resources which yields greater total productivity from the forest.

In economic theory goods derived from multiple-use management are classified as joint products, a term connoting physical union. In such cases, any allocation of the costs of production to the separate products is imprecise. Thus the costs and returns of any one output alone cannot conform to economic theory when other outputs are recognized. For budgeting and accounting purposes we estimate and allocate costs to individual outputs, but decisions based solely on these allocations or annual cash flow will be unsatisfactory in terms of economic efficiency in the long run.

Given this interrelationship, inherent in multiple-use management, the Secretary of Agriculture established that in the suitability analysis (36 CFR 219.12(b)(3)) it is only feasible to analyze all costs and all returns of each of the management alternatives considered.

The second major interrelationship is less widely recognized outside of economics and professional forestry. For purposes of planning and

decisionmaking, the forest is subdivided into smaller geographic units. These are the "categories of land" cited in 36 CFR 219.12(b)(2). Sometimes called "stands," these areas are often called "analysis areas" in land management planning. Fundamentally they are areas of like factors. Each acre in an individual area responds similarly to management prescriptions or, as in 36 CFR 219.12(b)(2), each area is to have similar management costs and returns. The key point is that the total output of the forest and the total costs of forest management depend upon the relationships between these analysis areas as well as within each analysis area itself. The result is that decisions about single analysis areas cannot be made in isolation from decisions about the remaining analysis areas on the forest or the mandate for integrated consideration of resources (NFMA Section 6(f)(1)) would not be met.

The simplest example of this is on the cost side of the benefit-cost equation. Commonly a single road may provide access to a number of analysis areas on which timber management is a possible activity. The problem of allocating the cost of the road among the analysis areas has no satisfactory solution. The cost per analysis area for the road will depend upon which of the analysis areas served by the road receive timber management and the intensity or degree of timber management in each case. The cost per analysis area cannot be computed independently in any meaningful way. Economic decisions about timber management on each of the analysis areas must be made simultaneously.

The geographic interdependencies on the benefit side of the equation are even stronger. The entire timber inventory of a National Forest cannot be harvested at once. NFMA Section 11 established a national policy that the flow of timber to be sold from the National Forests will be managed. Conditions are specified clearly when sales can rise above long-term sustained-yield.

The effect of this flow control policy is parallel to the effect of road costs. The rate at which timber may be sold on any single analysis area depends upon the rate at which other analysis areas on the forest are being sold. This affects the economic analysis. The flow control will force some trees to be sold either before or after the time when it would be optimal, in economic terms, to do so. This will reduce the monetary returns to some analysis areas. In other cases, the selling of timber might appear uneconomic for analysis areas, but the sale would replace older stands with more vigorous younger stands resulting in an increase in the long-term, sustained-yield level of the forest. In turn, the higher sustained-yield level would allow a greater amount of timber available for sale on other analysis areas, moving their sale timing closer to the economic optimum. The result is that the selling of timber, that appears uneconomic when examined at the level of the analysis area, is efficient when examined for the forest as a whole.

There are other geographic interdependencies on the benefit side of the equation. The most common are those related to wildlife and watershed conditions. NFMA imposes an upper limit on the size of openings in the forest cover created by timber harvest. The openings themselves are not necessarily adverse. For some species of wildlife, openings can improve habitat conditions. For Rocky Mountain elk, as an example, some research shows that optimum summer range has 60 percent of the area in natural or created openings, and 40 percent of the area in various types of forest cover. To achieve this optimum, or even to observe simple limits on maximum opening size, it may be necessary to accelerate or delay sale scheduling on individual analysis areas. To assure this optimum can be sustained over time, the creation of openings needs to be considered in the sale schedule which comprises the long-term sustained yield for timber. These interrelated factors affect the economic returns.

The effect of all of these geographic interdependencies is to force the question of timber suitability to be resolved at a planning level that can consider alternatives for all of the analysis areas simultaneously. The natural and practical place to make the final determination of the land's suitability for timber production is when Forest-wide alternatives are developed in the planning process. The framework of the economic analysis must recognize and account for the interrelationship between the uses of the Forest and the interrelationship between the geographic areas of the Forest. Postponing the final economic test of suitability to the point in the planning process where proper consideration of these interrelationships can be accomplished, as in 36 CFR 219.12(b)(3), is the only feasible method of meeting all requirements in NFMA.

#### Appellants' Point (d)

The remaining point in the appellants' procedure, (d), is that the same number of acres be considered suitable in all alternatives. To do so would unreasonably limit the range of the alternatives considered. The purpose of the alternatives is to describe the costs and the effects of a number of different mixes of output levels and management practices. Until the alternatives are formulated, it is impossible to know how much land is needed to produce a specific mix. For some of these alternatives, otherwise suitable land will not be needed; to force it into production would be inefficient. For other alternatives, the level of output may be very high requiring that all tentatively suitable land be used.

The process of formulating alternatives insures that for any alternative output level, the land that is most cost-efficient in achieving the targets of the alternative will be chosen for management and designated as suitable. Prior limitation on the acreage designated suitable is incompatible with this test of cost-efficiency. Prior limitation would result in less emphasis on the economic factors required by Section 6(k) of NFMA rather than more.

#### Conclusion about Issue 2B

we conclude the suitability process as determined by the Secretary in

36 CFR 219.12(b) and used by the Region complies with NFMA.

DISCUSSION OF ISSUE 3: Will the plan's timber program significantly harm the environment?

Appellants contend the logging and road construction proposed in the plan will cause substantial harm to the outstanding, but fragile natural resources, the Grand Mesa, Uncompahgre, and Gunnison National Forests. They describe the Forest's spectacular scenery, recreational opportunities, water quality, abundant mule deer and other wildlife, and unstable soils as being threatened by the timber program. To reduce such adverse effects, appellants seek the curtailment of the timber program.

First, it is important to note that in the design of specific projects Environmental Analyses, Environmental Assessments, Environmental Impact Statements or site-specific requirements for protection of the natural resources are developed. Thus, the FEIS may not be the final determination regarding the actual, on-the-ground impact of specific projects on the Grand Mesa, Uncompahgre, and Gunnison National Forests.

Both law and internal direction require goods and services to be produced from the National Forests in a sound environmental manner. GMUG National Forests management activities are planned so that no significant adverse environmental effects result or that they will be mitigated. The FEIS, page IV-1, states: ". . . many adverse effects are eliminated from all alternatives by applying Forest Direction Management requirements displayed in the plan. Management requirements ensure, among other things, long-term land productivity is not impaired by any alternative." The plan directs that (1) management activities be designed in an environmentally sound manner, (2) mitigation, when needed, confine adverse impacts to acceptable time periods and minimum averages, and (3) long-term adverse effects be avoided on the design of specific management activities and projects (responsive statement, V-2).

Appellants contend the thin, fine-textured silt and clay-enriched soils on the GMUG Forests are highly prone to compaction damage (SOR-54). Both the plan and FEIS recognize the fragility of the GMUG soil and its relationship to timber management and discuss appropriate mitigation measures.

"All alternatives will create some effects on the soils resource . . . Management Requirements, plan, Chapter III, mitigate any short-term impacts. Through management direction displayed in the plan, long-term soil productivity will not be impacted by any alternative" (FEIS, IV-96).

"Soil erosion will not significantly reduce short-term or long-term productivity due to Forest Management Requirements which specify that restoration and rehabilitation begin within one year of termination of the disturbance" (FEIS, IV-97).

