

CHAPTER 2

HOW THE REVISED PLAN ADDRESSES YOUR ISSUES

INTRODUCTION

This chapter describes how the Revised Plan developed in response to public issues and to comments about the draft Revised Plan. All discussions are organized under the 13 issues that guided the revision. This chapter includes:

1. A summary of the management situation in terms of the existing resource situation and the potential for resource development including the anticipated demand for goods and services from the Forest.
2. Statements of management direction in the form of Forestwide multiple-use goals and objectives which have been underlined for identification.

The reader is directed to Chapter 3 where specific management area direction and standards are provided for the Forest for the next 10 to 15 years.

ISSUE 1: BIODIVERSITY

Maintaining biological diversity on the Forest is a major goal of the Revised Plan. Standards are designed to conserve specific elements of biodiversity and restore others where needed. Efforts are increasing in developing knowledge and in implementing conservation measures. The Forest's land and resource management approach conserves biodiversity as an integral part of sustaining multiple uses of the Forest and achieving the desired future described in Chapter 3 for each management area.

The next seven sub-headings describe how the complex subject of biodiversity is addressed in the Revised Plan.

Fragmentation

Almost every acre of the Forest was heavily impacted by humans through timber harvesting, mining, charcoal and tanbark production, grazing, and recurrent burning prior to federal acquisition. Additionally, ecosystems within the Forest were severely affected by natural events (such as chestnut blight). Since acquisition that began in 1911, the Forest has recovered from these past activities and now provides large blocks of unfragmented habitat.

Changes to the ecosystems of the Forest from management practices need to be viewed within the context of natural changes that are already occurring to forest vegetation from both natural disturbances and plant succession. Many of the plant communities contain forest vegetation with advancing age struc-

tures approaching physical maturity. These plan communities are currently relatively stable or advancing toward climax conditions.

Forest vegetation is again facing a major disturbance – gypsy moth and oak decline. Significant oak mortality will occur. Disturbance of normal ecological process will inhibit adequate oak regeneration and promote considerable species shift to nonsusceptible species. An abundance of dead overstory trees with no seasonal foliage promotes a biological response to find a new ecological site equilibrium.

Our approach to fragmentation takes into account that all ecosystems on the Forest will be dynamically affected by these forces and that no natural community or habitat condition is considered never changing.

Forest fragmentation is a function of patch size, isolation of patches, total reserve area, and linkages among patches. Patch size and age requirements vary by species. Many species tolerate or prefer a mixture of forest age classes, but some species are restricted to young (early successional) or mature (late successional) forest communities only. The Revised Plan will provide large, unfragmented blocks of forested land, mostly in later successional stages. These areas are allocated primarily to Management Areas 4, 5, 6, 8, 9, 18, 21 and portions of Management Areas 13, 14 and 15 that are unsuitable for timber production. These forested and riparian areas are located in a manner that provides opportunities for the movement of plants and animals resulting in long-term viability of species. Although the Revised Plan permits vehicles on existing roads, wildlife habitat improvements, and timber salvaging operations in the immediate vicinity of system roads, these activities are located on the periphery of the unfragmented areas and will not significantly cause additional fragmentation.

Fragmentation of late successional habitats are usually caused by openings in the forest canopy. Edge effects occur when distinct habitat boundaries are created by timber harvest or other activities. These effects may be permanent or temporary depending on whether the disturbed area is allowed to proceed through vegetative succession. Species composition and community structure may change in areas where light and wind can extend into the exposed forest edge. This creates habitat suitable for some species and unsuitable for others.

Habitat for species benefitting from early successional vegetation is provided to a lesser extent in the Revised Plan. Early successional habitat is provided in Management Areas 12, 16, 17, 20, 22 and portions of Management Areas 7, 11, 13, 14 and 15 which are suitable for timber production. This habitat will primarily be located in timber harvest units (0-10 age class), wildlife clearings,

utility rights-of-way, and along closed system roads and in prescribed burn areas.

Old Growth

The Southern Region is in the process of formulating definitions and descriptions of old growth for the major forest types on each national forest. These definitions will not be completed until after the Revised Plan is published. The Revised Plan was prepared with the understanding that future amendments may be needed as new policies on old growth are issued.

The Forest contains ten of the old growth forest type groups that are being defined by the Southern Region. These forest type groups are described in Appendix H of the FEIS. The ID Team has prepared "interim" definitions for each of these types and identified stands which have a high probability of containing old growth characteristics.

At the present time, the Forest contains some stands (predominately hemlock) that have never been harvested. These stands are located in Management Areas 4, 8, 9, and 21. The largest concentration is on Shenandoah Mountain. As the Forest ages, additional stands, and even larger areas, are beginning to reach an age where "old growth characteristics" are developing. Lands unsuitable for timber production in other management areas provide additional acres or potential old growth.

Management of most stands with old growth characteristics will mimic natural disturbances by using practices such as prescribed burning. Naturalized undesirable exotic pest plants and animals will be controlled or eliminated where it is practical and economically feasible while maintaining the biological features of the area. Gypsy moth will affect old growth conditions in some forest types where oak dominates by decreasing the percentage of oaks in the canopy. These will become standing snags and downed logs thereby contributing to structural diversity and large woody debris accumulation.

Table 2-1 on the following page displays acreages for the ten old growth forest type groups. The acreages located on lands classified as suitable for timber production, lands classified as unsuitable for timber production and the total acreages are displayed. Based on existing inventories, approximately 180,000 acres exist. Using the same identification criteria, this will increase to 256,000 acres in ten years and to 737,000 acres in 50 years.

As previously discussed, the Revised Plan will not include an "old growth" policy until a Regional policy is completed. To avoid foregoing opportunities for old growth, the following interim policy will be followed until the Regional policy is developed and, if necessary, the Revised Plan subsequently amended:

1. No silvicultural practices will be scheduled in stands identified as "Total Present Old Age Stands" in Table 2-1 and located on lands classified as unsuitable for timber management in any of the ten old growth forest type groups;

As discussed in Chapter 3 of the FEIS, it is estimated that an additional 187 miles of 4-wheel drive and other licensed off-highway vehicle roads are needed to meet the anticipated demand for such opportunities by the year 2000.

Under the Revised Plan, all open system roads on the Forest are available for vehicles licensed for public roads. The intent of the Revised Plan is to continue to offer year-round use on those system roads where year-round use has traditionally been offered, and to continue to offer seasonal use on those system roads where seasonal use has traditionally been offered.

The map which accompanies this Revised Plan shows the routes which offer opportunities for licensed OHV users. Persons interested in OHV experiences should contact the appropriate Ranger District to learn the status and specifics on the location of these OHV routes.

Non-Motorized Trails

The Forest trail system includes approximately 950 miles designed for a variety of non-motorized uses including hiking, horseback riding, mountain biking and backpacking. The Revised Plan continues the "Share The Trail" concept.

Non-motorized trails are compatible with all management areas. Trails in Management Areas 4 and 18 may be closed or relocated if it is determined that unacceptable damage is being caused to biological or riparian resources.

Appendix B contains a listing of potential trail construction and reconstruction projects. It is the intention of the Revised Plan to develop or improve these trails as funding permits.

Three trails are components of the National Trails System: the Appalachian National Scenic Trail, the Lion's Tale National Recreation Trail and the Wild Oak National Recreation Trail.

Approximately 60 miles of the Appalachian National Scenic Trail are within the boundary of the Pedlar Ranger District. Except for portions of the Trail in the The Priest and Three Ridges Roadless Areas (allocated to Management Area 8), the Appalachian Trail Foreground Zone has been allocated to Management Area 6. New standards have been incorporated as recommended by the Appalachian Trail Conference.

The 0.3-mile Lion's Tale National Recreation Trail, located on the Lee Ranger District, is part of Management Area 12 ("Specialized Recreation Sites").

The 25.6 mile Wild Oak National Recreation Trail, located on the Dry River Ranger District, lies within Management Areas 13 and 21.

**Access for
Persons With
Disabilities**

The Revised Plan 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. The Forest Service intends to continue to seek such opportunities as the Revised Plan is implemented. Access for disabled persons is also provided in developed recreation facilities as discussed under **ISSUE 13 – THE MIX OF GOODS AND SERVICES.**

Currently, two motorized routes are provided for hunting access to physically disabled hunters. The two mile Neal Run Trail on the Warm Springs Ranger District is open for ATVs or motorcycles. The Fore Mountain Road on the James River Ranger District is opened for licensed OHVs.

Most Ranger Districts provide hunting access to physically disabled hunters who possess a valid Virginia or West Virginia permit. Additional information is available from the Ranger District and state agencies.

**ISSUE 4:
ALL-TERRAIN
VEHICLE (ATV) USE**

Under current management direction, the Forest has developed three all-terrain vehicle systems on the Forest:

1. The Taskers Gap/Peters Mill Run System on the Lee Ranger District contains approximately 20 miles of routes. There is potential for additional route mileage within this particular management area.
2. The Rocky Run System on the Dry River Ranger District contains 15 miles of routes. There is potential for additional route mileage within this management area.
3. The South Pedlar System on the Pedlar Ranger District contains approximately 25 miles of routes.

