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RECORD OF DECISION

FINAL ENVIRONMENTAL IMPACT STATEMENT
for the
REVISED LAND AND RESOURCE
MANAGEMENT PLAN

GEORGE WASHINGTON NATIONAL FOREST
Virginia West Virginia

**RECORD OF DECISION
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SECTION I

INTRODUCTION

Basis and Need for Decision

This document is a public Record of Decision (ROD) that summarizes the basis and rationale for my decision to select Alternative 8A from the accompanying Final Environmental Impact Statement (FEIS) to be the *Revised Land and Resource Management Plan for the George Washington National Forest* (Revised Plan)

The FEIS and Revised Plan were developed according to the National Forest Management Act (NFMA), its implementing regulations, 36 CFR 219; National Environmental Policy Act (NEPA), and the Council of Environmental Quality (CEQ) regulations, 40 CFR 1500-1508; and other Acts and laws

The National Forest Management Act (NFMA) requires all forests in the National Forest System to develop plans that direct resource management activities on the Forests. *The Land and Resource Management Plan for the George Washington National Forest* (1986 Plan) was adopted in August, 1986. The 1986 Plan was appealed by the public and has been revised to comply with the Chief of the Forest Service's appeal decisions.

The Revised Plan is part of the long-range resource planning framework established by the Resource Planning Act (RPA). NFMA requires revision of forest plans ordinarily on a 10-year cycle (36 CFR 219.10(g)) or at least every 15 years (NFMA Section 6(f)). A plan may be revised sooner if circumstances warrant. A formal review of monitoring and evaluation (M&E) findings (See Chapter 5, Revised Plan) is required at least every five years to determine if resource conditions and issues and concerns have changed significantly enough to require change in management direction, further amendments or revisions.

The Revised Plan establishes a framework for future decisionmaking by outlining a broad, general program for achieving goals and objectives of the Revised Plan. The Revised Plan is carried out at the "project level" through implementing specific projects at specific locations (such as building a trail, developing a campground or selling timber). (See Section V, ROD, Implementation)

The Revised Plan does not direct specific management activities to occur at specific locations, nor does it dictate day-to-day administrative activities needed to carry on the Forest Service's internal operations, i.e. personnel matters, law enforcement, fleet equipment, or internal organization changes

The FEIS that accompanies the Revised Plan provides analytical data that discloses the environmental consequences of all the alternative management strategies considered in detail. The FEIS discloses the effects of these Alternatives and their responses to issues and concerns.

DECISIONS

Summary of Decision

My decision is to select Alternative 8A from the FEIS and approve it as the Revised Plan.

My decision to select **Alternative 8A** is based on its potential to maximize public benefits consistent with the principles of multiple use and sustained yield of Forest resources. Alternative 8A addresses a broad range of public issues and management concerns; supplies a mixture of public uses and products; responds to environmental values and conditions desired by the public, and is sensitive to ecological principles, emphasizing the maintenance of healthy, diverse and sustainable Forest ecosystems.

Alternative 8A enhances the compatibility of multiple resource uses and increases environmental sensitivity with which commodities are produced. It balances economic and resource values and recognizes the equal importance of water and air quality, fisheries, wildlife, wilderness, minerals, outdoor recreation, and a sustained supply of wood products.

Alternative 8A strikes a balance among competing interests in order to achieve the maximum net public benefits from Forest resources.

Since the issues reflect needs and priorities that often compete with one another, none of the alternatives would satisfy all parties completely. I have concluded, however, that Alternative 8A represents the highest public agreement on which locations of the Forest are suitable for which uses, and has the greatest potential for achieving desired future conditions of the Revised Plan.

Decision Rationale

The goal of the Revised Plan is to permit management activities that balance the need to use the Forest resources to supply goods and services in the present with the need to protect, sustain and conserve resources for the future. The Plan also recognizes the limited capabilities of the land and resources, and responds to the fact that not all of the uses, products and environmental conditions desired by Forest users and the agency can be provided. How thoroughly and balanced these factors were integrated into Alternative 8A were important considerations in my decision.

Critical factors relevant to my decision to select Alternative 8A are:

- *Biological diversity of the Forest, including its resource values that are generally limited to public owned land within the mid-Appalachian Region.*
- The productive capacity of the Forest to produce a variety of goods and services, including forest products, clean water, developed and dispersed recreation, wildlife and fisheries, motorized recre-

ation, non-motorized recreation, minerals, game and non-game habitat, and their local, regional and national effects.

- The health of the Forest affected by the continued presence and potential damage to natural resources from the gypsy moth as well as other insects and diseases in the presence of an aging forest.

- The natural beauty of the Forest associated with its historical and cultural value to the mid-Appalachian region.

- Concerns about changes in socio-economic conditions in the area affected by the Forest that could come into play if significant changes in the management of the Forest were incorporated.

- National and regional issues such as below-cost timber sales, ecosystem management, and old growth which require new approaches to traditional management.

- Sensitivity to striking a balance when addressing key elements of the many identified issues

NEPA requires the formulation of alternative ways to manage the Forest. (See Chapter 2, FEIS). Formulating a broad range of reasonable alternatives provides a basis of comparison for selecting the Alternative that comes closest to maximizing net public benefits.

Public comments about the Draft EIS (DEIS) indicated public preference to manage the Forest under Alternatives 3, 12, and 8. Many modifications to these alternatives were suggested.

Alternative 3 (minimal level manipulation and vast wildernesses) meets my intent to significantly reduce clearcutting and includes some biological diversity elements. However, it does not adequately satisfy certain legal requirements--no radical change to socio-economic conditions; flexibility to adequately manage damage from gypsy moth; provision of certain goods and services (developed recreation and forest products). It does not permit the flexibility to manage habitats adequately for some wildlife species requiring abundant early successional conditions. For these reasons, I could not select Alternative 3.

Alternative 12, which provides a traditional range of goods and services, responds to some of the key factors as well as many other issues described in detail in the Revised Plan and the DEIS. It's strong points are in it's capability to produce high outputs of goods and services, particularly timber products; OHV trails; and habitat for white tailed deer. However, implementing Alternative 12 would require unacceptable levels of clearcutting, soil erosion, use of the Forest by all terrain vehicles; not enough opportunities to maintain unfragmented habitat; and too much development of remote and historically controversial areas. This failure to address controversial issues, and at the same time provide goods and services adequately, requires my selecting a more equitable, environmentally sensitive and balanced alternative.

Alternatives 6, 9, 10, 11 and 13 were not as expansive in one or more of the following areas: lack of flexibility for managing the gypsy moth; lack of suitable acres for manipulation of vegetation to meet wildlife habitat requirements and a diversity of forest age classes; and were not responsive enough to the local socio-economic needs of the surrounding communities.

Alternatives 2, 4, 5, 7, 10, 14 were not responsive enough to my intent to move away from clearcutting, adversely affecting black bear population, and would result in too much fragmentation of the Forest.

In the draft, Alternative 8 was the Forest Service preferred Alternative. Many public comments supported this alternative (in many cases with modification). These comments, in response to the issues, led to the formulation of a modified Alternative 8, Alternative 8A. Although Alternative 8A is similar to Alternative 8, it is different in some respects. Differences and adjustments are:

More flexibility for managing the gypsy moth.

Increased opportunities to provide both game and non-game species habitat.

Additional areas identified for dispersed recreation opportunities.

Identification and direction provided for special management areas.

A better balance and spatial allocation between suitable and unsuitable acres.

Increased sensitivity to riparian areas and in particular, riparian areas within municipal watersheds

A better defined habitat for the only known population of the Cow Knob salamander.

An average annual Allowable Sale Quantity (ASQ) was increased to 4.7 MMCF (33 MMBF). This level better responds to meeting the desired future condition for wildlife, removing salvage products from suitable lands, and improving economic conditions in the surrounding area while requiring an ecological approach to managing the Forest ecosystem.

Allocation of OHV routes for all terrain vehicles that suit environmental conditions better, and better defined opportunities for OHV users of the Forest's system roads.

Increased allocation of areas and corridors for visually sensitive management

Allocation of suitable lands on more productive sites (offering higher value wood products) within management areas suitable for timber production.

Alternative 8A could affect economic and social factors in surrounding communities. However every effort has been made to develop and select an alternative that maximizes net public benefits without jeopardizing the basic stability of these communities.

The selected alternative also provides smaller increases in the opportunities for motorized recreation and recommends three additional areas for wilderness opportunities on the Forest. However, additional opportunities were provided where these activities will be consistent with other multiple-use objectives.

Alternative 8A does not maximize any single resource or public service or propose the management of resources beyond the sustainability of ecosystems within the Forest. It does not propose management of any resource solely on values in the market place.

Alternative 8A makes the following decisions:

1. Establishes Forest-wide multiple use goals, objectives and standards, including estimates of the goods and services expected;
2. Establishes management areas with multiple-use prescriptions containing objectives, desired future condition and standards;
3. Establishes a Forest-wide Allowable Sale Quantity (ASQ) and the Timber Sale Schedule;
4. Identifies land that is not suitable for timber production;
5. Allocates twenty-four roadless areas to management areas which permit a range of activities;
6. Establishes a monitoring and evaluation process;
7. Determines what lands are made available for leasable mineral development;
8. Identifies 75,000 acres in the Alleghany Front Lease Area where consent to lease federally-owned oil and natural gas is being given; and
9. Designates "Special Interest Areas".

Description of Decisions and Recommendations in the Revised Plan

Establishment of Forest-Wide Multiple-Use Goals, Objectives and Standards, Including Estimates of the Goods and Services Expected. Goals and objectives are conditions we want to achieve in the future. Forest-wide goals and objectives are included in the text of Chapter 3 of the Revised Plan and have been underlined for reference.

Standards are a set of constraints that must be met to ensure compliance with laws, regulations, Executive Orders or policy direction established by the Forest Service. Deviation from compliance with a standard requires a forest plan amendment. Forest-wide standards are listed under "Common Standards" in Chapter 3 of the Revised Plan. In addition to the applicable common standards, each management area may have specific standards that apply to that particular management area.

The estimates of the goods and services expected from the Revised Plan are discussed in Chapter 2. The appendices (particularly Appendices A, B, C and E) provide more information on the projects being used to provide these goods and services. The level of outputs of goals and issues are only projected estimates and are not considered targets or objectives by themselves.

Establishment of Management Areas with Multiple-use Prescriptions Containing Objectives, Desired Future Condition and Standards. Management areas are areas in the Plan having similar management objectives. Chapters 2 and 3 of the Revised Plan contains management area objectives, desired future conditions and standards. Objectives and desired future condition are discussed under "Desired Future" for each management area Table 3-1 of the Revised Plan lists the management areas, including acreages.