Page III-74 contains the following general direction in the Soil Resource Management activity:

- 01 Maintain soil productivity, minimize man-caused soil erosion....
  - a. Use site preparation methods which are designed to keep fertile, friable topsoil essentially intact.
  - b. Give roads and trails special design considerations to prevent resource damage on capability areas containing soils with high shrink-swell capacity.
  - d. Revegetate all areas, capable of supporting revegetation, disturbed during road construction and/or reconstruction to stabilize the area and reduce soil erosion.
  - f. . . . avoid use of tractors on highly erodible sites. . . .
  - g. Minimize soil compaction by reducing vehicle passes, skidding on snow, frozen or dry soil conditions, or by off-ground logging systems.

The following standards and guidelines for the Soil Resource Management activity are given on Page III - 74:

- a. Use the following standards and guidelines unless more site specific requirements are developed during project design.
  - 1) Limit intensive ground disturbing activities on unstable slopes and highly erodible sites.

Appellants allege the plan's timber program and roadbuilding will harm visual quality and recreation values (SOR-55-61). Visual resource management aims to design treatments resulting in minimal disturbance, blend treatments naturally into the existing landscape, and mitigate any unavoidable visual impacts (responsive statement, V-15). The GMUG Forests use the visual management system to establish visual quality objectives (VQO's). Reference pages III-19 and 20 of the plan for detailed lists of visual management guidelines. On pages III-18-22, the plan gives the following general direction for visual resource management:

- 01 Apply the Visual Management System to all National Forest System (NFS) lands. Travel routes, use areas and water bodies determined to be of primary importance are sensitivity level 1 and appropriate visual quality objectives are established according to the Visual Management System.
- 02 Rehabilitate all existing projects and areas which do not meet the adopted visual quality objectives(s) (VQU) specified for each management area. Set priorities for rehabilitation, considering the following.
  - a. Relative importance of the uses and the amount of deviation from the adopted VQO. Foreground areas have highest priority;

- b. Length of time it will take natural processes to reduce the visual impacts so that they meet the adopted VQO;
  - c. Length of time it will take rehabilitation measures to meet the adopted VQO; and
  - d. Benefits to other resource management objectives to accomplish rehabilitation.
- 04 Plan, design, and locate vegetation manipulation in a scale which retains the color and texture of the characteristic landscape, borrowing directional emphasis of form and line from natural features.
  - 05 Blend soil disturbance into natural topography to achieve a natural appearance, reduce erosion and rehabilitate ground cover.
  - 06 Revegetate disturbed soils . . . .

Appellants allege the road construction program will result in substantial harm to wildlife. On the GMUG National Forests roads will be located, designed and built so as to minimize environmental damage (responsive statement, page V-26). Closure points will be located to maximize their effectiveness and minimize costs. To discourage violators, law enforcement activities will be publicized. Responsive statement, Page V-26.

According to the FEIS, page III-75, "(h)abitat effectiveness is influenced by the amount of human use and activities that occur within the areas. The frequency and time of year of disturbance are important factors." The GMUG Plan, page III-77, directs seasonal closure if "(u)se causes unacceptable wildlife conflict or habitat degradation." In elk calving and deer fawning areas, for example, road construction and timber harvesting are prohibited during the spring. As the FEIS, page IV-47 explains, "(i)ncreased road construction and motorized vehicle use can cause temporary big game displacement. By limiting the area under vegetation treatment open at one time in a large area, there will be seasonal seclusion remaining within the area. Travel management...displayed in the plan, chapter III,...mitigates this impact in all alternatives."

Appellants contend the Forests' water quality will deteriorate in direct proportion to the amount of soil erosion. As explained in detail in the responsive statement, pages V-32-33, soil erosion that may result from disturbed surface areas will be controlled through various mitigation measures. If such measures do not effectively control the erosion, then termination of the activity causing the adverse impact will be considered. The FEIS, page IV-75, states "a more site-specific analysis will be conducted" for those watersheds having the potential to approach a critical status with respect to water and sediment yield increases "before any additional management activities occur."

### CONCLUSION OF ISSUE 3

We agree with the Region's response and conclude appellants' allegations are not supported by the record.

DISCUSSION OF ISSUE 4: Do the plan and the process by which it was formulated violate NFMA, administrative law and NEPA?

Appellants contend the plan and FEIS violate the NFMA, the Administrative Procedure Act (APA) and NEPA. Specifically, they allege the Forest Service (1) has not met the NFMA requirements while identifying lands suitable for timber production, (2) failed to comply with the requirements of the APA, and (3) violated NEPA by denying the public its opportunity to comment on the vegetation-treatment issue.

In determining lands suitable for timber production, the Forest Service followed the requirements of 36 CFR 219.12 (1979). We have already discussed in detail the suitability determination and how it complies with the regulations under Issue 2, above, and, therefore, will not repeat that discussion here.

The responsive statement, with which we agree, also addresses this issue in Chapter VI. Reference VI-2-8 for a discussion of the role of economics in submarginal lands, VI-9-11 for a discussion of non-timber factors in the suitability determination, and VI-11-14 for a discussion of NFMA, Section 6.

Appellants allege the GMUG Plan and EIS violate basic principles of Federal administrative law. They contend the Region's basic conclusions are "so obviously unsupported in or contradicted by the record as undoubtedly to fall short of APA standards" (SOR-94). The specific conclusions in question include (1) the projections of timber demand, (2) the necessity for the value of multiple-use benefits from the planned timber program, (3) production levels planned, and (4) benefits to be derived by nearby communities from the planned timber program (SOR-94). According to appellants, the adoption of the plan is a clear error of judgment because the record, as a whole, does not support the Region's decisions. In addition, appellants allege the GMUG National Forest planners failed to consider "meaningfully basic and obvious factors relevant to land allocation, such as the gross sub-marginality of certain categories (analysis areas) of land for timber production" (SOR-96).

Our review shows the record does support the decisions made in the plan. Many of the factors considered in reaching conclusions of the plan have already been discussed at length. We find Regional Forester Rupp exercised his discretion appropriately and acted in accordance with law.

Appellants contend the plan and FEIS disclose crucial information for the first time in the final documents, thereby violating NEPA. Because the vegetation-treatment rationale was not explained at length in the draft documents, appellants claim the public was denied its opportunity to comment.

As discussed in the responsive statement, pages VI-31-33, CEQ regulations require federal agencies to involve the public in environmental decisions. 40 CFR 1503.4 states the following:

- (a) An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:
- (1) Modify alternatives including the proposed action.
  - (2) Develop and estimate alternatives not previously given serious consideration by the agency.
  - (3) Supplement, improve, or modify its analyses.
  - (4) Make factual corrections.
  - (5) Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

The vegetation treatments and their concomitant effects on timber and other resources were discussed in the draft EIS and proposed plan. Many of the comments received from the public reflected misunderstanding; consequently, the FEIS and final plan were revised to explain more fully the importance of vegetation and its relationship to other resources. The FEIS, pages I-14-17, explains that revisions were made to reflect new data, revised management direction and implementing schedules, public comments and goal clarification. Two prescriptions that duplicated direction in other prescriptions were deleted. Two were added to make winter range management more site-specific and two were combined. One alternative was added for the Fossil Ridge Wilderness Study Area and Cannibal Plateau Further Planning Area. Incremental alternative present net value changed, resulting in increased discounted benefits for range. Basically, however, "there were no significant changes between the Draft and Final EIS" (Record of Decision, page 13).

CONCLUSION OF ISSUE 4: We conclude that the changes in the final documents are clarifications, not substantial changes warranting an additional comment period from the public.