The Revised Plan calls for one additional system to be established on the Deerfield Ranger District if there is interest on the part of an organization to sponsor the construction and maintenance of this system. The length of this potential system is estimated to be 15 miles.

As discussed in Chapter 3 of the FEIS, the ID Team anticipates that an additional 331 miles of routes would be needed to meet the anticipated demand for ATV opportunities by the year 2000.

Forest officials worked with representatives of ATV organizations to identify sixteen other potential areas where ATV systems could be developed. If all of

Under the Revised Plan, fisheries will be managed 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.

Lakes, ponds, reservoirs and most perennial streams are contained in Management Area 18. The desired future condition for Management Area 18 gives specific objectives for large woody debris, water temperature, sedimentation, and dissolved oxygen levels for streams. Fisheries direction for lakes, ponds, and streams is also provided in the discussion of Management Area 18 in Chapter 3.

**ISSUE 7:
AESTHETICS**

The approximately 1.1 million acres of the Forest contain picturesque mountains and valleys of great scenic beauty.

→ Under the Revised Plan, the Forest landscape continues to be a basic Forest resource and, as such, its requirements are based on appropriate visual quality objectives when managing resources of the Forest. Management Areas 5 and 7, in particular corridors along scenic routes, are managed to emphasize visual resource objectives.

Visual quality objectives (VQO's) are used as a management tool to protect the scenic attributes of the landscape. They identify the degree of acceptable alteration to the existing landscape appearance as perceived by the average Forest visitor. Assigned VQO's are consistent with the best management practices for all resources as emphasized in a particular management area.

During the revision process, the existing inventory of VQO's as defined in the National Forest Landscape Visual Management System was updated and verified. The Revised Plan uses "adopted" VQO's to match the management of the visual resources with the other objectives of each management area. Each management area described in Chapter 3 is assigned one or more VQO's.

The maximum modification visual quality objective is inconsistent with any of the recreation opportunity spectrum classes in the Revised Plan. Therefore, the maximum modification VQO has been eliminated. In its place, an adopted VQO of retention, partial retention, or modification is used, depending on the management area direction in Chapter 3.

Table 2-5 contains a breakdown of the acreage by long-term VQO in the Revised Plan compared to the existing inventory.

Table 2-5.
Thousands of Acres by Visual Quality Objectives

<u>Visual Quality Objective</u>	<u>Thousands of Acres</u>	
	<u>Inventory</u>	<u>Revised Plan</u>
Preservation	34	46
Retention	94	379
Partial Retention	279	548
Modification	641	88
Maximum Modification	13	0

In addition to these five long-term VQO's, there are two short-term VQO's which may be employed: rehabilitation and enhancement.

Specific guidelines and contrast reducing techniques have been developed for use with vegetation management practices on the Forest. They aid management in determining how to provide the visual image that viewers expect in certain areas. Refer to Common Standards in Chapter 3.

opportunities are provided. The opportunities do not conflict with the special biological values of the area and, in most cases, consist of dispersed non-motorized recreation activities. Activities may include hunting, fishing, hiking, nature study, and other similar activities. Interpretive facilities such as signs, wildlife viewing areas, and scenic vistas may be used to support dispersed recreation opportunities.

The continuance or reintroduction of natural processes is the most significant consideration when determining management activities for these SIAs-Biologic. Habitat is protected and managed for rare species and unique natural communities. Inholdings and adjacent lands are acquired as opportunities arise and are considered a priority for acquisition.

Conflicts that develop between biological resource protection and existing or proposed activities within an SIA-Biologic are resolved in favor of the activities that least impact the natural environment yet provide public safety and consistency with the special biological management objectives for the area.

Public use is allowed as long as it does not contribute to the impairment of natural values.

**Standards for
SIAs-Biologic**

Adherence to the following standards is required when implementing the Revised Plan in Special Interest Areas-Biologic. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

4-1. SIAs-Biologic are generally managed to meet a visual quality objective of retention. Short-term visual quality objectives of enhancement or rehabilitation may be used for individual areas where there is a need to manipulate vegetation or perform other management practices to retain or enhance special biological features.

Fire

4-2. In meeting objectives for habitat management and species maintenance, prescribed fire is permitted.

*Integrated Pest
Management*

4-3. Insect and disease outbreaks are not controlled except where threatened, proposed, endangered, or sensitive species and their habitats may be adversely impacted. Biological control methods are the preferred tactics.

Minerals

4-4. The area is available for oil and gas leasing with the following stipulations; no surface occupancy is permitted in areas less than 300 acres; in areas more than 300 acres, surface occupancy is restricted with controlled surface use stipulations and requirements.

4-5. Areas are available for other leasable minerals and common variety minerals on a case-by-case basis, according to analysis of needs and associated effects.

Recreation

4-6. Biological areas are managed under four recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1) or semi-primitive motorized (subclass 2). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

4-7. Where appropriate, interpretive services (trails, signs, viewing areas) are provided to enhance visitors' understanding and appreciation of the special values of the areas.

4-8. Trails and other recreation facilities are located so as to minimize negative impacts to the natural values of the area.

Roads

4-9. Motorized public travel is restricted to open system roads. New road construction is normally prohibited. See Common Standards.

Soil and Water

4-10. Watershed improvement projects are developed and implemented on areas where erosion is human-caused, but are not normally undertaken in response to natural processes that may occur.

Special Uses

4-11. New special uses are issued only where there is an over-riding demonstrated public need or benefit. Access to privately owned property is permitted only when other access is impractical or infeasible.

4-12. New utility corridors are located outside this management area if at all possible.

*Timber and
Other Vegetation*

4-13. If needed for safety of the public, dead or dying trees along roads can be cut. Availability for removal as salvage depends on the degree of disturbance and is determined on a case-by-case basis.

Wildlife

4-14. Vegetation may be manipulated for the management of the biological values identified as well as any threatened, endangered, or sensitive species and their habitat.

4-15. Existing or replacement wildlife improvements may be maintained as long as their presence is compatible with the management objectives of the area.

It is estimated that 50 to 100 acres per year may need treatment to maintain or restore various vegetation types to a more natural state. Primary treatment is prescribed burning; other treatments include elimination or control of exotic species.

**The Desired Future
Shenandoah Crest**

The protection, maintenance, and restoration of species, natural communities, and ecological processes are the primary objectives. Within this context, light-on-the-land multiple resource management activities may occur as specified in the standards for this SIA.

Vegetation types are influenced by the natural environmental and ecological processes that dominate the landscape. This area is generally protected from activities that fragment landscapes or conflict with TES species management goals. Restoration and maintenance of certain vegetation communities are permitted through prescribed burning or other proven means of controlling natural succession. Inholdings and adjacent lands are acquired as opportunities arise and are considered a priority for acquisition.

Visitors to this area see examples of the natural communities of Shenandoah Mountain. This includes various old growth forest types as well as a mosaic of grass and fern dominated openings with scattered trees along the very crest of Shenandoah Mountain. Dispersed recreation opportunities are provided when in harmony with the special biological values of the area. The existing Shenandoah Mountain picnic site continues to be used at its current size. Mountaintop vistas such as Reddish Knob Observation Site and Flagpole Knob provide sweeping views of the Shenandoah Valley.

Motorized vehicle access is limited to designated routes. Unauthorized roads are closed to vehicular traffic and revegetated. Driving for dispersed recreation is allowed on open system roads.

Non-motorized dispersed recreation opportunities abound. Visitors have the opportunity to experience solitude and enjoy the natural character of the landscape. Recreation activities include wildlife viewing, hunting, hiking, mountain biking, pleasure driving, and dispersed camping. Trail systems may be maintained, upgraded, expanded, or reduced, depending on demand and analysis.

**Standards
Shenandoah Crest**

Adherence to the following standards is required when implementing the Revised Plan in SIA-Shenandoah Mountain. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

4-40. This area is generally managed to meet a visual quality objective of retention.

4-41. Vegetation management practices that are used to provide scenic quality are permitted, such as removal of single or small groups of trees to provide or maintain a vista.

Fire

4-42. Prescribed fire is permitted to meet resource objectives for habitat restoration management or species maintenance.

Integrated Pest Management

4-43. Forest insect and disease outbreaks are not controlled except where threatened, endangered, or sensitive species or their habitats may be adversely impacted. If control efforts are deemed necessary, biological control measures are the preferred method of control.

Minerals

4-44. This area is available for oil and gas leasing with controlled surface use stipulations.

This area is not available for other leasable minerals.

4-46. This area is available for common variety minerals on a case-by-case basis. Availability depends on the nature and degree of disturbance planned.

Recreation

4-47. The Shenandoah Crest area is managed under three recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

4-48. Where appropriate, interpretive services (trails, signs, viewing areas) are provided to enhance visitors' understanding and appreciation of the area's special values.

4-49. Trails and other recreation facilities are located to minimize impacts occurring to the natural values of the established area.

4-50. Vistas and associated turn-outs may be maintained or increased where compatible with biological values.