Establishment of Forest-wide Allowable Sale Quantity (ASQ) and the Timber Sale Schedule. Appendix A of the Revised Plan contains a discussion of the Allowable Sale Quantity (ASQ) of 330 MMBF for the first decade of the Revised Plan. Table A-4 in the Revised Plan contains the Timber Sale Schedule.

Identification of Those Lands Not Suitable for Timber Production. Appendix A of the Revised Plan identifies lands not suited for timber production as determined through the three-stage process outlined in 36 CFR 219.14. It also includes a definition and discussion of the 350,000 acres suitable for timber production including a procedure for locating these lands on the ground. An approximate location of suitable acres by management area is also identified in the Special Features map of the Revised Plan. Table 1 displays the lands suitable and unsuitable for timber production by management area

Table 1.
Lands Unsuitable and Suitable For Timber Production

<u>Management Area</u>	<u>Thousands of Total Acres</u>	<u>Thousands of Unsuitable Acres</u>	<u>Thousands of Suitable Acres</u>
4	70	70	0
5	10	10	0
6	10	10	0
7	39	27	12
8	44	44	0
9	141	141	0
10	8	8	0
11	11	9	3
12	2	2	0
13	42	38	4
14	133	85	48
15	331	138	192
16	39	12	27
17	91	28	63
18	21	20	1
20	4	4	0
21	59	59	0
22	6	6	0
TOTAL	1,061	711	350

Recommendation of Three Roadless Areas for Wilderness Study. Alternative 8A includes three roadless areas (St. Marys Addition, the Priest, and Three Ridges) in Management Area 8. These three areas, containing approximately 12,000 acres, are recommended for wilderness study. The recommendation of areas for wilderness study area designation is a preliminary administrative recommendation that will receive further review and possible modification by the Chief of the Forest Service, the Secretary of Agriculture, and the President of the United States. Final decisions on wilderness designation have been reserved by Congress to itself.

Allocation of Roadless Areas to Management Areas Which Permit a Range of Multiple Uses. The remaining twenty-four roadless areas are allocated to a variety of management areas which permit different mixtures of multiple uses to occur. Table 2-3 in the Revised Plan displays the allocation of roadless area acreage to management areas. As disclosed in Table 3-17 of the FEIS, 5% of the roadless area acreage is recommended for wilderness study, 84% is unavailable for regeneration harvesting, road construction or other management practices that would preclude future consideration for wilderness study. The remaining 11% may be developed during the first decade of the Revised Plan. Such development, however, would require site-specific analysis and disclosure before any irretrievable or irreversible commitment of resources occurs.

Establishment of a Monitoring and Evaluation Process. The Forest monitoring and evaluation program is described in Chapter 5 of the Revised Plan. Forest managers monitor by collecting information about the implementation and effectiveness of projects and activities, and evaluate their findings to determine whether the Plan remains sufficient, valid and appropriate and whether or not projects and activities are achieving the goals and objectives of the Plan.

Determination of What Lands are Made Available for Leasable Mineral Development. The Revised Plan designates, by management areas, those lands which are administratively available for leasing of federally-owned leasable minerals. This decision identifies areas where leasing is permissible but does not authorize leasing any specific lands. Table 2 of this document displays the lands available for leasing both energy (oil and gas) and non-energy leasable minerals. The Revised Plan permits leasing for energy leasable minerals on 145,000 acres with standard lease terms, on 842,000 acres with timing or controlled surface use stipulations and on 42,000 acres with no surface occupancy stipulations. It also designates 479,000 acres "generally available" and 532,000 acres available on a "case-by-case" basis for leasing non-energy minerals.

Identification of 75,000 Acres in the Alleghany Front Lease Area Where Consent to Lease Federally-Owned Oil and Natural Gas is Being Made. As discussed below, there are actually two parts to the decision to lease oil and natural gas under the requirements of 36 CFR 228.102. The leasing decision described in the FEIS is made in cooperation with the Eastern States Office of the Bureau of Land Management.

The standards in Chapter 3 of the Revised Plan designate, by management area, lands which are administratively available for mineral development. In the case of leasing federally-owned oil and natural gas, this decision complies with 36 CFR 228.102(d). The decision to approve the Revised Plan is the first step in leasing fluid minerals on national forest lands.

Before authorizing any leasing, a second decision must be made on the specific lands involved. In the Selected Alternative, this second decision is being made only for the 75,000-acre Alleghany Front Lease Area. The Alleghany Front Lease Area contains most of the Forest land that has high-to-moderate potential for natural gas and oil. Should future information locate other areas of high interest, additional lease areas may be identified and subsequently analyzed.

The Forest Service authorizes BLM to offer leases for federally-owned oil and natural gas on 75,000 acres in the Alleghany Front Lease Area (refer to the map on page 3-71 of the FEIS). This is the "consent decision" discussed in 36 CFR 228.102(3). As displayed in Table 2, 5,000 acres can be leased with standard lease terms, 69,000 acres with controlled surface use or timing stipulations, and 1,000 acres with no surface occupancy stipulations. This decision represents the point of irreversible and irretrievable commitment of resources. It requires site-specific environmental analysis which is contained in Chapter 3 of the FEIS under "MINERALS". Details on the Reasonably Foreseeable Development Scenario are contained in Appendix E of the FEIS.

Designation of "Special Interest Areas". The Revised Plan designates 38 "biological" special interest areas (refer to Table 3-2), twelve historic special interest areas, two geologic special interest areas, and a special interest area along the Shenandoah Mountain Crest. After these areas have been evaluated, they will be designated botanical, zoological, historical or geologic areas. If more specific management direction is identified during this designation process, the Revised Plan will be appropriately amended.

The special interest area in Management Area 4 and other habitat in adjoining Management Area 21 (Little River) form the known range of the Cow Knob Salamander. The standards in these two management areas have been designed to provide for the recovery of this species which has been nominated for the federal Threatened and Endangered Species list.

The Forest coordinates with the USDI Fish & Wildlife Service on managing for the recovery of the Cow Knob salamander. The Revised Plan was prepared in conjunction with a "pre-listing" recovery plan for this species.

Identification of Six Areas To Study for Additions to the Research Natural Area (RNA) System. There are presently two research natural areas on the Forest: Little Laurel Run and Ramseys Draft. As discussed in Chapter 3 of the Revised Plan under "MANAGEMENT AREA 4", Big Levels, Laurel Run, Maple Flats, Shale Barren-Complex, Skidmore and Slabcamp/Bearwallow are recommended for evaluation as research natural areas. The areas found to fit the RNA criteria will be recommended to the Chief of the Forest Service who has authority to establish RNA's.

Relationship of Decisions to Other Planning Documents, Tiering

NEPA, RPA, NFMA and related implementing regulations require the Forest Service to use a multi-level, integrated planning and decision-making process. At the national level, the RPA program establishes long-range resource objectives based on the present and anticipated supply of, and demand for, various resources. It includes a description of Forest Service programs, cooperative programs, and management of the National Forest Service System. Each of the 9 Regions in the Forest Service shares responsibility in achieving the RPA program.

At the regional level, the Regional Guide establishes regional management standards and guidelines, *The Regional Guide for the South* (Southern Region, USDA—Forest Service 1984).

At the forest level, the Revised Plan establishes management direction for the Forest. The Revised Plan complies with *The Forest Service Program for Forest and Rangeland Resources. A Long-Term Strategic Plan—Recommended 1990 RPA Program*.

At the district, or project (ground) level, possible projects are scheduled (Appendices A, B, C, E of the Revised Plan). These projects are anticipated activities that could take place. Environmental analysis conducted for these proposed projects will be "tiered" to the FEIS for the Revised Plan. (Tiering means that information in the FEIS, Revised Plan and associated documents will be incorporated into the analysis by summarizing the discussions contained in these documents and incorporating the full discussion by reference.)

The FEIS that accompanies the Revised Plan is tiered to four other environmental documents:

- *Final Environmental Impact Statement for Suppression of Southern Pine Beetle* (USDA Forest Service — Southern Region, April 1987);
- *Final Environmental Impact Statement as Supplemented [in] 1985—USDA Gypsy Moth Suppression and Eradication Projects* (1985);
- *Final Environmental Impact Statement—Appalachian Integrated Pest Management (AIPM)—Gypsy Moth Demonstration Project* (1989);
- *Final Environmental Impact Statement — Vegetation Management in the Appalachian Mountains* [USDA Forest Service — Southern Region, July 1989].

Comparison of the Selected Alternative to the Environmentally Preferable

All alternatives considered in detail meet minimum legal and environmental standards. A detailed discussion of the environmental effects of each alternative is included in Chapter 3 of the FEIS. The environmentally preferable alternative is the one which would cause the least impact to the physical and biological environment of the Forest.

Alternative 3 is the environmentally preferable alternative since it involves the least human-induced change to the natural environment. Environmental protection would be the dominant concern under this alternative.

A summary of the major environmental, economic and physical differences between Alternative 3 and Alternative 8A, the selected alternative, is provided in Table 2 of this Record of Decision. Table 2 also contains a comparison of the output of goods and services provided by each alternative.

Although Alternative 8A has a greater effect on the environment, I selected it as the Revised Plan because it generates more net public benefits. Some of these benefits are:

- It more fully resolves issues than Alternative 3 does.
- It provides the flexibility to adequately manage damage from gypsy moth better than Alternative 3 does.
- Goods and services are provided in a way that best responds to overall public desires and environmental protection needs.
- The PNV is only slightly less than that of Alternative 3.
- Flexibility is provided to manage habitats for a variety of wildlife species, including those which need abundant early successional habitat as well as those that require abundant older successional habitat.
- It provides a projected 80 new jobs while Alternative 3 would cause an unacceptable loss of 566 jobs.
- Substantial areas are allocated to unfragmented habitat and remoteness while still providing for a desirable mix of multiple uses.

Comparison of the Selected Alternative to Alternatives with Greater Present Net Values

Present net value (PNV) is the difference between discounted benefits and discounted costs, or a comparison of the value of goods and services produced on the Forest to the costs of producing these goods and services. Present net value is used to compare Alternatives for economic efficiency. In calculating PNV, a dollar value is assigned to Forest outputs. Some output values, such as timber, are determined by the marketplace and produce a revenue. Other resource outputs, such as recreation, are assigned values derived from research and generally do not produce revenue.

Present net value only includes those goods and services that can be priced. When selecting Alternative 8A other non-priced factors are considered in maximizing net public benefit.

These PNV measures provide a partial net public benefits estimation framework for comparing alternatives and discussing other benefits that were not given a monetary value.