SUMMARY OF CONCLUSIONS AND DECISION:

The issues raised by the appellants are complex. Their statement of reasons and additional comments are thoughtful. Nevertheless, we conclude the procedure they recommend for determining suitability is impractical for implementing the requirements of the law. Specifically, we conclude the following:

1. The procedure used by the Region complies with the law and is the most practical way of implementing the regulations, 36 CFR 219.12(b).

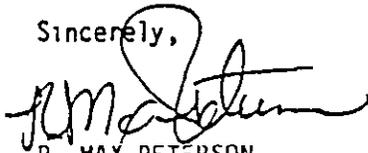
2. The timber program will not significantly harm the environment.
3. The plan and the process by which it was formulated complies with NFMA, NEPA, and administrative law.
4. The documentation in the record is insufficient to support the Regional Forester's decision regarding timber demand and program scheduling.

The FEIS and plan are remanded for the following actions:

1. Document the process used to arrive at planned sales levels
2. Supplement the plan and EIS with appropriate reference to the planning record for Stage 2 of the suitability analysis and note its availability. See responsive statement page 11-37.
3. Forward the additional information on sale level determination to this office for review.

This is the final administrative determination of the Department of Agriculture on the appeal issues of timber land suitability, the timber program's effect on the environment and compliance with NFMA, administrative law and NEPA. The Secretary may, on his own motion, elect to review this decision within 10 days. Pursuant to 36 CFR 211.18(f)(2) the Secretary will not consider a request for such review.

Sincerely,



R. MAX PETERSON  
Chief

Enclosure

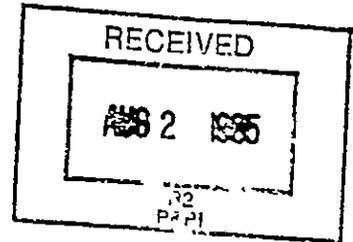
## List of Major Documents in the Appeal Record

### Grand Mesa, Uncompahgre, and Gunnison (GMUG)

1. National Forest Land and Resource Management Plan (LRMP), including Record of Decision, dated September 29, 1983.
2. Final Environmental Impact Statement (FEIS) on the GMUG National Forest LRMP, dated September 29, 1983.
3. Notice of Appeal and Request for Oral Presentation, dated September 29, 1983.
4. Statement of Reasons, dated December 5, 1983.
5. Responsive Statement, dated January 24, 1984.
6. Statement of Louisiana-Pacific Corporation, dated February 21, 1984.
7. Reply to Responsive Statement, dated February 23, 1984.
8. Statement of Montrose County, intervenor, dated February 24, 1984.
9. Statement of City of Montrose, intervenor, dated February 24, 1984.
10. Response to Intervenors' statement, dated March 12, 1984.
11. Appellants' response to intervenors' statements, dated March 12, 1984.
12. Statement of Louisiana-Pacific Corporation, intervenor, and following oral presentation, dated April 18, 1984.
13. Statement of National Forest Products Association, intervenor, following oral presentation, dated April 23, 1984.
14. Statement of Southwest Forest Industries, intervenor, following oral presentation, dated April 23, 1984.
15. Appellants' response to intervenors' statements, dated May 15, 1984.



DEPARTMENT OF AGRICULTURE  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20250



July 31, 1985

**SUBJECT:** USDA Decision on Review of Administrative Decision by the Chief of the Forest Service Related to the Administrative Appeals of the Forest Plans and EISs for the San Juan National Forest and the Grand Mesa, Uncompahgre, and Gunnison National Forest

**TO:** R. Max Peterson  
Chief  
Forest Service

Pursuant to 36 CFR 211.18 (f) (5) (1984), this office elected on September 12, 1984 to review the Chief's September 10, 1984 decisions on separate administrative appeals of the San Juan Forest Plan and accompanying Final Environmental Impact Statement (FEIS)/1 and the Grand Mesa, Uncompahgre, and Gunnison (GMUG) Forest Plan and accompanying FEIS./2 This letter constitutes my decision on the basis of that review. Due to the similarity of issues, the appeals for these two forests have been consolidated.

Appellant's objections to the forest plan and accompanying EISs for both forests are similar. These objections include the following: (1) the Regional Forester's decisions for the San Juan and GMUG are contrary to Departmental policy because they authorize increases in timber harvesting in the face of evidence that most of the timber sales involved will be uneconomic and will cost the Federal government more than they will raise in revenue, (2) the planning documents for both the San Juan and GMUG provide inadequate information on, or discussion of, the economic and environmental implications of continuing and increasing a timber sales program where costs substantially exceed revenues, (3) the procedures used to determine the suitability of land for timber management violate the requirements of the National Forest Management Act of 1976 (NFMA), (4) the plans and the process by which they were formulated violate NFMA, administrative law, and the National Environmental Policy Act (NEPA), and (5) the plans are an ambitious expansion of the timber program and will significantly harm the environment.

## BACKGROUND

Pursuant to the Multiple-Use Sustained Yield Act of 1960 (16 USC 528-531), the Secretary of Agriculture is required:

"to develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom. In the administration of the national forests due consideration shall be given to the relative values of the various resources in particular areas." (16 USC 529).

"Multiple use" is defined in the Act as:

"the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions ... with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." (16 USC 531).

It is clear from the definition of multiple use that Congress did not intend that the national forests be managed to maximize direct financial returns to the Treasury. However, neither did Congress intend that the Forest Service ignore economic considerations in its decisionmaking. The Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA), contains several references to the need to consider economics in the national forest planning process. Section 4 of RPA requires that in developing the Renewable Resources Program there be:

"specific identification of Program outputs, results anticipated, and benefits associated with investments in such a manner that the anticipated costs can be directly compared with the total related benefits and direct and indirect returns to the Federal Government ...." (16 USC 1602 (2)).

Section 6 of NFMA requires the Secretary of Agriculture to develop, maintain and revise land and resource management plans for the national forests and national grasslands. The Secretary is required to:

"promulgate regulations, under the principles of the Multiple-Use Sustained-Yield Act of 1960, that set out the process for the development and revision of the land management plans, and the guidelines and standards prescribed by this subsection." (16 USC 1604(g)).

Section 6 of NFMA also requires that the planning process for individual national forests consider economics and be linked directly to the goals of the RPA Program. The regulations required by Section 6(g) must include:

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"guidelines for land management plans developed to achieve the goals of the Program which — (A) insure consideration of the economic and environmental aspects of the various systems of renewable resource management..." (16 U.S.C. 1604(g) (3) .

(Emphasis added)

Section 6(g) also requires that as a prerequisite for timber harvesting:

"the potential environmental, biological, esthetic, engineering, and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area." (16 USC 1604(g) (3) (ii)).

Section 6(k) deals with the identification of lands unsuitable for timber production:

"In developing land management plans pursuant to this Act, the Secretary shall identify lands within the management area which are not suited for timber production, considering physical, economic, and other pertinent factors to the extent feasible, as determined by the Secretary, and shall assure that, except for salvage sales or sales necessitated to protect other multiple-use values, no timber harvesting shall occur on such lands for a period of 10 years." (16 USC 1604(h)).

Thus, economics is one of the factors that must be given consideration in identifying lands unsuitable for timber production under Section 6(k). However, the Secretary is to consider "other pertinent factors" as well.

Section 6(k) also requires the Secretary to:

"formulate and implement, as soon as practicable, a process for estimating long-terms (sic) costs and benefits to support the program evaluation requirements of this Act. This process shall include requirements to provide information on a representative sample basis of estimated expenditures associated with the reforestation, timber stand improvement, and sale of timber from the National Forest System, and shall provide a comparison of these expenditures to the return to the Government resulting from the sale of timber." (16 USC 1604(l)).