Roads

4-51. Motorized public travel is restricted to current open system roads and designated routes within the Rocky Run ATV/OHV area.

New road construction is normally prohibited. See common standards.

4-53. Reconstruction, minor relocation and construction of parking facilities are permitted where compatible with biological values.

4-66. The Little Laurel Run RNA is not available for other leasable minerals and common variety minerals.

Recreation

4-67. While limited non-motorized dispersed recreation opportunities are permitted, a high level of recreation use is discouraged.

4-68. Where appropriate, interpretive facilities such as trails and signing may be provided to explain the unique features represented in the area.

4-69. The Little Laurel Run RNA is managed under two recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized or semi-primitive non-motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 2). See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

4-70. Lands classified as roaded natural are managed to achieve as natural and undisturbed a setting as possible.

4-71. Non-administrative vehicular use is prohibited.

Developed recreation sites are not permitted.

Roads

4-73. Roads that do not contribute to the objective of preserving the natural ecosystem and not needed for administrative purposes are closed. Normally, natural revegetation will obliterate closed roads. Other measures, such as seeding or planting, may be used if conditions warrant.

Road construction is not normally permitted inside the area.

Soil and Water

4-75. Watershed improvement projects are developed and implemented on areas where erosion is man-caused.

4-76. No watershed improvement projects are undertaken in response to natural processes that may occur.

Special Uses

4-77. Special uses consistent with the Chief's establishment report are permitted.

4-78. New special uses are issued only where there is an over-riding demonstrated public need or benefit. Access to privately owned property is permitted when other access is impractical or infeasible.

Timber

4-79. Salvage of dead and dying trees, and firewood gathering is not permitted when the activity will take place in an area greater than 150 feet from the edge of an open road.

Wildlife

4-80. Wildlife management practices are restricted to those necessary to protect populations of threatened, endangered, or sensitive species.

**MANAGEMENT
AREA 5
Massanutten
Mountain Sensitive
Viewshed**

This 10,000 acre management area primarily contains the visual middleground of the west face of Massanutten Mountain (a narrow strip) as seen from the Shenandoah Valley along Interstate 81. Generally, much of this area is steep except at the ridge top and valley floor. Accessibility is limited due to steep slopes and adjacent lower-slope land that is in private ownership.

Dispersed recreation use such as hunting, fishing, photography, hiking, bird-watching, backpacking, etc., is encouraged if compatible with maintaining the scenic resources. The area is classified unsuitable for timber protection because of its steep, rocky, and low site qualities. Timber may be salvaged along existing roads.

The Desired Future

Lands within this area are managed to retain the natural and rugged setting of the steep slopes of Massanutten Mountain. As visitors view the Forest from Interstate 81, they enjoy a landscape where scenic views dominate the area. The mountain slopes are forested, but from the Interstate, individual trees may not be distinguishable. The vegetation is a mixture of species of various ages and sizes. The area is classified unsuitable for timber production because of its steep, rocky, and low site qualities. Timber may be salvaged adjacent to existing roads.

Roads, trails, and wildlife habitat improvement activities are the most obvious changes to the natural environment. Activities proceed in a manner not noticeable to the casual observer.

Facilities, such as trailheads or interpretive signs, are constructed in a manner that maintains the visual quality of the area. Motorized use is limited to open system roads and roads providing access to private property. Non-motorized trails and open system roads provide access to the interior of the management area.

Habitat for wildlife species that require a mature forest, such as black bear, gray squirrel or pileated woodpecker, is provided. Existing improvements are maintained.

Standards

Adherence to the following standards is required when implementing the Revised Plan in Management Area 5. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

- Aesthetics*
- 5-1. The area is managed to meet a visual quality objective of retention.
- 5-2. A short term VQO of enhancement may be assigned as appropriate to ensure scenic qualities are optimized.
- 5-3. A short term VQO of rehabilitation may be assigned as needed to restore an area or facility to a condition that meets the visual quality objective of retention.
- Integrated Pest Management*
- 5-4. Actions are considered on a case-by-case basis to protect the aesthetic values of viewsheds and reduce hazard to visitors in locations where scenic routes cross the management area.
- Minerals*
- 5-5. The area is available for oil and gas leasing with "Controlled Surface Use" stipulations. The area is available for other leasable minerals and common variety minerals on a case-by-case basis.
- Recreation*
- 5-6. Lands within this management area are managed under two recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized or semi-primitive non-motorized adopt a recreation opportunity class of semi-primitive motorized (sub-class 2). See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.
- 5-7. Lands containing a roaded natural ROS classification are managed to maintain their natural and relatively undisturbed setting.
- 5-8. Trails and other recreation facilities are located so as not to disturb the scenic values of the established area.
- 5-9. Where appropriate, interpretive services such as trails, signs and viewing areas, are provided to enhance visitors' understanding of and appreciation for the natural environment and the area's special values.
- Roads*
- 5-10. Any access roads through this management area are designed and constructed to meet the visual quality objective of retention.
- 5-11. Motorized public access is restricted to open system roads.
- Soil and Water*
- 5-12. Watershed improvement projects are developed and implemented on areas where erosion is due to man-caused activities.

**MANAGEMENT
AREA 7
Scenic Corridors
and the Highlands
Scenic Tour**

This 39,000-acre management area contains primarily the visual foreground of outstanding scenic routes that traverse the Forest. The majority of Sensitivity Level 1 routes and three Sensitivity Level 2 routes are in this management area.

These routes are typified by Interstate 64, the Blue Ridge Parkway, and certain federal and state routes, some of which are listed as Virginia Byways.

SCENIC CORRIDORS

Among these is the Highlands Scenic Tour, a component of the Forest Service's National Scenic Byways system. The desired future conditions and additional standards for both the foreground and middleground zones are provided separately at the end of the Management Area 7 discussion.

**The Desired Future
Scenic Corridors**

As visitors travel through this management area corridor, they enjoy a landscape which offers a variety of scenic views. These may include rugged mountain terrain with rock outcrops as well as low lying hollows and valleys. Visitors enjoy views of water features such as lakes and cascading rivers and streams and forest vegetation. A variety of sizes, colors and textures can be seen in the many species of vegetation.

The foreground viewshed consists primarily of a continuous cover of large hardwoods and pines with understory and groundcover vegetation. Occasionally there is an opening in the forest where opportunities for viewing wildlife and geographic features are maximized. Except along interstates, most of the views are restricted to the immediate foreground by vegetation and natural landforms. There are occasional openings which reveal middleground or distant background vistas. Because of the undulating nature of the forest canopy over the road or trail, the visitors experience both shade and sun, enclosure and exposure. Vertical curves in the travel routes provide elevation changes which afford views from a variety of vantage points. Occasionally, there are parking areas or pull-outs that provide opportunities for visitors to enjoy the landscape and photograph wildlife.

As seen from these sensitive routes, the scenic resources of the Forest are maintained and, if necessary, rehabilitated or enhanced. Interpretive facilities are permissible along primary travel routes to enhance the visitor's experience and knowledge.

In areas with a VQO of retention, most observers are not aware of the various management activities that are occurring in the area such as wildlife habitat improvement or salvage of hazard trees. In areas which meet a partial retention VQO, observers may be aware of management activities which occur, but management activities are not obtrusive. They are carefully planned to remain

subordinate to the primary goal of maintaining the scenic qualities of the landscape. See Table 3-3 for a list of travelways which are included, at least in part, as scenic corridors in retention zones and those in partial retention zones.

Table 3-3.

Scenic Corridors in Retention VQO Zones

Interstate 64	State Highway 56
Blue Ridge Parkway	State Highway 311
Amtrak	State Highway 55
US Highway 60	State Highway 130
US Highway 250	State Highway 39
US Highway 33	State Highway 42
US Highway 211	
US Highway 220	State Highway 924
US Highway 501	State Highway 850
State Highway 259	State Highway 770
State Highway 605	
Forest Development Road 447	
State Highway 629 south of Douthat	

Scenic Corridors in Partial Retention VQO Zones

State Highway 718	Forest Development Road 125
State Highway 606	Forest Development Road 274
State Highway 687	
State Highway 629 north of Douthat	

In areas classified as unsuitable for timber production, vegetation manipulation is permitted for improvements to visual resources, recreation opportunities, safety, and wildlife habitat.

Recreational and interpretive facilities which support developed and dispersed recreation opportunities may be located within the management area corridor. Interpretive services are provided to enhance visitors' understanding of and appreciation for the natural and cultural resources of the Forest. Facilities may include but are not limited to trails, buildings, viewing areas, hang gliding and signs. All facilities blend well with the natural surroundings.

Wildlife species that require a mature forest — such as gray squirrel or pileated woodpecker — are maintained or enhanced, resulting in viewing opportunities for "watchable wildlife" species.

**Standards -
Scenic Corridors**

Adherence to the following standards is required when implementing the Revised Plan in Scenic Corridors. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

7-1. A short term VQO of rehabilitation can be used to restore an area or facility to a condition that meets the visual quality objective of retention. Rehabilitation is applied to travelways and vista points as needed.