The Selected Alternative has a Present Net Value (PNV) of 1228.9 million dollars. As displayed in Table 3 (found later in the ROD), Alternatives 12, 5, 2, 3, 10 and 6 ranked according to highest PNV, have higher present net values.

Alternative 8A has a lower present net value than Alternatives 12 and 5 for the following reasons. 1) timber benefits decline because of a lower ASQ and less clearcutting; 2) wildlife benefits decline because of less habitat being managed for deer and turkey; 3) wildlife costs increase because of more acres being prescribed burned and additional clearings being made for wildlife; and 4) recreation costs are higher.

Alternative 8A has a lower present net value than Alternative 2 for the following reasons: 1) timber benefits decline because of a lower ASQ and less clearcutting; 2) wildlife costs increase because of more acres being prescribed burned and additional clearings being made for wildlife; and 3) recreation costs are higher.

Alternative 8A has a lower present net value than Alternative 3 because the budget is higher. Alternative 8A produces more timber, wildlife and recreation benefits than Alternative 3, but the higher costs result in a lower PNV.

Alternative 8A has a lower present net value than Alternative 10 for the following reasons: 1) timber costs are more because of more acres being harvested by harvest systems other than clearcutting; 2) engineering costs increase because of more new roads being built; 3) wildlife costs increase because of additional clearings being made for wildlife; and 4) recreation costs are higher.

Alternative 8A has a lower present net value than Alternative 6 for the following reasons: 1) timber costs are more because of more acres being harvested; 2) engineering costs increase because of more new roads being built; 3) other costs increase because of higher costs in recreation, fire, lands, minerals, soil and water, range and law enforcement.

In Alternative 8A, the costs of the timber program were increased to utilize a greater amount of even-aged regeneration methods other than clearcutting. The costs of the wildlife program were increased to use wildlife habitat improvements on lands unsuitable for timber production in areas where a timber sale program was expensive, or incompatible with the objectives and desired future condition for the management area. The costs of the recreation program were increased to provide larger and more developed recreation sites to meet increasing demand and to provide support for dispersed recreation use.

For more information on why present net value changes by alternative see pages B-90 through B-95 of Appendix B.

As discussed in the *Decision Rationale* section of this document, Alternative 8A limits clearcutting; minimizes fragmentation of the Forest; includes enough flexibility for managing the gypsy moth, includes enough suitable acres for manipulation of vegetation to meet wildlife habitat requirements and a diversity of age classes; and is responsive to local socioeconomic needs of surrounding communities.

Analysis of Cost Efficiency for the Selected Alternative (McCleery Decision)

On July 31, 1985, Deputy Assistant Secretary of Agriculture Douglas W. MacCleery rendered the *USDA Decision on Review of Administrative Decision by 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*. This was a benchmark decision that established the Department of Agriculture requirements for economic analysis needed to support a below-cost timber sale program that is designed to provide multiple-use benefits.

The above decision applies to situations similar to that on the George Washington National Forest where the selected alternative is below cost

The MacCleery decision indicates that the planning documents should have the information to address the following questions:

- 1) Is it possible to achieve the non-timber benefits more cost effectively than with timber sales?
- 2) To what extent can timber costs be cut or revenues increased while maintaining the appropriate level of non-timber objectives?
- 3) Does the demand for non-timber objectives support the need for the expenditures to meet them?
- 4) If the vegetation management program did not include sales whose costs were greater than revenues, what non-timber or amenity benefits would be lost? Who would be affected and how?

Question 1

In response to the first question the Forest developed Alternative 6. Alternative 6 produces at least the same amount of non-timber benefits as Alternative 8A without using scheduled timber sales. The discounted timber, engineering, and wildlife costs are subtracted from the discounted timber and wildlife benefits for Alternative 6 and Alternative 8A (See table 3). This computation results in Alternative 6 having a net benefit of 590.3 million dollars and Alternative 8A having a net benefit of 595.8 million dollars. Thus, using timber sales along with prescribed burning and wildlife clearings (i.e. Alternative 8A) is more cost efficient than only doing prescribed burning and wildlife clearings (i.e. Alternative 6) to meet non-timber benefits.

The conclusions for this analysis were very similar to an earlier nationwide study that was completed in September 1992 titled *Forest Management Budget/Cost Analysis with focus on the Timber Program of the George Washington National Forest*. The study indicated that the option which utilized timber sales to meet non-timber resource objectives (Scenario 3) had a lower "net effect" (Budget + Other Appropriation - Revenues) than the option which allowed no timber harvest (Scenario 2). Thus, the study concluded that using timber sales to meet non-timber objectives was more cost efficient than allowing no timber harvest.

Question 2

The effectiveness of cost reduction initiatives on the GWNF is readily apparent when comparing the annual cost of the timber sale program since 1987. There has been considerable lowering of total cost each year. Annual total costs were reduced \$521,000 in FY1988, further reduced \$660,000 in FY1989, and even further reduced \$131,000 in FY1990.

Unit costs have been reduced from \$59.72/MBF Harvest in 1988 to \$50.55/MBF Harvest in 1991

Since 1990, the Forest has not only focused on efforts to reduce costs but also to improve revenues through timber sale packaging initiatives that focus on hardwood sawtimber marketing opportunities. Priority will be given to harvesting high value stands with high regeneration priority or in imminent threat

of Gypsy Moth damage. Additional consideration will be given to making low value products optional material for bidding or removal when this makes value products more marketable. Low value and medium value sales to meet other resource objectives will be packaged to maximize sale marketability.

Based on implementing the above procedure unit revenues have been increased from \$18.76/MBF in 1988 to \$39.38/MBF in 1992.

Question 3

As discussed in Appendix B of the EIS, a demand analysis was completed for big game wildlife (i.e. bear, deer, and turkey). Based on the results of this analysis the demand for these species was 27,773 wildlife user days for bear, 215,568 wildlife user days for deer, and 100,725 wildlife user days for turkey. Alternative 8A produced the following results: 46,194 wildlife user days for bear, 180,907 wildlife user days for deer, and 97,086 wildlife user days for turkey. Based on this analysis it can be concluded that the demand for deer and turkey does support the need for expenditures to meet them.

Question 4

An alternative was developed to include a timber sale program of least-net-cost. Alternative 10 has the highest projected net revenue of any of the alternatives that harvest timber. To answer the questions of what non-timber or amenity benefits would be lost and who would be affected and how, the change in Alternative 10 from Alternative 8A is displayed in Appendix B of the EIS.

Based on the analysis it can be concluded that jobs related to timber, wildlife and Forest Service expenditures would all decline if Alternative 10 was implemented. Nontimber and amenity benefits related to populations of big game wildlife would also decline significantly. Finally returns to the federal treasury would decrease also.

Section IV of this ROD, "Issue 2 - Below-Cost Timber Sales", contains additional information about how the Revised Plan responds to the below-cost timber sales issue.

SECTION III

ALTERNATIVES

Alternative Considered, but Eliminated From Further Consideration

Alternative 1 represents the 1986 Forest Plan. The alternative does not, however, include several important interim management direction requirements which could not be incorporated into the Plan without a significant amendment. Since interim management has not been completely incorporated into the 1986 Plan, Alternative 1 was not a true and viable reflection of the way the Forest is being managed.

Alternative 2 (interim management direction) is a better representation of the way the Forest has been managed since the Forest Plan was released in 1986. Therefore, Alternative 1 was not considered as the no action alternative and was eliminated from detailed study.

Alternatives Considered in Detail in the FEIS

Thirteen alternatives, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14, were formulated initially. The Draft FEIS was released in January 1992. The public, other government agencies, state and local governments, forest users, individuals and organizations were asked to comment. Comments on the merits of the alternatives were specifically requested.

In response to public comments, a new alternative (8A) was formulated; small adjustments were made to all of the alternatives; and changes (identified in the following discussion) were made to Alternatives 5, 6, 7, 11, 12, and 13. Chapter 2 of the FEIS contains detailed descriptions of the alternatives. Summaries appear below.

Alternative 2 is the no action/no change alternative. Under this alternative, the Forest continues to be managed under management direction in the amended Forest Plan and additional interim management direction set forth by the Chief.

Alternative 3 explores the advantages of changing a number of Forest Service policies. Technically, the Regional Forester does not have the authority to make such policy changes. Alternative 3 assumes that such changes are recommended by the Forest Supervisor and the Regional Forester to the appropriate higher authority.

Alternative 3 calls for a minimal level of manipulation while producing habitat not available on private lands. This alternative creates an extensive wilderness system by designating all roadless areas as wilderness and recommending additional areas. Wildernesses are linked by wildlife travel corridors. Buffer zones surround wildernesses where possible. Trails are maintained at a minimum level. Foot travel requiring map reading and compass skills is encouraged. All motorized vehicles are restricted to open roads outside the wildernesses.

Alternative 4 provides a variety of motorized recreation experiences. Roads constructed for timber sales are used by off-highway vehicles. Areas currently managed for non-motorized dispersed recreation are reviewed for conversion to motorized recreation as demand warrants.

Alternative 5 provides an uninterrupted flow of marketable goods and services. It provides a high level of timber and, as a result, habitat favorable to huntable wildlife.

In the FEIS, the ASQ for this alternative has been increased from 600 MMBF to 680 MMBF to provide a response to concerns that sufficient regeneration was not being accomplished given gypsy moth mortality.

In **Alternative 6**, the emphasis is on non-market goods and services. Included are wilderness recreation, fish and wildlife habitat, water recreation, and non-wilderness dispersed recreation. Eleven roadless areas (containing 25% of the acreage in the roadless area inventory) are recommended for wilderness study. Special Interest Areas are maintained or enhanced.

In the FEIS, wildlife habitat improvement accomplished through non-timber management practices was increased so that this alternative provided an amount of wildlife habitat comparable with Alternative 8A. The management area allocation was also modified to increase the amount of lands in Management Area 4 through the inclusion of more "Special Interest Areas – Biological" including the Shenandoah Mountain Crest. A modified management area map for this alternative accompanies the FEIS.

Alternative 7 allocates Forest lands to unfragmented habitat, riparian areas, habitat for bear/squirrel, habitat for turkey/woodpecker, habitat for deer/grouse. Quality hunting, fishing, hiking, and nature study are emphasized.

In the FEIS, the allowable sale quantity was reduced from 580 MMBF to 520 MMBF to provide a wide range of response to concerns over the amount of timber harvesting. The management area allocation was also modified to remove all of the "Special Biological Areas" from Management Area 4. A modified management area map for this alternative accompanies the FEIS.