#### DISCUSSION

The previously cited statutory references make it clear that Congress intended that economic factors should be one of the considerations which shape the development of the Renewable Resources Program and the national forest land management plans which are a part of that Program. Just as clearly, Congress also intended that non-economic factors be considered in the development of these plans.

The Secretary has duly promulgated the required NFMA implementing regulations at 36 CFR part 219, hereinafter referred to as the "NFMA regulations".<sup>13</sup> Section 219.1 of these regulations established that the purpose of forest planning is to "provide for multiple use and sustained yield of goods and services from the National Forest System."

One of the characteristics of national forest lands that greatly complicates decisionmaking is that these lands must be managed for both market and nonmarket resource outputs. The national forests must be managed for various multiple uses -- some of which are priced and for which revenues are received, some of which can be priced in dollar terms but for which no revenues (or revenues representing less than fair market value) are received, and some of which cannot be readily priced in the market sense, or otherwise valued in dollar terms commensurate with priced outputs. Two examples of non-priced benefits are protection of threatened and endangered species and protection of down-stream water quality.

The goal of national forest management is to provide a level and mix of multiple uses, both priced and non-priced, that is optimal, now and for the future, to the national welfare. This, of necessity, involves subjective judgments about the relative value of various specific priced and non-priced objectives and outputs, as well as the value of responding to various issues raised by the public during the planning process. It is through the planning process that alternatives providing various mixes of priced and non-priced objectives and responses to expressed public issues are analyzed and evaluated and decisions ultimately made as to how these lands are to be managed.

A further complicating factor results from the fact that many Federal resource investments produce joint outputs -- some of which are priced and some non-priced. A road investment may produce timber outputs, may be used for a wide range of recreational activities, and can reduce the cost of protection from fire or insects. A timber sale may be designed to achieve habitat objectives which increase opportunities for both consumptive and non-consumptive wildlife uses. The cost of a national forest timber sale is often increased and/or the revenues generated from that sale are reduced when non-timber multiple use objectives are achieved through the timber program. Yet the timber program may be the most cost effective way to achieve such multiple use objectives.

It is difficult, and in many cases impossible, to allocate many timber sale costs in a non-arbitrary manner among the various multiple-use functions, such as timber, recreation, watershed management, and protection. Any analysis, however, can and should attempt to identify and account for the full estimated value of the joint benefits produced by such investments. Even after this accounting is completed, however, there will be both values and costs and responses to public issues that are not easily quantifiable or measurable in dollar terms but which nonetheless must be considered in decisionmaking.

#### THE ROLE OF ECONOMICS IN NATIONAL FOREST DECISIONMAKING

Applicable law, policy, and just plain common sense dictate that the Forest Service should manage its resource programs in an economically efficient manner, consistent with its legal mandate for multiple use, sustained yield and the achievement of the maximum net public benefits. The use of rigorous analysis, including economic efficiency analysis, is required by the regulations and guidelines developed to implement the National Forest Management Act of

1976. These regulations and guidelines require, at an early stage in the planning process, the establishment of economically and biologically driven benchmarks which, in conjunction with public issues, management concerns, and resource use and development opportunities identified during the scoping stage of the planning process, form the basis for formulation of a full range of planning alternatives. The economic efficiency with which specific units of forest land can be managed for timber production must also be evaluated and identified as part of the second step of the procedure for analyzing the suitability of land for timber production. (36 CFR 219.12(b) (2) (1982).

The procedural guidelines for analysis issued by the Forest Service on May 31, 1983 to complement the planning direction contained in the NFMA Regulations provide detailed and comprehensive guidance for carrying out the economic analyses necessary to evaluate alternatives.

In a paper dated October 10, 1983, titled "Role of Economic Analysis in National Forest Land Management Planning and Decisionmaking," this office has also issued policy guidance on this issue. This paper summarized that policy as follows:

"(1) Economic efficiency is one criterion to be considered in decisionmaking.

"(2) The primary measure of economic efficiency is present net value (PNV)...a determination of anticipated benefits less anticipated costs, both discounted to the present. Present net value is an extremely important economic concept. It is one component or partial measure of public net benefits...PNV is very important in decisionmaking. By definition, PNV measures only the net economic value of resource benefits to which dollar values can be assigned. These usually include: timber; minerals; range forage; visitor-days for wildlife, wilderness, and other recreation uses; and some uses of water...

"(3) The economic, social, and environmental effects of a broad range of alternatives must be fully evaluated and displayed. In doing so, the benefits and the specific costs of non-priced objectives having a significant effect on PNV must be identified and evidence provided that a rigorous effort was made to assure they are achieved efficiently.

"(4) The analysis will evaluate alternative bundles or mixes of resource outputs. Because of the joint nature of many resource investments and other activities, no attempt will be made to evaluate investments by arbitrarily allocating costs and benefits to a single resource, such as timber or recreation. Instead, planning alternatives emphasizing particular resource objectives will be formulated and compared to alternatives emphasizing other resource objectives and output levels."

It is clear that applicable regulations, policy, and planning procedural guidelines impose an obligation on the Forest Service to explain the economic implications of the planning alternatives it evaluates. Indeed, they impose an obligation on the agency to utilize economic considerations not just in the

evaluation of its planning alternatives, but in the development and formulation of those alternatives as well. In other words, economic efficiency is one of the factors that must be taken into account not only in producing a given level of resource outputs or objectives cost effectively, but also in decisions on the specific goals and resource production targets that will be achieved in national forest management to provide the greatest benefits to the public. In the 1982 revised NFMA regulations this is referred to as the greatest "net public benefit" (36 CFR 219.3).

A particularly strong obligation is imposed on the Forest Service to explain the economic, social and environmental tradeoffs which are likely to occur when resource objectives or responses to expressed public issues are proposed which would reduce economic efficiency (reduce present net value). Both the anticipated costs and the benefits of such resource objectives should be evaluated and explained so that decisionmakers and the public can readily understand the implications of decisions that would have an adverse impact on economic efficiency.

The previously cited October 10, 1983 paper on the role of economics in national forest planning indicated that the planning documents should:

"(I)dentify and display both financial costs and anticipated benefits and other effects of constraints designed to achieve non-priced objectives that reduce PNV. Examples of such objectives include non-declining yield, rotations based on biological criteria, and requirements designed for wildlife or aesthetic objectives, such as view zones. They also include production of commodity resources, such as timber, at levels greater than is economically efficient for the purpose of aiding dependent industries in nearby communities. All such situations should be addressed and evaluated explicitly."  
(Emphasis added)

Thus, the Forest Service has an obligation to provide information on the short and long term economic implications of the alternatives it evaluates in forest planning. Where, as is the situation on the San Juan and GMUG, the selected alternative authorizes an expansion of timber sales, and projections are for costs to exceed revenues for the entire planning horizon, a considerably greater burden is imposed on the Forest Service to provide even greater detail as on the rationale for, and specific benefits that will be achieved from such a continuation and expansion.

#### ROLE OF THE EIS AND RECORD OF DECISION

Under current procedures, the EIS and associated planning records provide information on the economic, social and environmental effects of each planning alternative. After the final EIS is completed and the alternative to be implemented is selected, a Record of Decision is prepared which explains why the deciding officer considered the selected alternative to be the one which provides the greatest benefit to the public.

When a particular alternative is selected by the Regional Forester, the Record of Decision (ROD) should explain in adequate detail why that alternative is thought to provide greater net public benefits than the other alternatives evaluated. The ROD is an extremely important planning document which describes the basis and rationale for the decision. Through the ROD the

Public is given its best insight as to the relative weight that the deciding official placed on economic efficiency, market and non-market outputs, and responses to specific issues raised by the public.