7-2. A short term VQO of enhancement may be assigned as appropriate to ensure scenic qualities are optimized.

7-3. Seek opportunities to screen or minimize visual impacts of utility corridors and support towers.

7-4. Vegetation management and other practices that meet the objectives for providing a scenic environment are permitted.

*Integrated Pest
Management*

7-5. Actions are considered that protect the aesthetic values of the foreground on a case-by-case basis. Forest insect and disease outbreaks may be controlled along roadways and overlooks to prevent tree mortality and reduce hazards to visitors.

Minerals

7-6. The area is available for oil and gas leasing with "Controlled Surface Use" stipulations. The area is available for other leasable minerals and common variety minerals on a case-by-case basis.

Recreation

7-7. Lands within this management area are managed under three recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. The Highlands Scenic tour is managed as roaded natural. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

7-8. Interpretive services including trails, signs, viewing areas, self-guided programs and buildings are provided to enhance understanding and appreciation for the natural environment, cultural resources and the Forest's special features.

7-9. Larger scale public use facilities such as public information centers and administrative headquarters are allowed with structures properly landscaped.

Roads

7-10. Access roads through this management area are designed and constructed to minimize visual impacts and meet the retention VQO.

*Special Uses and
Utility Corridors*

7-11. New special uses are issued only where there is an over-riding demonstrated public need or benefit. Access to privately owned property is permitted when other access is impractical and infeasible.

*Timber and Other
Vegetation*

7-12. Vegetation management is permitted for wildlife habitat improvement, visual resources enhancement, rehabilitation, recreation, firewood, safety and salvage of dead and dying trees.

7-13. On lands suitable for timber production, silvicultural practices may be employed that achieve the desired future condition of the management area, and meet the appropriate visual quality objective.

7-14. On suitable lands salvage of dead, dying and damaged trees can occur from existing roads to provide for scenic rehabilitation and public safety using ground-based or helicopter logging.

Wildlife

7-15. Wildlife and fisheries habitat improvement activities are performed to enhance viewing and fishing opportunities as well as for non-game wildlife species. "Watchable" wildlife species habitat enhancement is performed in accordance with a visual quality objective of retention.

7-16. Wildlife habitat improvements that blend well with the surrounding landscape may be implemented.

**THE HIGHLANDS
SCENIC TOUR**

The Highlands Scenic Tour is a 19.6 mile designated Forest Service Scenic Byway. It is located in Allegheny and Rockbridge Counties and includes segments of State Route 850, State Route 770 and FDR 447. The Byway takes on the form of an elongated loop. The visual foreground zone is managed differently than the middleground zones which are primarily located in the middle of the loop. The desired future and standards are discussed separately for these zones.

**The Desired Future
Foreground**

From the dense forested stream valleys of Brattons Run and Simpson Creek to the upland hardwood forest on the ridge of North Mountain, the Highlands Scenic Tour weaves through scenery which consists primarily of a continuous cover of forest. There are views to impressive geologic formations on the upper slopes as well as beautiful cascading streams in narrow valleys. There are numerous reminders of a once thriving mining community including building foundations and a narrow gauge railroad grade.

The scenic, historic and natural resources are interpreted for the benefit of visitors. There is a modest interpretive facility, trailhead and short loop trails along Simpson Creek. Other short interpretive trails are located along the

(a) the intensity of the infestation; (b) the constraints applied to the control methods and (c) the resources available to control the spot.

Lands

8-53. Adequate access is provided to states or persons, and their successors in interest, who own land completely surrounded by wilderness or roadless areas recommended for wilderness study.

8-54. Any national forest land within, or adjacent to, the wilderness or a roadless area recommended for wilderness study is not considered for exchange.

8-55. The purchase or exchange of any available private or state-owned land inholdings or interests within wilderness or roadless areas recommended for wilderness study is pursued.

8-56. Right-of-way and land acquisition is pursued to provide access to wilderness or roadless areas recommended for wilderness study.

Minerals

8-57. Existing wildernesses are unavailable for mineral leasing and development, subject to valid existing rights. Leases with "No Surface Occupancy" stipulations may be issued when the area is subject to withdrawal of underground mineral resources.

8-58. The gathering of information on mineral resources in wildernesses is permitted in a manner that does not result in significant disturbance to the soil surface and meets legal requirements.

8-59. Roadless areas recommended for wilderness study are managed under the following direction until Congressional action occurs; these areas are available for oil and gas leasing with controlled surface use stipulations; these areas are available for other leasable minerals on a case-by-case basis; these areas are not available for common variety minerals.

8-60. Upon Congressional action designating these areas as wilderness, roadless areas previously recommended for wilderness study are legally unavailable for mineral leasing and development, subject to valid existing rights.

Recreation

8-61. Lands within this management area are managed under two recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized or semi-primitive non-motorized adopt a recreation opportunity class of semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

Research and Scientific Study

8-62. Non-manipulative scientific study dependent and compatible with the goals and objectives of the wilderness are allowed. Only those studies are approved that are consistent with wilderness management.

8-63. Test plots are marked in a temporary manner not generally visually evident to the average visitor.

Search and Rescue

8-64. The county or counties where the wilderness areas are located have the responsibility for search and rescue of lost or injured visitors. The Forest will provide assistance when requested for such things as scouting services, detailed maps, aerial photography, and detailed information about the area. Use of motorized equipment for search and rescue operations within the wilderness area must be approved in advance by the Forest Supervisor.

8-65. Commercial use by outfitters and guides of wildernesses or roadless areas recommended for wilderness study is allowed if compatible with preservation of the wilderness values, is educational, or is in the interest of scientific research. However, contest events such as foot races or horseback enduros are not allowed.

8-66. Decisions to authorize commercial uses of wilderness or roadless areas recommended for wilderness study are documented following NEPA regulations.

Special Uses

8-67. Other special uses consistent with wilderness values are allowed on a case-by-case basis.

TE&S Species

8-68. Appropriate management is provided to known populations of endangered, threatened, and sensitive species.

Water

8-69. No measures are initiated that change water flow.

8-70. No water developments, such as impoundments or water wells, are constructed in wilderness.

8-71. Water quality measurements are made with portable or nonpermanent equipment.

8-72. Water quality measurements are performed and documented as prescribed by State and/or Federal laws, policies, and/or procedures.

8-73. Users are informed of the need to purify drinking water and any other special or unusual conditions which they need to be aware of, such as flooding potential.

**MANAGEMENT
AREA 9
Remote Highlands**

This 141,000-acre management area contains many of the more remote areas of the Forest. Remote Highlands are managed to provide older vegetation in remote and isolated areas where recreationists can obtain a degree of solitude and the environment can be maintained in a near-natural state where only light-on-the-land management activities occur. These areas are classified unsuitable for timber production and contribute to the unfragmented habitat of the Forest.

The Desired Future

The ecosystem is generally the result of natural processes. Wildlife preferring unfragmented mature vegetation or the late successional stages of vegetation predominate in older age forests. Normally, visitors can view wildlife species that require old growth conditions and low levels of disturbance. Habitat is provided for threatened, endangered, sensitive species, and interior forest dwelling species and to meet requirements necessary for sustaining viable populations of other plant, bird and animal species.

Little evidence of other users and low interaction among users occurs, except along roads and trails. Facilities of a primitive nature may be present to protect the resources and the safety of visitors.

Recreation facility development is generally provided to accommodate users at the perimeter of the management area. Visitors are afforded the opportunity to be self-reliant on their outdoor skills in an environment away from such comfort and convenience amenities normally found in developed recreation areas. Trailhead parking, bulletin boards and vault toilets may be provided.

Opportunities are provided for primitive, dispersed recreation experiences that emphasize solitude and challenge such as hiking, horseback riding, mountain biking, hunting, fishing, and camping. Travel is primarily on system trails using mountain bikes, hiking, and horses. Existing system roads may remain open or be open seasonally. Motorized use of trails is prohibited. A range of trail difficulty levels, easy to most difficult, is offered as terrain dictates. For resource protection primarily, campsites may be designated and show evidence of repeated, but acceptable levels of use.

Stands having old growth forest oak are identified and managed to retain their old growth characteristics. Other portions of this management area attain the characteristics of old growth specific to that forest type over time.

Wildlife habitat improvements are implemented through maintenance or construction of openings, through prescribed burning, and similar improvements. Travel routes accessing these improvements are maintained at minimum levels.

Minerals activities may occur in a few locations. Maintenance and restoration of developments are used to provide wildlife habitat.

Standards

Adherence to the following standards is required when implementing the Revised Plan in Remote Highlands. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

9-1. Management practices meet the visual quality objective of retention. Areas contributing to excessive erosion/sediment and salvage have a short term visual quality objective of rehabilitation. Enhancement may be used to showcase outstanding scenic resources.

Fire

9-2. Prescribed fire may be used to maintain habitat for wildlife and fire dependent plant communities.

Integrated Pest Management

9-3. Generally, forest insect and disease outbreaks are not controlled except where threatened, endangered, or sensitive species and their habitat may be adversely impacted or to prevent a threat to private land.