Alternative 8 was the Forest Service preferred alternative in the DEIS. It emphasizes biological values – proposed, threatened, endangered, and sensitive species; large areas of unfragmented habitat for area-sensitive species; wildlife viewing and nature studies – while providing multiple use.

Alternative 8A is the alternative selected for the Forest Plan. Although very similar to Alternative 8 above, it also reflects many of the suggestions and comments made on the draft EIS and positive components identified in other alternatives. It emphasizes providing uses, values, services and environmental conditions consistent with the 1990 RPA Assessment in a manner that maintains biological diversity and sustainable ecosystems. Since Alternative 8A was formulated after the DEIS was issued, a management area map for this alternative accompanies the FEIS. (See Section IV, Decision Rationale.)

Alternative 9 provides extensive areas of unfragmented forest and a large increase in wilderness.

In the FEIS, the land suitable for timber production was reduced from 80,000 acres to 66,000 acres based on additional evaluation of where uneven-aged regeneration harvests could be practically applied on the

Forest. The management area allocation was also modified to increase the amount of lands in Management Area 4 through the inclusion of more "Special Interest Areas – Biological". A modified management area map for this alternative accompanies the FEIS.

Alternative 10 emphasizes a mixture of goods and services that provides the highest revenue in an efficient manner. Included is a timber sale program of least net cost. The volume of timber produced is determined by the amount of land available for timber production that provides a positive cash flow.

Alternative 11 emphasizes biological values and roadless area values. Eleven roadless areas are recommended for wilderness study and remote areas are managed as backcountry. Motorized recreation is restricted to open system roads.

In the FEIS, this alternative was adjusted to provide one possible response to suggested changes to the Forest Service preferred alternative in the DEIS. The roadless areas recommended for wilderness study were changed to eleven roadless areas often recommended by some individuals and organizations. The remaining roadless areas and other remote areas were allocated to a different version of Management Area 9 containing standards that resembled Management Area 8. Lands suitable for timber production were limited to lands within 1/2 mile of system roads. No unlicensed off-highway vehicle trail routes were included and licensed off-highway vehicles were restricted to open system roads. The management area allocation was also modified to increase the amount of lands in Management Area 4 through the inclusion of more "Special Interest Areas – Biological". A modified management area map for this alternative accompanies the FEIS.

Alternative 12 provides a traditional range of goods and services including timber, recreation, minerals, wilderness, range, and wildlife habitat.

In the FEIS, the ASQ for this alternative has been reduced from 500 MMBF to 450 MMBF to provide a wide range of response to concerns over the amount of timber harvesting. The lands suitable for timber production have been increased to 595,000 acres. Also, the mixture of regeneration harvest methods has been changed so that the estimated annual program of harvest would consist of clearcutting 1,250 acres, modified shelterwood on 1,400 acres and two-stage shelterwood on 700 acres.

Alternative 13 provides areas of unfragmented forest and increases wilderness. Twenty-three roadless areas are recommended for wilderness designation; the remainder provide primitive recreation.

In the FEIS, this alternative was adjusted to provide one possible response to suggested changes to the Forest Service preferred alternative in the DEIS. 23 roadless areas were recommended for wilderness study based on roadless areas often recommended by some individuals and organizations. The remaining roadless areas and other remote areas were allocated to a different version of Management Area 9 containing standards that resembled Management Area 8. Some lands were allocated to Management Area 2 (migration corridors) to respond to concerns that such changes were needed to the Forest Service preferred alternative in the DEIS. Lands suitable for timber production were limited to lands within 1/2 mile of system roads. No unlicensed off-highway vehicle trail routes were included and licensed off-highway vehicles were restricted to open system roads. The management area allocation was also modified to

increase the amount of lands in Management Area 4 through the inclusion of more "Special Interest Areas – Biological". A modified management area map for this alternative accompanies the FEIS.

Under **Alternative 14**, the Forest is managed to (1) provide a mixture of emphases based on local issues and conditions, (2) provide goods and services to local constituents, (3) maintain natural values on large portions of the Forest (including a moderate increase in wilderness), (4) achieve a multiple-use program in light of the 1990 Resources Planning Act Assessment, and (5) minimize value loss and vegetation impacts caused by the spread of gypsy moth defoliation and mortality.

SECTION IV

ISSUES

Response to Issues/Public Comment

The revision process began with the identification of issues and concerns through contacts with individuals; local officials and organizations; local, state, and federal agencies; industry; various interest groups; and Forest Service employees and retirees.

Frequent releases of draft Plan and EIS materials were made to the public. The public was asked to make informal comments anytime they wished. Regular public meetings and workshops were held throughout the development of the Revised Plan. Particular attention was paid to the responsiveness of Alternatives to the Issues.

The DEIS and Draft Revised Plan were formally released to the public for comment on January 17, 1992. Comments were due within 90 days.

All letters of comment received by April 30th were reviewed, analyzed, and considered in preparing the FEIS and Revised Plan. All letters received after April 30th were reviewed, but are not included in Appendix I of the FEIS. All responses to the DEIS and Draft Revised Plan are available for review at the Supervisor's Office, Harrisonburg, Virginia

Among the more than 4,300 letters received were letters from the following Federal and State Agencies and elected officials:

Federal Agencies

United States Environmental Protection Agency
United States Department of the Interior
Office of the Secretary (Departmental response)
National Park Service, Blue Ridge Parkway
Bureau of Mines

State Agencies

Commonwealth of Virginia

Office of the Governor
Department of Forestry
Department of Historic Resources

State of West Virginia

Division of Forestry
Division of Natural Resources

Elected Officials

United States Senate

John W. Warner

U. S. House of Representatives

Constance A. Morella
Jim Olin

Senate of Virginia

Elliot S. Schewel
Malfourd W Trumbo

West Virginia Senate

J. D Brackenrich

Virginia House of Delegates

Watkins M. Abbitt, Jr.
R. Creigh Deeds
Lacey E. Putney
S. Vance Wilkins, Jr

West Virginia House of Delegates

Joe Martin
Earl M. Vickers

A copy of each of these letters is included in Appendix I of the FEIS.

In addition to the comments, the Forest Interdisciplinary Team reviewed plans and documents from other agencies and county planning commissions. To the best of my knowledge, my decision does not conflict with, and is compatible with, these plans and documents. No Native American tribal lands are located within the National Forest boundary.

Public comments on the draft documents generally fell within the following thirteen issue areas. Comments and responses from more than 4,300 letters are contained in Appendix I of the FEIS.

- Biodiversity
- Below-Cost Timber Sales
- Forest Access
- All Terrain Vehicle (ATV) Use
- Roadless Area Management
- Special Management Areas
- Aesthetics
- Vegetation Manipulation
- Resource Sustainability
- Minerals
- Gypsy Moth and Other Pests
- Adequacy of the Revision
- Mix of Goods and Services
- Cultural Resources
- Lands
- Other Comments

The Forest responded to the substantive public comments in a variety of ways, which included:

1. Modifying existing alternatives as described under **Section III – Alternatives**
2. Developing and evaluating a new alternative (Alternative 8A) not previously considered as described under **Section III – Alternatives.**

- 3 Supplementing and modifying the analyses as described in Appendix B of the FEIS.
4. Making factual corrections
5. Explaining why the rationale, authorities, and sources were used in the DEIS and why the Forest's position is maintained in the FEIS

The comments and responses are part of a continuing dialogue with the public. Extensive public participation has been extremely valuable in revising the 1986 Plan.

From this input, thirteen issue areas were formulated and considered throughout this revision process. The issues are summarized in Chapter 1 of the FEIS and discussed in more detail in Appendix A of the FEIS. Chapter 2 of the Revised Plan describes how the selected alternative responds to these thirteen issues.

Issue 1 – Biodiversity

Overview of Issue. Many public comments concern biological diversity. Biological diversity – or the diversity of life – includes ecosystem diversity, species diversity, and genetic diversity within a species. A major task of the revision effort was to successfully provide for biological diversity while striving to accommodate the public demand for a variety of Forest goods and services.

This FEIS addresses the question of biological diversity by concentrating on eight components of biological diversity: the natural values of the Forest, forest type conversion, old growth, forest fragmentation, late successional habitat, riparian and wetland areas, management indicator species and special biological areas. There is environmental disclosure on these eight components in Chapter 3 of the FEIS.

Revised Plan Response. Chapter 2 of the Revised Plan, under "ISSUE 1 – BIODIVERSITY", contains a detailed discussion on how the Revised Plan responds to each of the eight components of biodiversity. In summary, the Revised Plan:

- Provides large, unfragmented blocks (composed mostly of late successional vegetation) in Management Areas 4, 5, 6, 8, 9, 18, 21 and portions of Management Areas 10, 11, 13, 14 and 15 that are unsuitable for timber production
- Provides early successional habitat to a lesser extent in Management Areas 12, 16, 17, 20, 22, and portions of Management Areas 7, 11, 13, 14, and 15 that are suitable for timber production.
- Identifies approximately 180,000 acres (17% of the Forest) in ten old growth forest types with a "high probability of now containing old growth characteristics".
- Provides guidance on managing stands with a "high probability of now containing old growth characteristics" until a Regional policy is completed.
- Prohibits any stand type conversion. Permits planting naturally or historically occurring pine and hardwood species

- Maintains a mixed species (pine or hardwood) mixture in the regenerated stand.
- Establishes the goal of restoration, maintenance, and enhancement of riparian areas and their dependent resources.
- Identifies riparian areas based on physical and biological characteristics rather than arbitrary distances from perennial streams.
- Establishes policy for managing riparian areas under three conditions: those riparian areas, reservoirs, lakes and ponds adjacent to lands unsuitable for timber production (except in wilderness, roadless areas recommended for wilderness study, and research natural areas); those riparian areas adjacent to lands suitable for timber production; and those riparian areas on national forest lands that are adjacent to or upstream from seven municipal water supplies. (Additional information is provided in Chapter 3 of the Revised Plan under "MANAGEMENT AREA 18".)
- Applies streamside management zones to both perennial and intermittent streams. (Standards are listed under "COMMON STANDARDS" in Chapter 3 of the Revised Plan.)
- Provides habitat for the continued existence of all populations of threatened, endangered, and sensitive plant and animal species in the Forest.
- Requires coordination of management of threatened, endangered, and sensitive species with the USDI Fish & Wildlife Service and appropriate agencies in Virginia and West Virginia.
- When needed, requires site-specific surveys to be conducted for undiscovered habitats of, and populations of, threatened, endangered and sensitive species prior to a decision to implement any project
- Establishes 38 Biological Special Interest Areas, two Geological Special Interest Areas, and a Special Interest Area along the Shenandoah Mountain Crest for the recovery of the endemic Cow Knob Salamander.
- Recommends six Biological Special Interest Areas for study for designation as Research Natural Areas.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to five factors: old growth forest types with a "high probability of now containing old growth characteristics"; "relatively fragmented" and "relatively unfragmented habitat"; management of riparian areas; and carrying capacity of habitat for deer, bear, and turkey. Information on four of the measurable attributes is displayed in Table 2.