The Secretary's office has placed a great deal of emphasis on the need for a competent and comprehensive analysis as part of the decisionmaking process. The ROD must also explain how the information from that analysis was used in arriving at the decision as to the alternative to be selected.

If the selected alternative is not the one which is the most economically efficient (has the highest PNV), there is an obligation in the ROD to explain in appropriate detail: (1) the difference between the net value and mix of the priced outputs that could be realized in implementing alternative(s) having a higher PNV and the net value and mix of the priced outputs anticipated if the selected alternative were to be implemented, (2) the objectives of the selected alternative in terms of priced and non-priced outputs and/or responses to expressed public issues that would not be expected to be realized if the alternative(s) having a higher PNV were implemented, (3) a summary in the ROD of the major trade-offs or differences between (1) and (2) expressed in economic, environmental, physical, and/or other appropriate quantitative and qualitative terms; and (4) an explanation as to why the selected alternative is expected to provide greater overall net public benefits than the alternative(s) with a higher PNV. /4

#### FINDING, CONCLUSIONS AND DECISION

The selected alternatives for both the San Juan and the GMUG forest plans authorize modest increases in timber sales over volumes that have recently been offered on those forests. For the San Juan, timber sale levels have averaged about 26 million board feet (MMBF) annually in recent years. However, for the 23 years from 1960 through 1982, the average annual sale level was 50 MMBF. The selected alternative on the San Juan would provide for a 38 MMBF average annual allowable sale quantity during the period of the plan. For the GMUG, which in recent years has offered for sale an average of about 29 MMBF per year, the selected alternative provides an upper limit for the average annual allowable sale quantity of 35 MMBF during the period of the plan.

It should be pointed out that allowable sale quantity is the maximum level of timber that can be sold under the plan. Actual sale levels will depend upon a number of factors, including timber sale funding levels. The allowable sale quantity corresponds to what in existing timber management plans is referred to as the allowable harvest. The average annual allowable harvest under the previous 10-year timber management plan for the San Juan was 117 MMBF and for the GMUG was 58 MMBF.

So the statement of the appellants that the selected alternatives provide for an ambitious increase in timber sale levels is untrue. Compared to existing timber management plans for these forests, the maximum level authorized for both national forests is substantially reduced. Unfortunately, the planning documents do not do a good job of explaining and comparing the old annual allowable harvest level and the new annual allowable sale quantity.

Nevertheless, the selected alternatives for both national forests would permit an increase in timber sales from recently experienced levels if adequate funding levels are provided, and therefore, the planning documents must discuss and rationalize this possibility.

For both forest plans, the estimated costs associated with every alternative examined substantially exceed projected revenues for the entire planning horizon. The general pattern for both forest plans is for the present net value for timber alone to decrease and for the excess of costs over revenues to increase as goals for timber sales volume are increased. The record established that the direct costs associated with increasing timber sales above recent sale levels will exceed expected revenues over the entire planning horizon. The benchmark analyses indicate that at current costs and prices, the timber sale level that is economically efficient if timber values and costs alone are considered is 7-9 MMBF per year on the San Juan and 4-9 MMBF per year on the GMUG.

A distinction must be made between economic efficiency as defined in the current forest planning guidelines and generation of revenues from the sale or lease of commodities from the national forests. The selected alternative for the San Juan National Forest has the second highest PNV of the ten alternatives examined (\$307 million); whereas for the GMUG, the PNV of the selected alternative was the second lowest, yet was still significantly positive (\$146 million). Even though the relationship of program costs to anticipated revenues was projected to be very unfavorable for the entire planning horizon, the PNVs for the selected alternatives were relatively high. The reason PNV was relatively high while the ratio of revenues to costs was low for both forests is due to Forest Service projections that resource outputs which are assigned a dollar value but for which revenues are not received, such as outdoor recreation, would be produced at high levels under the preferred alternatives for both forests.

The timber and associated road programs on both the San Juan and the GMUG account for the bulk of both costs and revenues, yet non-timber benefits account for the bulk of the benefits that make up PNV. These facts should lead to exploration of the question of whether it is possible to achieve the non-timber benefits more cost effectively through a management program of a different nature than presently proposed. The primary rationale cited in the planning documents to support the selected alternative seems to be that a healthy forest is necessary to achieve a high level of non-timber and amenity objectives; that vegetation management designed to achieve a forest having a more even distribution of age classes is necessary to provide a healthy forest; and that a timber sale program is the most appropriate way to accomplish such vegetation management. In view of the large net cost of vegetation management accomplished through the timber program, each of these assumptions needs to be explored and fully rationalized and documented.

The following are examples of questions that should be addressed: Is the timber program as currently proposed actually the most cost effective way to achieve the non-timber multiple use objectives of the plan? To what extent can timber program costs be cut and/or revenues be enhanced while still providing an appropriate level of non-timber multiple use objectives? Are there other ways to accomplish vegetation management more cost effectively than through a timber program as currently proposed? The Forest Service has been exploring the use of prescribed fire for this purpose in Colorado. Does this

technology, used in conjunction with timber sales where economically efficient, hold promise to reduce the cost of vegetation management?

Other questions that should also be explored include: Are the non-timber multiple use benefits to be achieved through the timber program really needed? Do projections of demand for these non-timber objectives support the need for the Federal expenditures required to achieve them? What are the high-level non-timber and amenity benefits that would be lost and who would be affected by the change and in what ways?

The nature of the economic situation related to the timber program on the San Juan and GMUG would indicate the need to explore fully such questions and to provide the public the results of such evaluations. The planning documents for these two forests are currently deficient in this regard. /5

Another separate but related issue is that even though the below-cost sales issue has been raised by the public for a number of years, there is little evidence in the record of the extent to which either Forest has previously, is now, or will in the future explore ways to substantially reduce timber and road costs or enhance revenues while achieving, at the same time, appropriate multiple use objectives and providing adequate supplies of timber to meet the existing dependent plant capacity and job needs of the community. Neither do the planning documents evaluate the effect on the overall economics of the timber program that could result from efforts to reduce costs and/or enhance revenues.

A recently completed Forest Service study of the Black Hills National Forest, which has forest conditions and timber selling practices similar in many ways to those of the San Juan and GMUG, found significant opportunities to reduce costs and enhance revenues from the timber program without adversely affecting timber sale levels or damaging non-timber resource uses. Similar opportunities may exist on the San Juan and GMUG and should be aggressively explored.

Neither the San Juan nor the GMUG Records of Decision contain adequate explanation as to the specific non-priced objectives or responses to public issues that will be achieved through continuing and increasing timber sales with known costs greater than expected revenues. Although non-priced objectives, such as community stability and the multiple use benefits associated with vegetation management, were discussed in general terms in the planning documents, more detailed discussion, backed by competent analysis, is needed to inform the public why the Forest Service believes that the values of achieving those objectives exceed the costs of the program.

Since there is no indication in the planning documents that increases in timber sales will be made only if there is an increase in demand and prices for timber, an explanation is needed as to why increasing the dependency of local community mill capacity and jobs which could result from an increase in sales of National Forest timber with revenues exceeding costs will contribute to greater national or local welfare -- especially since increased dependency upon submarginal timber sales would seem to result in potentially greater community instability due to uncertainties over continuation of a relatively high level of Federal funding to support a timber program with costs greater than revenues. The ROD should address this question.