Minerals

9-4. These areas are available for oil and gas leasing with controlled surface use stipulations.

9-5. Other leasable minerals and common variety minerals are generally restricted but can be available on a case-by-case basis. Availability depends on the nature and degree of disturbance planned and the significance of the mineral.

Recreation

9-6. Remote Highlands are managed under four recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1) or semi-primitive motorized (subclass 2). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

9-7. No-trace camping techniques are promoted. Campsites and other areas of concentrated use are managed for a low level of change in natural conditions.

9-8. Overused sites are rehabilitated. Temporary or permanent site closures may be implemented when other management techniques are not successful.

Roads

9-9. No new road construction is permitted except: (1) to access approved mineral activities; (2) where the new road is the only prudent alternative to serve

Management Area 10 is composed of approximately 55 miles of rivers that qualify as scenic rivers and approximately 200 miles that qualify as recreation rivers. Both have corridor widths of 1/4-mile on each side of the river. There are approximately 4,000 acres in the scenic river corridor and 4,000 acres in the recreation river corridor. All acres are classified as unsuitable for timber production.

The Desired Future

Eligible river segments and their immediate environments are managed to preserve free-flowing conditions and to protect the outstanding values of the segments -- scenic, recreation, geologic, fish and wildlife, historic, cultural, and similar values that made it eligible. Until designation decisions are made or other river studies are conducted, National Forest System lands associated with each eligible river corridors are managed to perpetuate or enhance each rivers current conditions. Characteristics of the rivers and their corridors are not reduced below the standards for classification as a recreational river.

Resource effects, including soil compaction, loss of vegetation, and water pollution around streams is minimized. Roads, trails, and dispersed campsites are managed to discourage impacts to lakes, streams, and fragile soil resources.

Wildlife habitat improvement activities are performed to enhance viewing and hunting opportunities.

Standards

Adherence to the following standards is required when implementing the Revised Plan in areas where rivers/portions of rivers are designated as scenic or recreational. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

10-1. Until designation decisions are made, National Forest System lands associated with eligible river corridors are managed to perpetuate their current conditions. Management activities may enhance conditions, but may not reduce the characteristics below the standards for the river's potential classification.

Aesthetics

10-2. A short term VQO of rehabilitation can be used to restore an area or facility to a condition that meets the visual quality objective of retention. Rehabilitation is applied to travelways and vista points as needed.

10-3. A short term VQO of enhancement may be assigned as appropriate to ensure scenic qualities are optimized.

Overhead utility lines and support towers are screened where possible.

Facilities

10-5. Development of hydroelectric power facilities is discouraged on National Forest System lands.

10-6. New flood control and water supply dams and levees are discouraged on National Forest System lands.

10-7. Proposed facilities (roads, campgrounds, buildings) are located outside floodplain boundaries for the 100-year flood (Executive Order 11988), unless no practical alternative location exists. Where present and future facilities cannot be located out of the 100-year floodplain, structural mitigation (deflection structures, riprap, etc.) is used.

10-8. Utility structures such as new transmission lines, gas lines and water lines are discouraged. Where no reasonable alternative exists, additional or new facilities are authorized only in locations that can provide acceptable visual impacts.

Fire

10-9. Prescribed burning is permitted if meets specific resource objectives.

Integrated Pest Management

10-10. Suppression of forest insect and disease infestation may be considered in developed areas with the objectives of protecting proposed, endangered, threatened and sensitive species, protecting the tree canopy along sensitive streams, preventing tree mortality and reducing hazards.

Recreation

10-11. Lands within this management area are managed under three recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

OHV use is allowed only on open system roads.

10-13. Soils are stabilized on eroded recreational sites through revegetation, traffic control, or closing of site.

10-14. Trails are maintained to a standard compatible with intended use.

10-15. Trails are located, constructed, and maintained so as to minimize adverse impacts to the resources.

Soil and Water

10-16. Disturbed areas (channels, degraded areas, etc.) that are contributing sediment directly to perennial streams and bodies of water are treated so that sediment yield is reduced to the natural rate as soon as possible.

Timber

10-17. Salvage of dead, dying, or damaged trees can occur from existing roads with ground-based or helicopter logging methods without additional road construction.

Wildlife/Fisheries

10-18. Wildlife habitat improvement activities are performed to enhance viewing and hunting opportunities. Waterfowl, woodcock, watchable wildlife, and other riparian dependent species habitat enhancements are allowed.

10-19. Wildlife habitat improvements are constructed using materials that blend well with the surrounding landscape.

SCENIC RIVERS -

River segments qualifying for scenic river designation under the National Wild and Scenic Rivers Act of 1968 (refer to Appendix D of the EIS) are managed to retain the attributes that qualify them for scenic river designation. As described in the Act, a scenic river is a river or section of river that is "free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads."

The largely primitive surroundings on the river and within the one-quarter mile corridor that exists on both sides of the river is maintained.

The Desired Future

The river and a one-quarter mile corridor on each side exist in a natural to near-natural setting and usually possess outstanding scenic quality. The characteristic landscape is that of continuous forest cover of predominantly hardwood species. Occasional small openings in the forest exist. The terrain is generally steep adjacent to the river, however some areas do possess a wide, flat river valley. Intermittent and perennial streams flow unobstructed from the sideslopes into the river. Opportunities for wildlife viewing are good. In some areas the hydrologic processes over time have exposed geologic features.

The river and its channel are not modified except for fisheries habitat improvements. Dams or other structures that impede the flow of the river are prohibited. Some activities related to management of riparian dependent resources or wildlife habitat activities may be evident. The river user is aware that man's past activities have changed the original character of the river and its surrounding landscape only in selected areas and for short stretches. Most users are not offended by these sights.

Recreation use on the river and within the corridor is not concentrated, and visitors have the opportunity to experience some solitude and enjoy the primi-

tive character of the surrounding landscape. Water-based recreation activities such as swimming, wading, fishing, canoeing, rafting, and kayaking occur in the river. The use of motor powered boats may be permitted in designated areas. Land-based recreation activities include hunting, hiking, horseback riding, and other activities that do not disturb the serenity of the area. OHV use occurs only on existing open roads.

Management practices do not alter the primitive landscape. Access to scenic river segments is provided at select locations. Facility emphasis is on health, safety, and resource protection plus some degree of user convenience. Lands within scenic river corridors are classified unsuitable for timber production.

Standards

Adherence to the following standards is required when implementing the Revised Plan in areas with scenic river designation. These standards are in addition to standards that apply to all of Management Area 10.

Aesthetics

10-20. Scenic river corridors are managed to meet a visual quality objective of retention.

Facilities

10-21. No new special uses authorizing the construction of buildings or structures are issued unless there is no reasonable alternative.

Minerals

10-22. Scenic river sections are available for oil and gas leasing with controlled surface use stipulations.

10-23. Scenic river corridors are available for other leasable minerals and common variety minerals on a case-by-case basis.

Recreation

10-24. Scenic river corridors are managed under three recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

10-25. Rehabilitation can be used to restore an area or facility to a condition that meets both the semi-primitive motorized or nonmotorized ROS class designation and the visual quality objective of retention. This might include existing roads, trails, bridges, parking facilities, or campgrounds.

10-26. Public use facilities such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river and are located outside the floodplain.

Roads

10-27. Access for recreation development and wildlife and fisheries habitat development is allowed in selected locations within the river corridor.

RECREATION RIVERS

River segments qualifying for recreation river designation under the National Wild and Scenic Rivers Act of 1968 are managed to retain the attributes that permit them to qualify for the recreation river designation. As described in the Act, recreation rivers are rivers or sections of river that are "readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past."

Rivers qualifying for recreation river designation are managed to maintain the free-flowing nature of the river while providing for an abundance of recreation use. Multiple use activities may occur within the river corridor, including wildlife habitat manipulation, road construction, and trail construction.

To maintain pastoral settings, grazing is permitted on approximately 240 acres in five pastures or on newly acquired lands with similar desired future conditions. Lands within this management area are classified as unsuitable for timber production. The grazing program is not expanded beyond the existing allotments.

The Desired Future

While the characteristic landscape in this management area is that of mostly continuous forest cover, the river and one-quarter mile corridors on each side of the river may have some development. Evidence of impoundments or diversions from the past may be present. A few roads, trails, wildlife habitat improvements, grazing in open pastures, and recreation activities dominate the landscape.

The river is readily accessible by road or railroad. Forest Service facilities provide user information, access to the river, camping, and day-use activities. Facilities may be developed to provide for user convenience and may include paved boat ramps, electric hookups at camping sites, interpretive trails, and flush toilets at public restrooms.

Recreation use of the river and the corridor is concentrated. Opportunities for solitude are not readily available. The level of social interaction with other recreation users is moderate or high at developed sites and on the river. Water based recreation may include canoeing, rafting, tubing, hunting, kayaking, swimming, and fishing. Land based activities may include picnicking, hiking, camping, bicycling, horseback riding, and interpretive services.