Issue 2 – Below-Cost Timber Sales

Overview of Issue: The Forest is a below-cost timber sale forest. That means that the expenses of operating the timber sale program exceed revenues received from the sales. This is primarily because the majority

of the volume of timber harvested is low-value roundwood. About 25% of the volume harvested is high-value sawtimber. Many people want these below-cost timber sales to stop; others want to be sure that if we do conduct below-cost timber sales, the resulting benefits to other resources justify the below-cost situation. Other people wanted to maintain or increase current employment levels. .

A review of concerns that fall under the Below-Cost Timber Sale issue reflect its complexity. Concerns expressed by the public include: (1) opposition to below-cost timber sales; (2) effects of timber harvesting on local communities and economies; (3) role of the Forest's timber program in the local timber market; (4) multiple-use benefits from timber harvesting; (5) failure of the Forest to provide a legitimate rationale for below-cost sales, (6) compliance with a Department of Agriculture decision on the analysis needed to support a Forest Plan with below-cost timber sales; (7) the amount of land that will be deemed suitable for timber management; and (8) timber harvest levels.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 2 – BELOW-COST TIMBER SALES" contains a detailed discussion on how the Revised Plan responds to concerns about below-cost timber sales. In summary, the Revised Plan:

- Requires that during implementation, the Forest Supervisor will continue to search for means to increase the efficiency of the timber sale program by improving revenues from timber sales and reducing expenses.
- Uses the timber sale program in situations when it is the most cost-effective method of achieving other multiple use resource objectives (predominately wildlife habitat) and to retain the latitude to react to rapidly changing conditions such as those caused by gypsy moth infestations.
- Designates 350,000 acres, or approximately 32% of the Forest land base, as suitable for timber production (refer to Appendix A of the Revised Plan).
- Establishes the overall goal of (1) initiating timber sales for timber management purposes on those highly productive sites where timber management can show a positive cash flow and is compatible with the desired future condition of the management area and (2) implementing timber sales on other lands in those situations where it is the most cost effective method of achieving the specific desired future condition for the management area.
- Establishes an allowable sale quantity of 47.3 million cubic feet (330 million board feet) for the first decade. An annual offer of 4.73 million cubic feet (33 million board feet) is consistent with achieving an amount of vegetation manipulation to achieve wildlife and other resource objectives. An annual offer of 33 million board feet would be a slight reduction (6%) from annual offer for the past five years and a 13% reduction from that directed by Interim Management.
- Establishes a policy of where and under what conditions salvage of dead, dying or damage trees may be accomplished.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to seven factors: projected net revenue from timber sales; wildlife benefits

from timber sales; marginal timber and wildlife benefits from timber sales; lands suitable for timber production; allowable sale quantity for all products and for specific components; supply of timber products as a percentage of demand, and changes in employment for the timber industry. Information on these factors is displayed in Table 2.

Issue 3 – Forest Access

Overview of Issue: This issue reflects the public's concern over access to the Forest and how access should be managed. Concern centers around the abilities of visitors to have motorized access to the Forest, including disabled visitors, whether new roads should be built, whether roads should be open or closed, the use of four-wheel drive vehicles, ATVs, and the need for more trails for hiking, horseback riding and mountain biking.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 3 – FOREST ACCESS" contains a detailed discussion on how the Revised Plan responds to concerns about forest access. In summary, the Revised Plan.

- Requires that a road system be maintained to serve the public, meet management needs and protect resources in a cost-effective manner.
- Permits new system roads to be constructed as needed and to the standard to meet the desired future condition identified in each management area.
- Estimates that 5 to 8 miles of new system roads are needed annually to support the timber sale program required to meet the timber, wildlife and Forest health needs for the period of time covered by the Plan.
- Estimates that 90% of new system roads constructed to support the timber sale program will be closed to public vehicular access, but are open for foot, mountain bike, or horseback use.
- Assumes that any road construction in Management Areas 4, 5, 6, 9 and 21 will be limited to short spur roads leading to parking areas or to relocation of existing roads
- Development and interpretation of Highland Scenic Tour.
- Explains that roads that serve a legitimate access need will strive to be managed consistent with management area direction, and meet maintenance standards to remain open. When they do not meet these requirements, they are either closed or improved as funding permits. The adopted ROS classes provide general direction for road management (see Appendix G, FEIS).
- Identifies 160 miles of minimally designed travel routes on the Forest road system that provide an opportunity for licensed off-highway vehicles (refer to Chapter 3 of the Revised Plan).
- Explains that the intent is to continue to offer seasonal use on an additional 60 miles of roads that offer off-highway vehicle opportunities identified in Appendix J of the Revised Plan.

- Explains that new standards have been incorporated to the Appalachian Trail Foreground Zone (Management Area 6) in Chapter 3 of the Revised Plan.
- Continues the "Share the Trail" concept among non-motorized users where appropriate. .
- Encourages the continued exploration of methods to provide access to persons with disabilities in accordance with the Americans with Disabilities Act and other applicable legislation.
- Appendix B encourages the development of horse and hiking trails and river access points. (See Appendix B in the Revised Plan)

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to two factors: average annual road construction and miles of licensed OHV routes. Information on these factors is displayed in Table 2.

Issue 4 – All-Terrain Vehicle (ATV) Use

Overview of Issue: All-terrain vehicles are considered to be legitimate and acceptable on the Forest when used in areas meeting certain required for their compatibility with other resources. Recently, however, they have become a major point of controversy. Comments made by the public deal with both opposition and advocacy of all-terrain vehicle use and the management of this use.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 4 – ALL-TERRAIN VEHICLE (ATV) USE" contains a detailed discussion on how the Revised Plan responds to concerns about unlicensed ATVs. In summary, the Revised Plan:

- Retains the three existing ATV trail systems: Taskers Gap/Peters Mill Run, Rocky Run; and South Pedlar. Allows for development of connecting routes within the designated management area of each.
- Schedules the construction of one additional ATV trail system on the Deerfield Ranger District if there is interest on the part of an organization to sponsor the construction and maintenance of this trail system.
- Explains that the remainder of the Forest is closed to ATV vehicles with the exception of certain trails designated for disabled hunters through a Forest Supervisor order.
- Allow for disabled routes on Warm Springs to continue.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to two factors: number and miles of ATV routes. Information on these factors is displayed in Table 2.

Issue 5 – Roadless Area Management

Overview of Issue: There is a good deal of concern over the management of roadless areas. Comments from the public indicate they want to protect values that are unique to the Forest, or those that are at least uncommon on private land. These values include remote habitat for wildlife, primitive and semi-primitive recreation opportunities, and natural beauty. Some roadless areas may offer only one of these values; some offer all.

Concerns to be considered include:

- Which areas should be recommended for wilderness study?
- How much of the roadless areas should be excluded from timber management and other ground-disturbing or vegetation-disturbing activities?
- How should these lands be classified (wilderness, scenic areas, etc.)?
- What types of management practices are appropriate on the remaining roadless areas?

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 5 – ROADLESS AREA MANAGEMENT" contains a detailed discussion on how the Revised Plan responds to concerns about roadless areas. In summary, the Revised Plan:

- Recommends three roadless areas (12,000) for wilderness study: St. Marys Addition, the Priest, and Three Ridges.
- Allocates Big Schloss, Laurel Fork, Little River, and Mount Pleasant to Management Area 21 ("Special Management Areas").
- Releases the remainder of the roadless areas to varying level of multiple use management. However, only 18,000 acres allocated to Management Areas 14 and 15 are available for development.
- Requires site-specific analysis and disclosure before any management practices that might impact wilderness characteristics are undertaken.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to three factors: number of roadless areas recommended for wilderness study; acreage of roadless areas recommended for wilderness study; and allocation of roadless areas (by percentage of acreage) to management areas that are managed like wilderness study areas, that are unavailable for development or are available for development. Information on these factors is displayed in Table 2

Issue 6 – Special Management Areas

Overview of Issue: Certain areas receiving special management for many types of recreation, wildlife and fisheries recreation are receiving more public interest than ever before. This issue involves concern over the management of the four existing wilderness areas, the management of areas qualifying for wild and scenic river designation, the designation of Scenic Byways, the management of a number of areas

containing special recreational qualities, management of the Appalachian National Scenic Trail, and management of the fisheries.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 6 – SPECIAL MANAGEMENT AREAS" contains a detailed discussion on how the Revised Plan responds to concerns about existing wilderness, candidate wild and scenic rivers, scenic byways, and fisheries. The Appalachian Trail was discussed under "ISSUE 3 – FOREST ACCESS". In summary, the Revised Plan:

- Continues to recognize that "Special Management Areas" in the 1986 Plan have unique values that will be protected and/or enhanced.
- Explains how the "Special Management Areas" in the 1986 Plan have been allocated to different management areas.
- Establishes management direction for existing wildernesses in Chapter 3 of the Revised Plan under "Management Area 8".
- Explains that suitability studies will be completed on rivers qualifying for inclusion in the National Wild and Scenic Rivers System after the Revised Plan is approved.
- Establishes management direction for the Highland Scenic Tour in Chapter 3 of the Revised Plan under "Management Area 7".
- Establishes management direction for eighteen areas receiving heavy dispersed recreation in Chapter 3 of the Revised Plan under "Management Area 13".
- Manages fisheries to develop and maintain aquatic habitats that contain suitable water quality, food chains, and necessary habitats for all life stages of native fish, and to facilitate sport fishing.
- Establishes fisheries direction for lakes, ponds, reservoirs, and most perennial streams in Chapter 3 of the Revised Plan under "Management Area 18".

Comparison of Alternative Responses to Issue: By and large, most of the alternatives treat existing wilderness, scenic byways, candidate river corridors and the Appalachian Trail Foreground Zone the same. Alternative 3 provides substantially different management direction for existing wilderness, candidate river corridors, scenic byways, Appalachian Trail Foreground Zone, and fisheries. Details on the management direction in Alternative 3 is contained in the process paper "Alternative 3". This information is summarized in Chapter 2 of the FEIS and in the description of the "Affected Environment" in Chapter 3 of the FEIS.

Chapter 2 of the FEIS contains a comparison of how the fourteen alternatives responded to two factors: fisheries management direction and acreage within management areas emphasizing special recreational and scenic values. Information on acreage within management areas emphasized special recreation and scenic values is displayed in Table 2.