In summary, the RODs for the San Juan forest plan and the GMUG forest plan do not adequately explain why the selected alternative provides the greatest net public benefits. Alternatives with lower levels of harvest are shown to meet environmental requirements and appear to have the same or similar present value of benefits for range, developed recreation, other recreation, wilderness, wildlife and water, but without the less favorable costs and revenue characteristics of the selected alternative.

### Decision

The Chief is directed to ensure that the planning documents provide complete and adequate information concerning the economic implications of the various alternatives and that the RODs explain clearly why the selected alternative for each Forest is felt to maximize net public benefits. The Regional Forester should consider all existing alternatives and develop new ones, if such is necessary to explore the issues discussed in this decision, with appropriate supplementation of the EIS, as needed. The Regional Forester is to prepare new RODs fully explaining why the preferred alternatives maximize net public benefits, consistent with the principles described in this decision.

The ROD and other planning documents should also include a discussion of, or a reference to, the steps that will be taken to reduce timber costs and/or enhance revenues while meeting appropriate multiple use objectives and dependency needs of local communities.<sup>/6</sup> The effect that such steps, if successful, would have on improving the economic efficiency of the timber program should be evaluated and explained.

The Chief's decision for the San Juan directs the Regional Forester to supplement the record with information on timber demand projections in the area. By this decision the Regional Forester is also directed to discuss in the planning records the circumstances under which increased demands (and presumably increases in timber prices associated with those increased demands) would lead to increases in timber sales offerings during the plan period. The effect of projected price increases on economic efficiency and decisions to increase timber sale levels should be discussed as well. If circumstances other than, or in addition to, increases in timber prices may lead to increases in national forest timber sales offerings during the plan period, these circumstances should also be discussed.

The Chief's decisions for both the San Juan and the GMUG appeals indicate that the EIS and plan contain no indication that the suitability analysis required by 36 CFR 219.12(b)(2) (1982) (Stage II analysis) is available. The Chief then directs the Regional Forester to supplement the FEIS with the appropriate reference to the existence of the Stage II analysis in the planning records. This direction is appropriate but insufficient. The Stage II analysis should provide both decisionmakers and the public with information about the specific areas on the forest where management for timber would be the most cost efficient. It also provides important information about the economic efficiency of various land management prescriptions when applied to specific lands. It is not sufficient just to require a reference to the planning records. The Forests should discuss the results and implications of this economic analysis in a way that is meaningful to the public and should describe in the planning documents how this information was used in the formulation of alternatives, in the development and selection of prescriptions to be applied to specific lands

timber management. The information developed during the Stage II analysis can be useful to help identify the lands where timber production is economically efficient, as well as to assist in the development of new prescriptions which are more economically efficient when applied to specific analysis areas. The extent to which the Stage II analysis was used for this purpose should be discussed in the planning records. If the analysis was not used for this purpose, an explanation as to why it was not is also necessary. /7

#### RESPONSE TO SPECIFIC ISSUES RAISED BY APPELLANTS

This office agrees with appellants that the planning documents for both the San Juan and GMUG provide inadequate information on, or discussion of, the economic implications of continuing and increasing a timber sales program where costs substantially exceed revenues and that the planning documents are not adequately responsive to Departmental policy in this regard. By this decision the Chief is directed to cure this deficiency.

Appellants also contend that NFMA suitability regulations at 36 CFR 219.12(b) violate Section 6(k) of NFMA. The primary rationale for this contention appears to be that the regulations do not require that the identification of lands unsuitable for timber production be based solely on timber related economic criteria. Instead, the regulations result in timber land suitability being driven by the timber and other resource production goals that are inherent in the alternative that is selected. The NFMA regulations provide that the lands identified as suitable for timber production are those which are the most cost efficient in achieving the goals of the selected alternative. Appellants correctly point out that under the regulations, lands that are uneconomic for producing timber on the basis of timber values and costs alone, can nonetheless be identified as suitable for timber production if the timber goals for a national forest are set at a sufficiently high level to cause this result.

It would be inappropriate for the Forest Service to evaluate timber suitability based on the economic efficiency of lands solely for the production of timber. As discussed previously, timber related investments often produce other non-timber outputs and benefits as joint products which must be considered in evaluating the suitability of land for timber production. Some of these joint products can be valued in dollar terms, while others cannot. National forest decisionmaking must consider both priced and non-priced objectives. Section 6(k) of NFMA provides the Secretary considerable discretion to take into account both economic and other pertinent factors in identifying lands suitable for timber production.

It is clear that both the law and Departmental policy require that economic efficiency to be taken into account at many points of the planning process that ultimately leads to decisions as to the multiple use goals for which the national forests will be managed and the management practices that will be applied to those lands. So long as economic efficiency is taken into account, both as part of the process of selecting those goals and in meeting the selected goals cost efficiently, the approach specified by the regulations for identifying lands unsuitable for timber production is a valid exercise of the Secretary of Agriculture's discretion.

CONCLUSION

The Chief concluded that the regulations comply with NFMA. I affirm the Chief's decision.

The Chief also concluded that the process followed by the Region to determine suitability is consistent with 36 CFR 219.12 (1982). I affirm the Chief's decision.

The Forest Plans, FEISS, and Records of Decision are remanded for the action specified in this decision.

Pursuant to 36 CFR 211.18(f)(6), this is the final administrative action of the Department of Agriculture on the appeals issues of timber land suitability, the timber program's effect on the environment, and compliance with NFMA, NEPA and administrative law.

*Douglas W. MacCleery*  
DOUGLAS W. MACCLEERY  
Deputy Assistant Secretary  
Natural Resources and Environment

/1 Appellants are the Natural Resources Defense Council, Inc., The Wilderness Society, the Colorado Mountain Club, the Colorado Open Space Council, the National Audubon Society, the San Juan Audubon Society, the Colorado Wildlife Federation, and the Public Lands Institute. The intervenors are the National Forest Products Association, Louisiana-Pacific Corporation, Colorado Timber Industry Association, and Southwest Forest Industries.

/2 Appellants are the Natural Resources Defense Council, Inc., The Wilderness Society, The Colorado Mountain Club, the Colorado Open Space Council, the National Audubon Society, the Audubon Society of Western Colorado, the Colorado Wildlife Federation, the Public Lands Institute, the Western Slope Energy Research Center and the High County Citizens Alliance. The intervenors are the National Forest Products Association, Louisiana-Pacific Corporation, Colorado Timber Industry Association, Southwest Forest Industries, the City of Montrose, the County of Montrose, the Town of Crested Butte, and Allied Forest Products.

/3 All references are to the 1979 version of the NFMA regulations because the forest plans at issue were prepared pursuant to those regulations. See 36 CFR 219.219 (b)(1) (1984).

/4 The Forest Service Washington Office, in direction signed by Gary E. Cargill to the Regional Foresters dated April 19, 1985, required that such information be provided in Records of Decision on forest plans.

/5 An example of the conceptual weakness of the analytical approach used in the San Juan planning process is that the road system apparently was not assumed to change depending upon management objective or timber sale level. In other words, it was assumed that the same road system would be needed no matter what multiple use emphasis was decided upon. Even though roads are a very significant part of the costs of management, the San Juan analytical approach

of keeping them constant for all alternatives effectively eliminated them from comprehensive evaluation. A legitimate question could be asked is: Could vegetation management objectives designed to maintain a healthy forest be achieved at lower cost than proposed if the road system were scaled down or otherwise modified? It seems reasonable that the information provided in the planning process should permit addressing this question.

In contrast the planning approach used by most other national forests provides that the road system (and the costs associated with it) will vary according to the management objective of the alternative being evaluated.