Resource effects, including soil compaction, loss of vegetation, and water pollution around streams is minimized. Roads, trails, and dispersed campsites are managed to discourage impacts to lakes, streams, and fragile soil resources.

Standards

Adherence to the following standards is required when implementing the Revised Plan in areas with recreation river designation. These standards are in addition to standards that apply to all of Management Area 10.

Aesthetics

10-28. The area is managed to meet a visual quality objective of partial retention.

Grazing

10-29. The grazing program is managed with range permit system with the existing allotments and any future ones confined to the areas designated to be maintained in an open pastoral setting.

Minerals

10-30. Recreational river sections are available for oil and gas leasing and development with stipulations. Other leasable minerals and common variety minerals are also available on a case-by-case basis.

10-31. All proposed mining activities must include appropriate mitigation measures to protect the recreational designation.

Recreation

10-32. Recreation river corridors are managed under two recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

10-33. Rehabilitation can be used to restore an area or facility to a condition that meets both the roaded natural or rural ROS class designation and the visual quality objective of partial retention. This may include existing roads, trails, bridges, parking facilities, or campgrounds.

10-34. Access for recreation use is provided to accommodate a large number of users.

10-35. Dispersed recreation facilities -- such as bulletin boards, boat launches, garbage receptacles, etc. -- may be established close to the river as long as riparian resources are protected.

10-36. Whenever feasible, coordinate future developments and activities with state and local governments and landowners in an effort to develop partnerships and a strategy for long-range use of the river.

Roads

10-37. Roads constructed within the corridor can be in the traffic service level A, B, or C categories and are typically open year-round. They provide safe access to recreation facilities for a variety of vehicles, including larger recreation vehicles (RVs).

10-38. Newly constructed roads can parallel the river on both sides and may cross at designated locations.

10-39. Long-term impacts of road construction on soil/water resources are reduced and the road investment is protected.

**MANAGEMENT→
AREA 11
All-Terrain/
Off-Highway
Vehicle Routes**

This 11,000-acre management area contains approximately 215 miles of routes designated for Off-Highway Vehicle (OHV) use.

Routes in this management area are managed to provide a variety of motorized recreation opportunities such as sightseeing, hunting, photography, and pleasure riding. Motorized use within the four ATV/OHV areas listed below occurs on approved and designated routes only. Routes within these areas are also suitable for unlicensed motorcycles.

**Table 3-4.
ATV/OHV Areas**

<u>Ranger District</u>	<u>ATV¹/OHV²Areas</u>	<u>Appx.Miles of Routes Existing & Proposed</u>
Deerfield	Archer	15
Dry River	Rocky Run	15
Lee	Taskers Gap-Peters Mill Run	20
Pedlar	South Pedlar	25

The Rocky Run area is classified unsuitable for timber production. It is characterized by a natural, relatively unmodified environment. The viewshed consists primarily of a continuous cover of hardwoods with small openings. The landscape, for the most part, appears unaltered by human activity. Existing roads, trails, and structures and newly constructed ATV trails are the most obvious changes to the natural environment.

The remainder of Management Area 11 is classified suitable for timber production. Both even-aged and uneven-aged systems are used throughout Management Area 11.

¹All-Terrain Vehicles (ATVs) - A type of off-highway vehicle. It includes vehicles 50 inches or less in width having a dry weight of 600 pounds or less that travel on three or more low-pressure tires with a seat designed to be straddled by the operator. Because all-terrain vehicles cannot be licensed or registered under state vehicle laws, they are not allowed on Forest Development Roads unless a road is designated by Supervisor's Order for OHV use that includes ATVs.

²Off-Highway Vehicles (OHVs) - A broad category of motorized vehicles capable of off-highway travel. This broad category includes ATVs, motorcycles, trailbikes, and four-wheel drive vehicles. ATVs and most trailbikes are not licensed under state motor vehicle laws. Licensed OHVs are allowed on any Forest Development Road that is open for public travel provided the vehicle and the operator are in compliance with motor vehicle laws of the state. This definition encompasses and replaces the term ORV (Off-Road Vehicle).

Standards	Adherence to the following standards is required when implementing the Revised Plan on lands with routes designated for Off-Highway Vehicle use. These standards incorporate direction and criteria found in Executive Orders 11644 and 11989, 36 CFR 295, FSM 2355 and the publication <i>Management Directions for Off-Road Vehicle Use in the Appalachian Mountain National Forests</i> . These standards are in addition to the applicable Common Standards listed at the end of this chapter.
<i>Aesthetics</i>	11-1. The visual quality objective is partial retention.
<i>Fire</i>	11-2. Prescribed fire is permitted for wildlife habitat improvement or for maintaining fire dependent species.
<i>Integrated Pest Management</i>	11-3. Insect and disease outbreaks may be controlled to prevent tree mortality and to reduce safety hazards to visitors.
<i>Minerals</i>	11-4. The area is available for oil and gas leasing and development with standard stipulations. Other leasable minerals and common variety minerals are also available.
<i>Recreation</i>	<p>11-5. Lands in this management area are managed under the roaded natural recreation opportunity class. See the <i>Transportation Network and Recreational Opportunities</i> map accompanying the Revised Plan.</p> <p>11-6. Trail and road systems are constructed that include both single-track, narrow trails for the motorcycle and ATV user as well as roads that may be used for removing timber and for larger four-wheel drive vehicles.</p> <p>11-7. Through trail design, layout, and signing, minimize user conflicts and safety hazards that may exist with other recreation users and between full size four-wheel drive vehicle users and ATV and motorcycle users.</p> <p>11-8. Through trail design, layout, and management, adverse effects on the land and resources are minimized. Damage to soil, watershed, vegetation, wildlife habitat, or other natural, cultural, and historical resources, and disturbance of wildlife on the public lands are minimized.</p> <p>11-9. Routes are closed to ATV/OHV use when unacceptable adverse effects occur or are likely to occur. The routes or trails remain closed until the adverse effects are eliminated and until measures are implemented to prevent recurrence.</p>

11-10. The effects of vehicle use, noise levels, enforcement of restrictions and closures are closely monitored and evaluated.

11-11. Public safety and effective law enforcement are promoted and conflicts are controlled with other uses of National Forest System lands.

11-12. Volunteer organizations are actively recruited through the Adopt-A-Trail program to become involved in the long-term construction and maintenance of trail systems.

11-13. Existing routes located in or adjacent to sensitive areas are relocated or closed. Unneeded old routes are restored to their natural profile and revegetated.

11-14. Trail system designs with a series of loops are encouraged. This results in a more compact trail system that confines impacts to a smaller area.

11-15. The trail network is located in an area which limits the ability of users to illegally access areas off the designated routes. Full advantage is taken of natural and man-made features to use as physical barriers to illegal use.

11-16. Old roads are converted to authorized routes to the extent possible and practical.

11-17. Within ATV/OHV areas public information is provided that, as a minimum, includes maps describing the routes where use is permitted, prohibited, or restricted and the conditions of such use.

11-18. Proposals for routes in this management area are evaluated during project level analysis based on direction and criteria found in Executive Orders 11644 and 11989, 36 CFR 295, FSH 2355 and the publication *Management Direction for Off-Road Vehicle Use in the Appalachian Mountain National Forests*. In addition, the following key factors are to be considered in the project level analysis.

a. Demand for new routes in this management area is determined and documented. In measuring demand, the following factors are normally included: the commitment of a club for assistance with construction, maintenance, patrolling and monitoring; significant number of requests by users or other publics to provide facilities; demonstrated conflicts with other Forest users; and existing uncontrolled use.

**MANAGEMENT
AREA 13
Dispersed
Recreation Areas**

This 42,000-acre management area contains lands that receive heavy dispersed recreation use. In some cases, the lands surround and complement developed recreation areas identified in Management Area 12. The lands are managed to provide a variety of dispersed recreation opportunities and experiences, to enhance and interpret unique natural resources, and to provide the facilities necessary to prevent degradation of the natural and aesthetic resources of the area.

Most of the lands are classified as unsuitable for timber production. Shaws Fork, North River, and Hidden Valley include lands that are suitable for timber production using uneven-aged management systems.

The smaller areas typically feature a significant scenic or recreational resource such as a waterfall or river and are used heavily by hunters and anglers. The larger areas typically have well-developed trail or road systems for activities such as hunting, fishing, horseback riding, hiking, and mountain bike riding. See Table 3-10.

**Table 3-10.
Dispersed Recreation Areas by Ranger District**

<u>Ranger District</u>	<u>Area</u>	<u>Acres</u>
Deerfield	Shaws Fork	250
Dry River	Brandywine*	1090
	Hone Quarry*	660
	North River*	10,860
James River	Longdale*	435
	Children's Forest*	245
	Oliver Mountain	7,940
Lee	Trout Pond*	1,040
	Hazard Mill*	360
	Elizabeth Furnace*	2,930

**Table 3-10. (Continued)
Dispersed Recreation Areas by Ranger District**

<u>Ranger District</u>	<u>Area</u>	<u>Acres</u>
Pedlar	Va. Wildlife Center	385
	Sherando*	3,715
	Pedlar River	690
	Crabtree Meadows*	1,250
	Shoe Creek	1,255
Warm Springs	Walton Tract	950
	Hidden Valley*	3,445
	Lake Moomaw*	<u>4,325</u>
	TOTAL	<u>41,825</u>

*Dispersed recreation areas surrounding or adjacent to developed recreation areas (Management Area 12).