Issue 7 – Aesthetics

Overview of Issue: Management of the visual resource – or quality of the landscape – continues to be a controversial subject. The public has expressed concern over the manner in which the agency manages the visual resource on the Forest.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 7 – AESTHETICS" contains a detailed discussion on how the Revised Plan responds to concerns about the visual resource. In summary, the Revised Plan:

Identifies two management areas (5 and 7) that are corridors along scenic routes and managed specifically for their visual qualities.

- Recognizes the Forest landscape as a basic Forest resource that receives the appropriate level of consideration with other criteria when meeting the desired future condition.
- Assigns "adopted" visual quality objectives (VQO's) to each management area in Chapter 3 of the Revised Plan. An explanation of how the adoption occurs is in Appendix I of the Revised Plan.
- Utilizes short-term VQO's of rehabilitation and enhancement in many management areas as described in the standards in Chapter 3 of the Revised Plan
- Provides specific guidelines and contrast reducing techniques under "Common Standards" in Chapter 3 of the Revised Plan

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of the adopted visual quality objectives for the fourteen alternatives. Information on the acreage assigned to preservation, retention, partial retention and modification visual quality objectives is displayed in Table 2.

Issue 8 – Vegetation Manipulation

Overview of Issue. Public comments over vegetation manipulation reflect concern over how timber and other vegetation is manipulated when managing for various Forest objectives

By far, the most controversial manipulation is clearcutting. Comments addressing the clearcutting controversy can be divided into four areas of public concern:

- Clearcutting should be eliminated or severely curtailed as a harvest method.
- Clearcutting should be relied on as the primary harvest method or at least retained as one of the tools used to achieve management objectives.
- Clearcutting must be shown – through site specific analysis – to be the optimum harvest method for achieving management objectives. This analysis is a requirement of the National Forest Management Act (NFMA)
- Methods other than clearcutting, such as shelterwood, group selection and single-tree selection, should be relied on.

Another area of concern involves the "featured species" concept of wildlife management and how it is applied through the use of habitat/vegetation manipulation

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 8 – VEGETATION MANIPULATION" contains a detailed discussion on how the Revised Plan responds to concerns about the regeneration harvest methods and featured species. In summary, the Revised Plan:

- Allows a combination of even-aged and uneven-aged regeneration harvest methods
- Manages nine areas totaling 11,000 acres, displayed on a map accompanying the Revised Plan, under the uneven-aged regeneration harvest method of group selection.
- Identifies modified shelterwood as the primary even-aged regeneration harvest method. The full range of silvicultural practices, however, are available for use based on site-specific conditions and desired objectives.
- Permits the selection of clearcutting only after site-specific project-level analysis has determined that other regeneration harvest methods will not achieve the objectives and desired future condition of the management area. Appropriate interpretation at the site will disclose the purpose for its use
- Provides for the management of popular wildlife species such as black bear, wild turkey, and white-tailed deer, in areas best suited for these requirements rather than in a pure "featured species" concept.
- Emphasizes habitat for wildlife species in Management Areas 14, 15, 16 and 22 when vegetation, terrain, road densities and other conditions are best suited for species requiring various conditions.
- Contains an expanded wildlife management program which provides habitat manipulation in areas where timber quality is poor, where there are weak markets for such products, and/or in remote areas where associated roading costs are extremely high. Examples are in Management Area 9, and unsuitable portions of Management Areas 14 and 15.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of the estimated acreage regenerated by clearcutting, other regeneration harvest methods and uneven-aged harvest methods for the fourteen alternatives and their associated management areas. This information is displayed in Table 2.

Issue 9 – Resource Sustainability

Overview of Issue: The concept of resource sustainability has surfaced as one of the major environmental concerns of the nineties. This issue reflects the concerns of the public for the future-of-the-Forest-itself rather than for the future-of-the-Forest-as-it-pertains-to-man. Concerns have been expressed over ecosystem management, re-introduction of extirpated species, the use of herbicides, the harvesting of timber, the protection of water quality and soil productivity, and the hazards of wildfire.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 9 – RESOURCE SUSTAINABILITY" contains a detailed discussion on how the Revised Plan responds to concerns about ecosystem management, extirpated species, soil productivity, water quality, vegetation management, herbicides, fire, and air quality. In summary, the Revised Plan:

- Requires an ecological approach to achieving multiple use management.
- Stresses the need for a high quality environment while producing needed goods and services.
- States that the Revised Plan does not promote the introduction of extirpated species. The Forest Service serves as a coordinating agency when any decision is made by the appropriate state or federal agency to introduce an extirpated species.
- Contains standards which ensure that management practices are implemented in a manner that maintains or improves the long-term productivity of the site.
- Details mitigation measures under Common Standards in Chapter 3 of the Revised Plan to protect soil productivity.
- Maintains or improves water quality to meet demands for beneficial uses of water.
- Protects water quality from nonpoint source pollution through the use of standards in Chapter 3 of the Revised Plan that meet or exceed state best management practices.
- Permits liming and other means to mitigate acid deposition in critical situation.
- Requires that vegetation management, including timber harvesting, be accomplished in a manner that maintains the diversity, productivity, and long-term sustainability of ecosystems
- Limits the use of herbicides to those listed in the *Final Environmental Impact Statement – Vegetation Management in the Appalachian Mountains* and its Record of Decision, and under the mitigation measures described in that document and incorporated as Common Standards in Chapter 3 of the Revised Plan.
- Restricts aerial application of herbicides on utility corridors that meet stringent criteria and only after site-specific analysis and disclosure.
- Requires that wildfire be suppressed using the least cost methods commensurate with the resource values at risk, the potential for human injury, the management area suppression objectives, and the availability of manpower and equipment.
- Continues working with the Virginia Department of Forestry on developing strategies to lessen fire impacts in the wildland-urban interface.

- Manages the Forest in a manner that meets Class II National Ambient Air Quality Standards.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of the average annual sediment and average annual erosion for the fourteen alternatives. This information is displayed in Table 2.

Issue 10 – Minerals

Overview of Issue: Comments relating to the minerals issue span a variety of concerns: some people are opposed to mining on the Forest; others oppose oil and gas leasing in the Laurel Fork and Big Schloss areas; some say there should be no surface occupancy in special management areas, and no mineral exploration in riparian zones.

There are requests that mined-over lands be reclaimed until the problem areas are eliminated. In relation to the management of fluid minerals, a question is raised as to the respective roles of the Bureau of Land Management and the Forest Service.

Comments from the Bureau of Mines request that: Forest lands remain open to future mineral development; the Revised Plan include a discussion of the minerals that exist on the Forest; Forest policy regarding mineral access and development be clearly presented; disclosure be made of the impacts on the minerals resource when Forest lands are withdrawn from mineral activity.

Revised Plan Response: Chapter 2 of the Revised Plan, under 'ISSUE 10 – MINERALS' contains a detailed discussion on how the Revised Plan responds to concerns about mineral development. In summary, the Revised Plan:

- Fosters the continued offering of opportunities to explore and develop leasable minerals and common variety minerals.
- Designates 1,029,000 acres available for leasing federally-owned oil and natural gas. 145,000 acres is available with standard lease terms, 842,000 acres with timing or controlled surface use stipulations and 42,000 acres with no surface occupancy stipulations. Existing wilderness areas are not available for leasing oil and natural gas.
- Designates 1,011,000 acres available for leasing federally-owned non-energy minerals. 479,000 acres are "generally available" while 532,000 acres are available on a "case-by-case" basis. Existing Wildernesses, historic sites, geologic sites, the Little Laurel Run Research Natural Area, administrative sites, communication sites, utility corridors, developed recreation sites, and the Appalachian Trail Foreground Zone are not available.
- Designates 981,000 acres available for salable (common variety) minerals. Mineral material sales are allowed on 141,000 acres and on a case-by-case basis on 840,000 acres. Existing Wildernesses, roadless areas recommended for wilderness study, historic sites, geologic sites, the Little Laurel Run Research Natural Area, administrative sites, communication sites, utility corridors, developed recreation sites, and the Appalachian Trail Foreground Zone are not available.

The Selected Alternative also includes the "consent" decision to lease federally-owned oil and natural gas on 75,000 acres of the Alleghany Front Lease area as described on page 6 of this Record of Decision

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of the acreage available for leasable energy minerals, non-energy minerals, and salable minerals as well as the acreage where the Forest Service consents to lease oil and natural gas for the fourteen alternatives. This information is displayed in Table 2.

Issue 11 – Gypsy Moth

Overview of Issue: The presence and continuing threat of gypsy moth creates uncertainty about what the outcome is going to be: whether or not the effects of infestation are any worse than the effects of treatment with pesticides; whether changes in species will occur; whether or not impacts on recreation areas, wildlife, and on timber harvests will be significant; and to what degree should salvage of Forest products occur

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 11 – GYPSY MOTH" contains a detailed discussion on how the Revised Plan responds to concerns about gypsy moth and other forest pests. In summary, the Revised Plan:

- Explains that the protocol for the treatment of gypsy moth populations has evolved under the Appalachian Integrated Pest Management (AIPM) – Gypsy Moth Demonstration Project.
- Permits the consideration of gypsy moth treatments which are evaluated in *Final Environmental Impact Statement as Supplemented [in] 1985—USDA Gypsy Moth Suppression and Eradication Projects* and *Final Environmental Impact Statement—Appalachian Integrated Pest Management (AIPM) – Gypsy Moth Demonstration Project*.
- Calls for the continued introduction, where appropriate and approved, of natural enemies, including fungal agents, to contribute to the biological control of introduced pests.
- Contains additional guidance in management area direction and salvage with Common and Management Area Standards in Chapter 3 of the Revised Plan.
- Explains that silvicultural treatments are considered as a means of reducing the susceptibility and vulnerability of timber stands to damage caused by pests

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of acreage that may be considered for insecticide treatment. This information is displayed in Table 2.

Issue 12 – Adequacy of the Revision

Overview of Issue: The public expressed concern over the legal and procedural adequacy of the 1986 EIS and Forest Plan. Some contended that the EIS had violated NEPA principles by presenting an inadequate range of alternatives and faulty analyses. Concerns over the 1986 Plan included: too much of the Forest was assigned to "general forest area" management with no specific direction; and, no clear direction for

implementing the 1986 Plan. Most of these comments came from the administrative appeals of the 1986 Plan

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 12 – ADEQUACY OF THE REVISION" contains a detailed discussion on how the Revised Plan responds to concerns about compliance with NEPA and NFMA. In summary, the Revised Plan:

- Explains how Chapter 4 of the Revised Plan contains a discussion on how the Revised Plan will be implemented.
- Explains how Chapter 5 of the Revised Plan contains the monitoring and evaluation schedule.
- Discusses the concept of present net value as an indication of economic efficiency.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of present net value, the budget required to implement each alternative, the change in jobs and the change in average annual income for the fourteen alternatives. This information is displayed in Table 2.