/6 In separate direction, outside the scope of his appeal, dated May 31, 1985, the Chief of the Forest Service instructed the Regional Foresters to carefully evaluate opportunities to reduce timber costs and enhance revenues. This memo also noted that sample national forests have been selected in several regions to evaluate additional opportunities. These evaluations may well lead to Service-wide recommendations on ways to reduce costs and enhance revenues and to a comprehensive action plan to carry out those recommendations with the objective of a substantial reduction in the volume of timber sold with revenues less than costs.

/7 Appendix E of the Analysis of the Management Situation for the San Juan, dated September 1981, provides a general discussion of the process that was followed in developing the Stage II Suitability Analysis, but does little to interpret the results or explain how the analysis was used in the planning process.



DEPARTMENT OF AGRICULTURE  
OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20250

SEP 11 1985

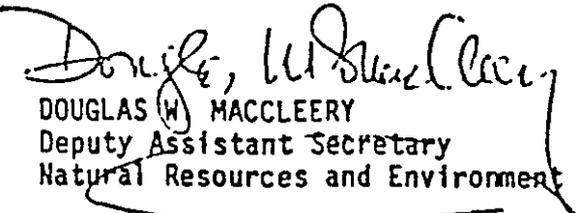
September 11, 1985

**SUBJECT:** USDA Decision on Review of Administrative Decision  
by the Chief of the Forest Service Related to the  
Administrative Appeals of the Forest Plans and EISs  
for the San Juan National Forest and the Grand Mesa,  
Uncompahgre, and Gunnison National Forests

**TO:** R. Max Peterson  
Chief  
Forest Service

In light of recent news coverage of my July 31, 1985, review of the above subject plans, clarification of my intent seems appropriate. 'First, my decision did not stay the implementation of the Forest Plans.' The two subject Forest Plans, appropriately developed under the 1979 regulations, remain in effect while the specified corrective actions are completed.

My principal concern is that information clearly relevant to making the decision on the allowable sale quantity be brought forward and made a part of the public record. 'Additional analysis may or may not be necessary.' If it is, consideration should be given to the costs of carrying it out in the light of the resource values involved.

  
DOUGLAS W. MACCLEERY  
Deputy Assistant Secretary  
Natural Resources and Environment

Reply to: 1920  
1570

Date: June 23, 1988

Subject: Secretary of Agriculture's decision on the appeals of the Forest Plans for the San Juan and Grand Mesa, Uncompahgre, and Gunnison National Forests

To: Regional Foresters

The Washington Office has received questions from field units regarding the implications of the Secretary of Agriculture's July 31, 1985, decision on the appeals of the Forest Plans for the San Juan and Grand Mesa, Uncompahgre, and Gunnison (GMUG) National Forests. The most common question is whether the Secretary's decision in these two appeals is also applicable to other National Forests.

The Secretary's decision found that the Regional Forester had not adequately explained his reasons for approving the San Juan and GMUG Forest Plans. It found that the Record of Decision in each case should have addressed three concerns: the rationale for the proposed vegetation management program, efforts to cut costs and raise revenues in the timber management program, and the circumstances under which timber sale levels would be increased during the planning period.

This decision was an interpretation of existing law, regulation, and policy rather than an attempt to create new policy for Forest planning. It applied existing policy to the specific factual situations of these two National Forests. Consequently, other National Forests with the same factual situations are subject to the same conclusions.

In addition, the Secretary's decision contains interpretations of existing law, regulation, and policy that have general application, particularly with respect to the role of economics in National Forest planning.

The balance of this letter provides some additional information on the rationale for the Secretary's decision and its implications for other National Forests. However, it is important that the decision be read in its entirety so that the context be understood. A copy is enclosed.

#### Background

The two appeals were brought by a coalition of environmental groups led by the Natural Resources Defense Council. They raised a number of issues, the most prominent of which included timber land suitability, timber harvest levels, and the environmental effects of timber management. The Chief's decisions on the appeals affirmed the Regional Forester on most issues but remanded the

Plans and their EIS's with the instruction that additional information be added to the record on timber demand, timber land suitability, and timber sale scheduling.

The Secretary of Agriculture subsequently chose to review the Chief's decisions. The Secretary's decision, which was signed by Deputy Assistant Secretary Douglas W. MacCleery, found that the Regional Forester had not adequately explained his reasons for concluding that the alternative selected for each Plan maximized net public benefits. The decision emphasized the role of the Record of Decision in providing this explanation but recognized that some additional analysis might be required in order to support the conclusions that were reached. As Deputy Assistant Secretary MacCleery stated in a letter of clarification on September 11, 1985:

"My principal concern is that information clearly relevant to making the decision on the allowable sale quantity be brought forward and made a part of the public record. Additional analysis may or may not be necessary. If it is, consideration should be given to the costs of carrying it out in the light of the resource values involved."

In acting on the remand, the Regional Forester decided that the San Juan and GMUG would carry out some additional analysis to address some concerns identified in the Secretary's decision and to improve the overall quality of the Plans.

#### Rationale for the Secretary's Decision

The Secretary's decision letter reviews the statutory and regulatory basis for Forest planning, as well as the Secretary's October 11, 1983, paper on "The Role of Economic Analysis in National Forest Land Management Planning and Decisionmaking," to identify the key principles that are pertinent to these appeals. As a general principle, the decision letter states that:

". . . applicable regulations, policy, and planning procedural guidelines impose an obligation on the Forest Service to explain the economic implications of the planning alternatives it evaluates . . . [and] to utilize economic considerations not just in the evaluation of its planning alternatives, but in the development and formulation of those alternatives as well" (p 5-6).

Within this general principle, the decision letter identifies a more specific one:

"A particularly strong obligation is imposed on the Forest Service to explain the economic, social and environmental tradeoffs which are likely to occur when resource objectives or responses to public issues are proposed which would reduce economic efficiency (reduce present net value)" (p 6).

And even more specifically:

"Where, as is the situation on the San Juan and GMUG, the selected alternative authorizes an expansion of timber sales, and projections are

for costs to exceed revenues for the entire planning horizon, a considerably greater burden is imposed on the Forest Service to provide even greater detail as on the rationale for, and specific benefits that will be achieved from such a continuation and expansion" (p 6).

The decision letter then goes on to emphasize the role of the Record of Decision (ROD) in providing the explanation that these principles call for. It states two fundamental requirements for the ROD. It must (1) explain in adequate detail why the selected alternative is thought to provide greater net public benefits than the other alternatives evaluated, and (2) explain how the information derived from the planning analysis was used in arriving at the decision as to the alternative to be selected.

#### Application to the San Juan and GMUG

The Secretary's decision letter characterizes the factual situation of the San Juan and GMUG Forest Plans as (1) proposing an expansion of a timber program in which projected timber sale revenues would fall short of projected timber costs for the entire planning horizon, and (2) projecting that the bulk of the costs would be for road construction and timber management activities while the bulk of the benefits would be nontimber and nonmarket benefits resulting from the vegetation management effects of the timber program.

Given these two key facts, the decision letter states that there should be consideration of ways to achieve both the timber and nontimber benefits more effectively. The letter concludes that the explanation in the ROD should address three areas: (1) the rationale for the proposed vegetation management program, why it is believed to maximize net public benefits, and why alternative approaches are less desirable; (2) efforts to cut costs and raise revenues for the timber program; and (3) the circumstances under which timber sale levels would be increased during the planning period.