The Desired Future

Lands in this management area provide a variety of dispersed recreation opportunities and experiences to enhance and interpret the resources of the area--natural, cultural, and aesthetic; to develop and administer a non-motorized trail system that supports demand; and to provide the facilities necessary to prevent degradation of the resources and to direct use of the area.

There is a continuous cover of hardwoods over most MA 13 lands. However, there are occasional small openings created for wildlife habitat or basic facilities for visitor use and resource protection. Vegetation manipulation may also occur to the extent needed to provide safety for visitors or scenic rehabilitation and enhancement.

Motorized use is by licensed vehicles only and occurs only on open roads in and adjacent to MA 13 lands. Cross country travel by any motorized vehicle does not occur.

Each of the listed areas features many diverse non-motorized recreation opportunities. Motorized staging areas for these activities frequently occur at adjacent developed recreation sites in Management Area 12 or at sites managed as areas of concentrated use. The latter serve as motorized access points for non-motorized activities within the management area itself. Camping, fishing, firewood gathering, and other activities that are often closely associated with vehicle use also occur along open roads in less concentrated densities. Self-

guided auto tours providing scenic, interpretive, educational and other pleasurable driving experiences, are available within easy access of populated areas.

Dispersed recreation areas that receive heavy use are managed to protect and preserve the resources of the areas. Site controls and facilities such as delineated parking lots, vault toilets, bulletin boards, user constructed fire rings, and hardened areas for tent use are used to provide some convenience to users and limit the spread of unacceptable impacts on the resources. Forest Supervisor's Orders may be used to implement necessary restrictions for resource protection.

The management area provides a variety of land and water-based, non-motorized dispersed recreation opportunities including but not limited to hiking, backpacking, bicycling, horseback riding, hunting, canoeing, rafting, and fishing. Lands in this management area are capable of handling a large number of users at any given time. Social interaction with individuals and groups is the normal situation. However, with the large size of some areas, there are many opportunities for solitude and challenge, remote and away from most evidence of man.

Interior access away from roads is by Forest Development trail on foot, horseback or bicycle. Many of these trails are loops for day hikes and backpacking.

Standards

Adherence to the following standards is required when implementing the Revised Plan on Management Area 13 lands. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

13-1. The area is managed to meet a visual quality objective of retention in foregrounds from sensitive travelways and viewing points; the visual quality objective is partial retention elsewhere.

Cultural Resources

13-2. Where appropriate, cultural resources present in the site are developed and interpreted for the user's education and enjoyment.

Fire

13-3. The suppression response is control for all intensity levels in situations where facilities are at risk.

13-4. Prescribed fire may be used for understory maintenance, wildlife habitat improvement, and to enhance the recreation experience.

Fisheries 13-5. Riparian and fisheries direction is described in Management Area 18.

Integrated Pest Management 13-6. Suppression of gypsy moth populations is considered to prevent tree mortality and reduce hazards to visitors.

Minerals 13-7. Exploration actions involving substantial activity, such as geophysical surveys, are confined to periods that do not interfere with Forest visitors.

13-8. The area is available for oil and gas leasing with the following stipulations; no surface occupancy is permitted in areas less than 300 acres; in areas more than 300 acres, surface occupancy is highly restricted by using controlled surface use stipulations.

13-9. Other leasable and common variety minerals are available on a case-by-case basis.

Recreation 13-10. Lands managed for dispersed recreation opportunities are managed under four recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1) or semi-primitive motorized (subclass 2). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

13-11. New trail systems may be added and existing systems expanded to meet the needs of the visiting public.

13-12. Sanitation facilities are provided where sanitation problems are anticipated or exist.

13-13. Identification signs, bulletin boards, maps, and brochures are installed as needed to support use and provide timely information to the user.

Existing capital investments and improvements are maintained.

13-15. Campsites and other areas of concentrated use are managed for a low level of change in natural conditions.

13-16. Overused sites are rehabilitated and temporary or permanent site closure is considered when other management techniques are not successful.

Roads 13-17. Roads to access recreation facilities are constructed to the standard necessary to support the level and type of use occurring.

13-18. Construction of new roads is minimized and new roads outside of developed areas are constructed to TSL D.

13-19. Motorized public access is restricted to open system roads.

Soil and Water

13-20. Water quality is maintained at existing or higher levels. Erosion from either natural causes or human use that is contributing to degradation of water quality is controlled at acceptable levels.

Timber

13-21. On lands unsuitable for timber production, dead trees may be salvaged or cut for firewood. Live or damaged trees and shrubs may be cut and removed for the safety of visitors or for scenic rehabilitation.

13-22. On lands suitable for timber production, large contiguous areas with level terrain -- as shown on the *Lands Suitable for Timber Production by Management Area* map -- are classified as lands suitable for timber production. Here, uneven-aged management using group selection and individual tree selection cutting methods are used.

13-23. Ten-year to 15-year cutting cycles are used for uneven-aged silvicultural systems.

13-24. Intermediate cuttings such as improvement cutting, salvage cutting, and sanitation cutting are permitted as long as progression is maintained toward development of the uneven-aged character of stands.

Wildlife

13-25. Existing wildlife habitat improvements may be maintained. Additional improvements are permitted if they contribute to achievement of the desired future for the management area.

**MANAGEMENT
AREA 14
Remote Habitat
For Wildlife**

This 133,000-acre management area contains portions of the Forest that are managed to maintain or enhance habitats for wildlife species that favor a mature forest environment that provides a continuous supply of hard and soft mast; large high value timber products; areas of dense vegetation cover; and freedom from continued disturbance. Generally, this management area is composed of contiguous terrain or is adjacent to other remote areas such as Management Area 9. Examples of species that may commonly inhabit the area are black bear, worm-eating warbler, pileated woodpecker, common raven, and bobcat.

The Desired Future

A large remote mountainous area of contiguous forest with boulders, out crops, ledges and cliffs. Some thickets of mountain laurel and rhododendron and scattered small forest openings are present. Blueberry, blackberry, and other fruit/nut bearing species are common in forest openings and in the mid-story. The overstory consists of large, older trees of several species including oaks (bear, red and white), yellow pines (table mountain, pitch and short leaf) and hickories. Vehicular access to the area is limited because of few open roads. Common wildlife species inhabiting the area are black bear, worm eating warbler, pileated woodpecker, common raven and bobcat.

Management with longer rotations (100-120 years) of hardwood and pine stands provide habitat for denning, cavity nesting and hard/soft mass production. On unsuitable timber lands old growth characteristics are developing. As a result of prescribed fire, this area also has openings and dense understory species. Regeneration areas (0-10 age class) up to 25 acres in size provide dense thickets of escape cover for various wildlife species in areas classified as suitable for timber production.

Motorized public vehicle access is restricted, thus providing suitable conditions for disturbance sensitive species, such as black bear. In addition, timber activities are carefully planned and scheduled to minimize the overall disturbance and still meet the overall desired future condition for the area. Normally, periods between timber sale entry of compartments or groups of compartments, will range from 7-10 years.

Roads that are closed are seeded with a non-invasive grass/forb/legume seed mixture providing food and nesting cover for wildlife.

Non-motorized dispersed recreation, particularly hunting, fishing, wildlife viewing, and hiking are common activities. Trail systems may be maintained, upgraded, expanded or reduced depending on demand. Many of these activities

are also linked to adjoining large remote areas such as management area 4, 8, and 9.

Management activities will be evident, particularly in the more accessible parts of the individual management areas. Habitat management activities include, but are not limited to development of water resources, prescribed burning, creation/maintenance of openings, and planting of fruit/berry producing soft mast. Mineral activities may occur.

Standards	Adherence to the following standards is required when implementing the Revised Plan on Management Area 14 lands. These standards are in addition to the applicable Common Standards listed at the end of this chapter.
<i>Aesthetics</i>	14-1. The area is managed to meet a visual quality objective of partial retention.
<i>Integrated Pest Management</i>	14-2. Control of insect and disease outbreaks may be considered in support of management objectives.
<i>Minerals</i>	14-3. Management Area 14 is available for oil and gas leasing with timing or controlled use stipulations. 14-4. Other leasable minerals and common variety minerals are generally restricted but can be available on a case-by-case basis. Availability depends on the nature and degree of disturbance planned and the significance of the mineral.
<i>Recreation</i>	14-5. Remote habitat areas are managed under two recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized or semi-primitive non-motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 2). See the <i>Transportation Network and Recreational Opportunities</i> map accompanying the Revised Plan. 14-6. Public motorized use is permitted on open system roads.
<i>Roads</i>	14-7. The Forest objective is to limit open interior road densities to no more than one-quarter mile of open road per 1,000 acres. In cases where interior open road density exceeds one-quarter mile of open road per 1,000 acres, Forest strives to reduce the open interior road densities to the desired standard. Road to area ratios are determined on acres and miles of individual management areas.