Issue 13 – The Mix of Goods and Services

Overview of Issue: The public comments that form this issue reflect what individuals want from the Forest. Comments were particularly aimed at the concern that the Forest has traditionally had too strong an emphasis on timber management. Instead, commenters say, emphasis should be on dispersed recreation, developed recreation, and wildlife management. There were also concerns over the management of special use permits and grazing allotments.

Revised Plan Response: Chapter 2 of the Revised Plan, under "ISSUE 13 – THE MIX OF GOODS AND SERVICES" contains a detailed discussion on the developed recreation, dispersed recreation, wildlife, lands and special uses programs. In summary, the Revised Plan:

- Contains a list of fifteen new developed recreation facilities that are scheduled for construction, funding permitting.
- Contains a list of eleven existing recreation sites scheduled for rehabilitation and expansion.
- Requires that most developed recreation facilities be made accessible to all as funding allows.
- Presents the amount of land in each adopted recreation opportunity spectrum class. Additional information on the adopted ROS is found in Chapter 3 and Appendix I of the Revised Plan and Appendix G of the FEIS.

- Places emphasis on both consumptive and non-consumptive wildlife and fisheries.
- Displays the forest-wide carrying capacity for bear, turkey and deer.
- Establishes the goal of consolidating national forest ownership by exchange or acquisition.
- Allows for special uses provided the uses are consistent with the objectives of the management area where the use is to be applied.
- Explains that dedication of public lands to a single use is minimized and discouraged.
- Emphasizes confining utilities to existing corridors wherever possible. Additional utility corridors may be established where there is an established need that cannot be met in the existing corridors.
- Explains that adequate access for meeting resource management needs is pursued through rights-of-way acquisition.
- Continues the current program of grazing on five allotments on 250 areas along the South Fork of the Shenandoah River and Cedar Creek on the Lee Ranger District.

Comparison of Alternative Responses to Issue: Chapter 2 of the FEIS contains a comparison of developed recreation site capacity, adopted recreation opportunity spectrum classes, wilderness recreation capacity and lands where wildlife management is emphasized for the fourteen alternatives. This information is displayed in Table 2.

Table 2.
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Percentage of Potential Old Growth at End of 10-Year Period (Percentages shown represent minimum acreage of potential old growth)	88%	100%	89%	84%	100%	73%	87%	88%	78%	93%	63%	87%	84%	89%
Relatively Fragmented Habitat (M Acres)	535	10	944	935	127	762	444	458	109	179	389	735	341	511
Relatively Unfragmented Habitat (M Acres)	526	1051	117	128	934	299	617	603	952	882	672	326	720	550
Riparian Areas Suitable For Timber Production (Percentage)	0%	0%	46%	66%	0%	0%	18%	5%	0%	9%	%	33%	0%	22%
Carrying Capacity¹ of Habitat (M Animals)														
Black Bear	1.3	1.5	0.7	0.9	1.5	1.4	1.4	1.4	1.5	1.4	1.4	1.2	1.4	1.3
Wild Turkey	16.6	15.6	8.6	14.9	21.6	24.2	18.9	19.8	16.2	16.1	18.9	19.3	17.5	18.2
White-Tailed Deer	40.3	26.6	30.8	60.7	46.4	64.1	41.4	46.4	28.6	34.2	38.0	56.6	33.1	46.6
Projected Net Revenue from Timber Sales (M Dollars)	-716	0 ²	-750	-735	0 ²	-1105	-611	-683	-506	-352	-511	-918	-489	-718
Special Interest Areas - Biological (M Acres)	54	11	53	53	84	2	54	70	34	53	31	53	51	54

¹Carrying capacity means the number of animals the Forest can support with the habitat provided.

²Alternatives 3 and 6 contain no timber sale programs and so generate no revenues, benefits or expenses from timber sales.

Table 2. (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Lands Suitable for Timber Production (M Acres)	300	0	354	655	0	696	260	350	66	120	280	595	185	350
Allowable Sale Quantity (MMBF)³														
All Products	380	0	400	680	0	520	270	330	80	150	210	450	150	350
Hardwood Sawtimber	10.5	0	11.0	19.0	0	13.0	7.5	9.1	1.2	4.4	4.3	11.4	4.1	9.8
Softwood Sawtimber	0.2	0	0	0	0	1.6	0.1	0.1	0.9	0	1.7	1.2	0.2	0
Hardwood Poletimber ⁴	27.0	0	29.0	49.0	0	34.8	19.2	23.7	3.5	10.6	12.4	30.7	10.5	25.2
Softwood Poletimber	0.3	0	0	0	0	2.6	0.2	0.1	2.4	0	2.6	1.7	0.2	0
Supply of Timber Products Compared to Demand (Percentage)	83%	0%	88%	149%	0%	114%	59%	74%	20%	33%	46%	99%	33%	77%
Change in Employment for the Timber Industry (Jobs)	0 ⁵	-246	+11	+194	-246	+93	-71	-33	-195	-147	-109	+44	-148	-20
Average Annual Road Construction (Range of Miles)	5-8	0	6-9	9-13	0	9-13	4-7	5-8	1-2	2-3	0	7-11	0	5-8
Routes for Licensed Off Highway Vehicles (Miles)	223	0	725	575	105	223	223	223	45	223	45	375	45	223

³Technically, the allowable sale quantity is in cubic feet. This number has been converted to millions of board feet since this measure is more familiar to most readers.

⁴Includes fuelwood.

⁵Alternative 2 (interim management direction) represents the basis for comparison with an assumption of an average annual offer of 38 million board feet.

Table 2 (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Trails for Unlicensed Off Highway Vehicles (Miles)	60	0	375	60 ^e	53	0	95	75	0	60	0	175	0	65
Trail Routes for Unlicensed Off Highway Vehicles (Number)	3	0	19	3 ^e	3	0	5	4	0	3	0	9	0	2
Roadless Areas Recommended for Wilderness Study														
(Number of Areas)	0	25	0	0	11	0	3	3	27	2	11	0	22	3
(M Acres)	0	524	0	0	87	0	12	12	260	3	115	0	213	12
Allocation of Roadless Areas (Percentage of Acreage)														
Recommend for Wilderness Study	0%	93%	0%	0%	33%	0%	5%	5%	100%	1%	45%	0%	82%	5%
Unavailable for Development	20%	7%	17%	20%	62%	3%	89%	84%	0%	49%	54%	20%	18%	50%
Available for Development	80%	0%	83%	80%	5%	97%	6%	11%	0%	51%	1%	80%	0%	45%
Management Areas Emphasizing Recreational and Scenic Values (M Acres)	40	237	34	40	160	39	146	176	124	71	165	39	261	144

^eNo formal ATV trail routes are scheduled, but ATV routes can be designated on a cases-by-case basis

Table 2. (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Adopted Visual Quality Objectives (M Acres)														
Preservation	34	1055	32	32	246	32	44	46	536	35	318	32	431	44
Retention	94	6	662	112	328	54	497	379	516	392	204	148	294	321
Partial Retention	279	0	9	9	483	971	447	548	5	474	535	671	332	508
Modification	654	0	358	908	4	4	73	88	4	160	4	219	4	188
Estimated Amount of Regeneration Harvest Methods for the first decade (M Acres)														
Clearcutting	15	0	10	40	0	20	3	3	0	9	0	12	0	10
Other Even-aged Methods	8	0	18	0	0	18	14	20	0	0	8	21	11	12
Dedicated to Uneven-Aged Management ⁷	9	0	0	0	0	32	16	8	56	0	86	0	31	47
Prescribed Burning (Average Annual M Acres)	.5	0	0	.5	3	3	3	3	.5	3	.5	.5	.2	3
Average Annual Sediment, Natural and Human Causes (M Tons) (Natural Sediment Averages Approximately 201 thousand tons/year)	22.8	20.8	23.9	23.9	21.3	24	22.5	22.9	21.5	21.9	22.3	23.5	22.1	22.8
Average Annual Erosion From Human Causes (M Tons)	10.6	2.6	14.6	14.9	4.6	15	9.4	10.6	5.5	7	8.5	13.2	7.9	10.5

⁷These are acres where uneven-aged treatments will be employed, not the acres of "openings" created.

Table 2. (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Lands Available for Leasable Energy (Oil and Gas) Minerals^a														
Leasing with Standard Lease Terms (M Acres)	338	0	933	916	33	194	223	145	51	396	12	397	6	298
Leasing with Stipulations (M Acres)	644	0	70	84	943	794	768	842	918	591	964	600	982	691
Leasing with No Surface Occupancy (M Acres)	47	0	26	29	53	41	38	42	60	42	53	41	53	40
Unavailable due to Congressional Action (M Acres)	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Unavailable due to Administrative Action (M Acres)	0	1029	0	0	0	0	0	0	0	0	0	0	0	0
Lands Where the Forest Service Consents to Lease Oil and Natural Gas in the Alleghany Front Lease Area^b														
Leasing with Standard Lease Terms (M Acres)	— ^c	0	65	65	3	10	5	5	0	40	0	27	0	5
Leasing with Stipulations (M Acres)	— ^c	0	9	9	71	64	69	69	74	34	74	47	74	69
Leasing with No Surface Occupancy (M Acres)	— ^c	0	1	1	1	1	1	1	1	1	1	1	1	1
Unavailable due to Administrative Action (M Acres)	0	75	0	0	0	0	0	0	0	0	0	0	0	0

^aThe above figures do not distinguish between federal and private mineral rights. Approximately 19 percent of the Forest contains private mineral holdings.

^bThe decision to consent to leasing is deferred and evaluated with each proposal.

Table 2. (Continued)

Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Lands Available for Non-Energy Leasable Minerals*														
Leasing Generally Available (M Acres)	698	0	942	342	924	764	529	479	189	710	312	802	190	535
Leasing on a Case by Case Basis (M Acres)	300	0	68	84	648	245	482	532	825	298	700	206	824	475
Unavailable due to Congressional Action (M Acres)	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Unavailable due to Administrative Action (M Acres)	21	1029	19	21	20	20	18	18	15	21	17	21	15	19
Lands Available for Salable Minerals*														
Mineral Material Sales Allowed (M Acres)	330	0	924	907	26	185	214	141	47	387	4	379	0	283
Mineral Material Sales Allowed on a Case by Case Basis (M Acres)	670	0	76	93	894	824	786	858	707	971	891	621	802	716
Unavailable due to Congressional Action (M Acres)	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Unavailable due to Administrative Action (M Acres)	29	1029	29	29	109	20	29	30	275	42	134	29	227	30

*The above figures do not distinguish between federal and private mineral rights. Approximately 19 percent of the Forest contains private mineral holdings.