The decision letter characterizes the rationale for the proposed vegetation management program on the two National Forests as follows: healthy vegetation is needed to provide a high level of benefits, a more balanced distribution of age classes is needed to ensure healthy vegetation, and a timber sale program is the best way to achieve the needed distribution of age classes. The decision letter states that the ROD must explain why the Regional Forester has reached these conclusions. The explanation should refer to the supporting evidence in the planning records. The decision letter on page 8 lists a number of specific questions as examples of the kinds of questions that should be explored when this evidence is developed. These are presented merely as examples of the kinds of questions that might be addressed rather than direction to exhaustively analyze these specific questions.

The decision letter cites with approval recent Forest Service efforts to cut costs and raise revenues of the timber management program. It states that the ROD must explain the likely effect of these efforts on the economics of the timber management program and the projections of below cost timber sales.

The timber sale levels allowed on these two National Forests (the ASQ's) are somewhat higher than the actual sale levels in recent years, but lower than the levels allowable under preceding timber management plans. The decision

letter states that the ROD must explain the circumstances under which actual timber sale levels will be increased under the new plans. If timber sale levels are increased in response to increases in timber demand, there may be associated increases in timber prices. The ROD should explain the likely effect of such price increases on the economics of the timber management program. On the other hand, if sale levels are increased without increases in timber prices, local economies may become more dependent on a timber sale program in which revenues do not cover costs. If this is the course of action that the plans allow, the ROD should address the likely effects on community stability.

#### Implications for the Record of Decision

As stated above, the ROD for a Forest Plan must explain why the selected alternative is believed to maximize net public benefits. National Forests with factual situations that are similar to those of the San Juan and GMUG may need to address the same concerns as those listed above in the ROD's for their plans. In making this judgment, responsible line officers should be guided by the following sources of direction:

1. General guidance on ROD's is found in 40 CFR 1505.2 and 1506.1(a); FSM 1953.4; FSH 1909.15-47.1, 47.11, and 47.12; 36 CFR 219.8(d), 219.10(c), and 219.12(j); and CEQ Forty Most Asked Questions (FSH 65.12) #10a, 14b, 19, 23c, 33b, and 34.
2. More specific guidance on using the ROD to explain why the selected alternative is believed to maximize net public benefits can be found in our 1570 letter of April 19, 1985. This letter was issued after the Chief's decision on the San Juan and GMUG appeals but before the Secretary's decision on review. The letter was cited with approval in the Secretary's decision. The contents of the letter have been incorporated into section 4.34 of the forthcoming Land and Resource Management Planning Handbook, FSH 1909.12.
3. Specific instructions on the treatment of below cost timber sales in RCD's and associated EIS's can be found in our 1920 letter of April 24, 1985.
4. General direction on the adjustment of timber sale levels in response to changes in market situations can be found in our 2430 letter of May 31, 1985. Additional direction on the discussion to appear in the ROD can be found in our 1920 letter of January 12, 1987.

#### Information Needs for Planning

As stated above, the explanation in the ROD must include an explanation of how the information developed in planning was used in selecting the preferred alternative. For National Forests which have factual situations similar to those of the San Juan and GMUG, the items listed below will be particularly important. Appendix B should summarize the principal conclusions reached on all of these items and should provide specific references to the places in the planning records where the underlying information may be found.

1. Financial Analysis of Timber Management. This is called the "Stage II" analysis in the Secretary's decision. It is an examination of the costs and revenues of timber options for the various timber strata that are identified on a Forest. It is required for all National Forests by 36 CFR 219.14(b). Detailed guidance on carrying out this analysis can be found in Chapter 20 of the Timber Planning Handbook (FSH 2409.13).

The summary of the financial analysis should describe the principal conclusions with respect to costs and revenues for the timber options considered and how this information was used in the formulation of alternatives and in the development and selection of prescriptions to be applied to specific lands. It will provide one of the bases for the subsequent discussion in the ROD of the economic implications of the planning alternatives and the proposed timber management program.

2. Sensitivity analysis. Sensitivity analysis is an analysis of how net economic values, outputs, and effects change as the principal items of input data in the analysis vary through their likely future range. In this case, the purpose of the analysis is to determine how the economics of timber management are affected by varying assumptions regarding future costs, revenues, and benefits.

There are a number of ways in which sensitivity analysis can be accomplished. The range of appropriate methods might include systematic variation of the variables in the financial analysis, sequential runs of the planning model for one or more of the Benchmarks constructed for the AMS or the preferred alternative, or special studies. The choice of the appropriate method will depend upon the specific situation in which a Forest finds itself. Guidance can be found in section 16.1 of the Economic and Social Analysis Handbook (FSH 1909.17). Particular attention should be given to assessing how reasonably achievable reductions in timber related costs would affect economic efficiency and the area of land identified as unsuitable for timber production.

The results of the analysis will provide a basis for the discussion in the ROD of how net public benefits of the vegetation management program may be affected by changes in timber prices or quantities demanded in the timber market or by the National Forest's own efforts to cut costs and raise revenues of timber management programs.

3. Costs of alternative vegetation management practices. Under 36 CFR 219.1; all National Forests have an obligation to ensure that Forest Plans provide for management in a manner that is sensitive to economic efficiency. Under 36 CFR 219.12(f), all planning alternatives must represent cost efficient means of accomplishing objectives. Thus, whenever National Forests propose timber management programs as means to achieve vegetation management objectives, they have an obligation to examine the relative efficiency of achieving these vegetation management objectives through other means, such as prescribed fire.

There are a number of ways in which this can be accomplished. The range of appropriate methods might include the study of vegetation management options in the financial analysis, consideration of planning alternatives that featured alternative methods for achieving vegetation management objectives, or special studies of the costs of various vegetation management practices.

4. Demand. Analysis of demand for both timber and other goods and services of the National Forests is required for all National Forests by 36 CFR 219.12(e). Detailed guidance for conducting the analysis can be found in FSM 1971 and Chapter 10 of the Economic and Social Analysis Handbook (FSH 1909.17).

The results of the timber demand study will establish a basis for expectations regarding future prices and quantities for timber. This, in turn, will provide a basis for the discussion in the ROD of the effects of demand changes on the economics of timber management and the net public benefits of the planning alternatives.

The results of the demand study for nontimber benefits will establish a basis for the discussion in the ROD regarding the need for and benefits of the nontimber outputs of the vegetation management program.

5. Effects on local communities. Analysis of community effects is required for all National Forests by 36 CFR 219.12(g). Detailed guidance can be found in FSM 1972 and 1973 and in existing Chapter 30 and forthcoming Chapter 20 of the Economic and Social Analysis Handbook (FSH 1909.17).

The analysis will provide both quantitative and nonquantitative information regarding the effects of the planning alternatives on local communities. It will provide one of the bases for the discussion in the ROD of the net public benefits associated with below cost sale programs.

#### General Applicability of the Secretary's Decision

As a general matter, the Secretary's interpretation of the role of economic analysis is applicable to all National Forests. For Forests without approved plans, draft and final plans and NEPA documents must meet the standards described by the Secretary's decision and other national direction.

Forests with approved plans should evaluate during annual monitoring and evaluation the degree of similarity between their factual situations and those of the San Juan and GMUG National Forests. If a National Forest is found to have a similar factual situation, its planning records should be further evaluated to determine if the information included or cited in the planning records is sufficient to support the necessary discussion in the ROD for the

Forest Plan. The ROD should also be evaluated to determine if it meets the standards described by the Secretary's decision and other national direction. If inadequacies are identified, remedial work should be scheduled as part of Forest Plan revisions or as part of amendments related to timber management.

/s/James C. Overbay

JAMES C. OVERBAY  
Deputy Chief

Enclosure

# **APPENDIX E**

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