Table 2 (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Lands That May Be Considered for Insecticide Treatment¹⁰														
Generally Available (M Acres)	898	0	935	926	435	973	596	668	175	647	521	927	188	685
Available Under Limited Circumstances (M Acres)	163	0	126	135	545	88	465	393	779	414	540	134	766	376
Not Available (M Acres)	0	1061	0	0	81	0	0	0	107	0	0	0	107	0
Present Net Value (Billions of Dollars)	1.25	1.25	1.13	1.27	1.24	1.21	1.22	1.23	1.18	1.24	1.18	1.3	1.21	1.21
Budget Required to Implement (MM\$)	13.7	8.9	15.7	14.9	14.3	18	15	15.2	12.9	12.8	16.3	14.5	16.3	16.4
Change in Employment (Jobs)	0	-566	-74	+293	-149	+339	0	+80	-385	-197	-24	+192	-245	+101
Change in Average Annual Income (MM\$)	0	-11.4	-1.8	+5.6	-1.8	+7.4	+0.5	+2.1	-7.4	-3.7	+0.2	+4.2	-4.6	+2.6

¹⁰These acres represent the maximum amount which could be considered for insecticide treatment. The actual number of acres treated must be determined by a site-specific environmental analysis

Table 2. (Continued)
Measurable Attributes to Compare Alternatives

Attribute	Alternative													
	2	3	4	5	6	7	8	8A	9	10	11	12	13	14
Adopted Recreation Opportunity Spectrum Class (M Acres)														
Semi-Primitive Non-Motorized	167	862	63	39	209	72	132	150	337	121	197	84	312	154
Semi-Primitive Motorized	203	0	181	32	134	271	213	208	14	194	153	226	39	161
Roaded Natural	691	199	459	82	714	714	643	615	706	586	707	541	706	558
Roaded Modified	0	0	358	908	4	4	73	88	4	160	4	210	4	188
Developed Recreation Site Capacity (M PAOT)	13.6	12.8	13.6	12.6	12.9	13.6	15.7	16.2	12.9	16.2	13.6	16.2	13.6	16.2
Wilderness Recreation Capacity (M RVDs)	16	271	16	16	60	16	21	21	134	17	70	16	117	21
Land Where Wildlife Management Is Emphasized (M Acres)	888	0	0	0	419	962	426	509	164	465	490	662	184	440

Table 3.
Present Value Analysis of Alternatives - Contributions to Costs and Benefits
Ranked According to Highest Present Net Value
(Millions of Dollars - 4% discount rate)

Alternative	PNV	<u>Present Net Values</u>		<u>Costs</u>				<u>Benefits</u>			
		Costs	Benefits	Timber	Engineering	Wildlife	Other 1/	Timber	Recreation	Wildlife	Other 2/
MAXPNV	1313.8	345.3	1659.1	46.2	73.6	18.8	206.7	41.4	873.9	743.6	.2
12	1296.3	357.7	1654.0	45.1	74.1	19.7	218.8	37.0	873.9	742.9	.2
5	1265.6	372.4	1638.0	59.0	77.2	19.7	216.5	54.4	858.3	725.1	.2
2	1254.5	335.6	1590.1	36.3	72.2	19.7	207.4	29.4	873.9	686.6	.2
3	1245.6	225.0	1470.6	0	15.8	1.9	207.3	0	826.7	643.7	.2
10	1240.9	315.4	1556.3	15.1	69.5	32.7	198.1	12.8	873.9	669.4	.2
6	1235.9	351.1	1587.0	0	63.6	59.0	228.5	0	873.9	712.9	.2
8A	1228.9	383.8	1612.7	32.3	72.6	37.9	241.0	25.3	873.9	713.3	.2
8	1217.4	378.4	1595.8	27.3	71.3	37.9	241.9	21.1	873.9	700.6	.2
7	1213.7	446.3	1660.0	55.2	75.1	68.5	247.5	43.0	873.9	742.9	.2
14	1208.4	407.2	1615.6	36.3	72.8	27.8	270.3	29.8	873.9	711.7	.2
13	1207.9	326.6	1534.5	20.2	63.9	19.2	223.3	13.8	849.9	670.6	.2
11	1178.3	404.3	1582.6	27.9	63.9	21.1	291.4	16.4	873.9	692.1	.2
9	1177.6	315.8	1493.4	13.5	68.1	20.3	213.9	5.5	834.3	653.4	.2
4	1132.6	389.6	1522.2	38.9	86.8	2.1	261.8	33.7	870.0	618.3	.2

1/ Other costs include recreation, lands, fire, minerals, soil & water, range, planning, law enforcement, and general administration.

2/ Other benefits include mineral leases (oil and gas)

SECTION V

IMPLEMENTATION

The Revised Plan may be implemented no sooner than 30 days from the date the Environmental Protection Agency's Notice of Availability of the Final EIS appears in the Federal Register.

The decision to approve the Revised Plan authorizes the Forest Supervisor to implement and proceed with site-specific and project-level decisionmaking. Forest officers begin by assessing existing resource plans and permits, contracts, and other instruments for compliance with the Plan standards (Chapter 4, Revised Plan).

During implementation, specific projects and activities will be proposed and analyzed. These analyses will be documented in the appropriate NEPA documents, i.e., Environmental Assessments, Environmental Impact Statements or categorical exclusions. The public will be notified of decisions resulting from these analyses. Participation by the interested and affected public is critical throughout Plan implementation, monitoring and evaluation.

Projects, practices and activities are designed to achieve the goals, objectives and desired future condition described in Chapters 2 and 3 of the Revised Plan. As described in Chapter 5, an interdisciplinary team, integrating the knowledge and skills of multiple resource specialists, will evaluate how well the selection of projects is achieving the desired future condition of the Revised Plan. There is no specific requirement that every project must contribute to achievement of the desired future condition.

Proposals in the Revised Plan can be accomplished from a physical, biological, economic, social, and legal perspective; however, these proposals are estimates and projections based on available inventory data and assumptions, and may be affected by the annual budget.

If the budget changes for any one year covered by the Revised Plan, some projects scheduled for that year may have to be rescheduled. Goals, objectives, desired future conditions, and standards will not change unless the Revised Plan is amended or revised. If budgets change significantly over a period of several years, the Revised Plan may have to be amended and could reflect different output projections and environmental conditions.

Multi-year program budget proposals are based on the Revised Plan. The budget process is used to request and allocate funds needed to implement the Revised Plan. Depending on final budgets, outputs and activities in individual years may be significantly different from those shown in Chapter 2 of the Plan. Cost and accomplishment data will be used to update and revise data bases and modify budget proposals.

The Revised Plan is the only land and resource management plan for the Forest. All other management plans are replaced, included, or incorporated by reference into the Plan. Chapter 4 of the Revised Plan discusses other plans developed under the umbrella of the Revised Plan to give more specific guidance to certain management activities.

Monitoring and Mitigation

The Monitoring and Evaluation (M&E) Program is the quality control system for the Revised Plan. It provides answers to three basic questions: 1) Did we do what we said we were going to do? 2) Did the action achieve the desired results? 3) Were the results appropriate to meet the overall objectives of the Revised Plan? M&E information will be used to update current inventory information, improve future mitigation measures, and to assess the need for amending or revising the Plan. (See Chapter 5, Revised Plan)

Mitigation measures are an essential part of the selected alternative. They appear primarily in Chapter 4 of the Revised Plan as standards which apply to the entire Forest as well as standards specific to individual management areas. These mitigation measures are designed to protect or enhance, as appropriate, aesthetic, soil, water, wildlife, fisheries, vegetation, dispersed and developed recreation, and other important resource values. All practicable measures have been taken to achieve this objective. The M&E Program will evaluate the effectiveness of these mitigation measures and identify any needed changes.

Amendment and Revision

Amendments and revisions allow us to incorporate new information, new policy and direction, and changing values and resource conditions into existing Forest Plans. Amendments and revisions keep plans current, relevant and responsive to agency and public concerns.

Reasons for amendments include: (36 CFR 219.10(f))

1. Recommendations of the Forest Interdisciplinary Team based on their review of monitoring results.
2. The determination that an existing or proposed permit, contract, cooperative agreement, or other instrument authorizing occupancy and use are not consistent with the Revised Plan but should be approved.
3. Changes necessitated by resolution of administrative appeals.
4. Changes to correct planning errors.
5. Changes made necessary by altered physical, biological, social or economic conditions.

A determination of whether or not a change is "significant" will be made pursuant to 36 CFR 209.10(f) and FSM 1922.5 and documented in a Finding of No Significant Impact (FONSI), decision notice, or record of decision and would be appealable under 36 CFR 217. If the change is determined to be significant, the Forest Supervisor will follow the same procedure required for development and approval of a new alternative for the Forest Plan. If the change is determined not to be significant, the Forest Supervisor may implement the amendment after appropriate public notice and compliance with NEPA (36 CFR 219.10(f)).

Significant amendments are approved by the Regional Forester. Nonsignificant amendments are approved by the Forest Supervisor.

SECTION VI

APPEAL RIGHTS AND APPROVAL

This decision may be appealed in accordance with the provisions of 36 CFR 217 by filing a written notice of appeal, in duplicate, within 90 days of the date of publication of the legal notice of availability for this decision. The appeal must be filed with the reviewing officer:

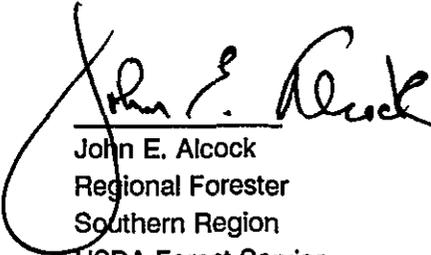
F. Dale Robertson, Chief
USDA Forest Service
P.O. Box 2417
Washington, D.C. 20013

The notice of appeal must include sufficient narrative evidence and argument to show why this decision should be changed or reversed (36 CFR 217.9).

Requests to stay approval of the Revised Plan will not be granted.
(36 CFR 217.10(b)).

If you would like more information on the Revised Plan or FEIS, or would like to inspect the Planning Records, contact:

Ronald W. Lindenboom, GWNF ID Team Leader
George Washington National Forest
P.O. Box 233, Harrison Plaza
Harrisonburg, Virginia 22801


John E. Alcock
Regional Forester
Southern Region
USDA Forest Service

1/21/95
Date