14-8. TSL D roads may be constructed in conjunction with resource management activities. They are available for foot travel, but are closed to all vehicles except for administrative use.

Wildlife

14-9. Treatments such as prescribed burning or adding grape arbors may be practiced to increase herbaceous vegetation, browse, berry production, and to rejuvenate bear oak.

14-10. Desired permanent openings should range from between one percent and five percent of the land area, depending on surrounding habitat conditions.

14-11. Permanent wildlife openings are periodically maintained by mowing, burning, or selective herbicide treatment.

14-12. Grape arbors, old home sites (open areas, orchards), spring seeps, and land form features that create unusual habitats are managed as key wildlife areas.

14-13. Up to four water sources per square mile may be developed if free-flowing water is not present. Springs and seeps will not be altered.

Timber

14-14. No artificial conversion of hardwood or hardwood-pine forest types to pine or pine-hardwood forest types is permitted.

14-15. Grapevine eradication is not permitted.

14-16. Salvage of dead or dying trees can occur using existing or new roads to achieve wildlife habitat objectives or to provide scenic rehabilitation using ground-based or helicopter logging methods. The primary wildlife habitat objective during salvage operations is the establishment of hard mast species (oak and hickory).

Standards on Unsuitable Land

In addition to standards that apply to all Management Area 14 lands, the following apply to MA 14 lands that are classified as unsuitable for timber production.

Timber and Other Vegetation

14-17. The area is classified unsuitable for timber production. However, timber harvests may take place if the harvests achieve wildlife habitat objectives.

14-18. On lands classified as unsuitable for timber production, prescribed fire is permitted outside the parameters set by the common prescribed burning standards if needed to meet objectives for habitat management and species maintenance. On suitable lands, refer to the common standards for prescribed fire.

Standards on Suitable Land

In addition to standards that apply to all Management Area 14 lands, the following apply to MA 14 lands that are classified as suitable for timber production.

14-19. Prescribed burning is allowed only within parameters identified in common standards for prescribed fire.

Timber

14-20. Even-aged regeneration harvest methods are used to meet wildlife habitat requirements. Site-specific analysis determines which cutting method is used.

14-21. The Forest strives to attain an overall average rotation of even-aged stands of 130+ years. Regeneration harvest levels should not exceed the maximum of eight percent of the land base in adjoining compartments within the management area. Regeneration cuts should also be well-disbursed throughout the management area. Desired rotation ages for even-aged systems vary in the following ranges:

Upland Hardwoods*	120 to 180	(scarlet oak 70+)
Cove Hardwoods	120 to 170	
White Pine	80+	
Yellow Pine	80+	
Virginia Pine	80+	

*In stands where the scarlet oak component exceeds 50 percent of the basal area, the rotation age can be reduced to 70 years.

14-22. Regeneration openings can range in size up to twenty-five acres, usually averaging around 20 acres.

14-23. The pine component of pine-hardwood types can be maintained in stands regenerated naturally.

14-24. Follow Region 8 Supplement 36 (Forest Service Manual 2631) direction for retention of snag and den tree clumps.

14-25. Soft mast species, such as dogwood and serviceberry, over two inches DBH are retained in site preparation at a rate of approximately 70 stems per acre (25 x 25 foot spacing), where available. Smaller stems will not be cut unless their abundance inhibits regeneration of the stand.

**MANAGEMENT
AREA 15
Mosaics of
Wildlife Habitat**

This 331,000-acre management area contains portions of the Forest that are managed to maintain or enhance habitat for wildlife favoring a mature forest environment with both temporary and permanent clearings, and freedom from disturbance during nesting, brood-rearing seasons. Vegetation characteristics and human activities are managed to provide high quality habitat for these species and high quality forest products to enable efficient vegetation manipulation through commercial timber sales on lands classified suitable for timber management. Development of quality habitat and control of motorized access receive the highest considerations in relation to associated resources. Species benefitting from this management area include, but are not limited to, wild turkey, ovenbird, gray squirrel, raccoon, and great horned owl.

The Desired Future

The area is managed to optimize hard and soft mast production and to provide a dispersed system of permanent forest openings. Open, park like understories are created and maintained to promote moderate herbaceous undergrowth. Forest openings and other suitable areas are managed to provide moderate herbaceous ground covers and abundant insect populations. Vegetation in this management area consists of a mosaic of hardwood and pine stands with varying ages that provide habitat for a variety of wildlife species preferring habitat ranging from permanent forest openings to hardwoods of mast-bearing age. A sustained yield forest of balanced age classes with a minimum of 60 percent of the stands in mast bearing age is considered desirable.

The transportation system is managed to minimize open road densities and impacts thereby providing for a great degree of isolation from motorized intrusion during wildlife reproductive seasons. Frequency of entry should be kept to a minimum. Districts will strive to keep periods of entry to 7 to 10 years. This will ensure minimal overall disturbance while achieving desired vegetation conditions.

Lands both suitable and unsuitable for timber production are located in this area. A variety of management activities occurs to achieve the desired future conditions.

The even-aged management is emphasized to maintain oak regeneration, to create open understory conditions, as well as provide stand diversity throughout the management area. Long narrow cuts with an undulating perimeter are preferred. Even-aged harvest methods with 120 - 180 year rotations are used to provide mosaics of older and younger trees, large dens and continuing supplies of hard and soft mast. Timber harvest operations are dispersed throughout the area to enhance wildlife habitat suitability; efforts are made to avoid placing new regeneration areas adjacent to recent regeneration areas.

Strategically located forest openings or open stands are developed and maintained in such a manner as to promote moderate growths of grasses, forbs, and legumes. This type habitat is very desirable for wildlife species associated with this management area.

Habitat management activities to facilitate desired future conditions include, but are not limited to, the development of water sources in areas where free-flowing water is lacking, controlled burning, timber harvests, and preparation and maintenance of temporary and permanent openings.

Motorized vehicle access and management activities are limited in order to provide freedom from continual disturbance to species such as the wild turkey. Some roads may be seasonally closed to vehicular traffic (April through August) to protect physical and biological resources and wildlife habitat. Closed roads are seeded with non-invasive grass/forb/legume/seed mixtures that have known value to wildlife.

Non-motorized dispersed recreational opportunities, particularly hunting, fishing, wildlife viewing, and hiking predominate. Trail systems may be maintained, upgraded, expanded, or reduced depending on demand.

Minerals activities may occur. Maintenance and restoration of minerals developments provide wildlife habitat.

Standards

Adherence to the following standards is required when implementing the Revised Plan on Management Area 15 lands. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

Aesthetics

15-1. The area is managed to meet a visual quality objective of partial retention.

Integrated Pest Management

15-2. Control of insect and disease outbreaks may be considered to meet the management objectives of this management area.

Minerals

15-3. Area is available for oil and gas leasing, other leasable minerals and common variety minerals. Timing stipulations may be used on a case-by-case basis.

Recreation

15-4. These wildlife habitat management areas are managed under three recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1). Lands inventoried as semi-primitive non-motorized adopt a recreation opportunity class of

semi-primitive motorized (subclass 2). See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.

Roads

15-5. The Forest objective is to limit open interior road densities to no more than one mile of open road per 1,000 acres. In cases where open road density exceeds one mile of open interior road per 1,000 acres, Forest officers strive to reduce the open road densities to the desired standard. Road to area ratios are based on acreage of the individual management area.

15-6. Salvage of dead or dying trees can occur from existing, or new roads, to achieve wildlife habitat objectives, safety, provide scenic rehabilitation or to capture value of deteriorating timber using ground-based or helicopter logging methods. Perpetuating the establishment of hard mast species (oak and hickories) is the primary wildlife habitat objective for salvage in these management areas.

Roads are designed to the lowest standard necessary to meet management area objectives (either TSL C or D).

Wildlife

15-7. Public motorized travel may be seasonally allowed (September through March).

15-8. Strive to maintain 5 percent of the area in grass/herbaceous openings that are well dispersed throughout the management area.

a. Permanent wildlife openings are periodically maintained by mowing, burning, or selective herbicide treatment.

b. Savannahs, grape arbors, old home sites (open areas, orchards), spring seeps, and land form features that create unusual habitats are managed as key wildlife areas.

15-9. Up to four water sources per square mile may be developed if free-flowing water is not present.

**Standards on
Unsuitable Land**

In addition to standards that apply to all Management Area 15 lands, the following apply to MA 15 lands that are classified as unsuitable for timber production.

Fire

15-10. On unsuitable lands fire is permitted outside parameters established for common prescribed burning standard to meet objectives for habitat man-

agement and species maintenance on suitable lands refer to common standard for prescribed fire.

Timber and Other Vegetation

15-11. On areas is unsuitable for timber production, harvesting may be used where such practices result in achieving specific wildlife habitat objectives.

**Standards
Uneven-aged Mgmt.**

In addition to standards that apply to all Management Area 15 lands, the following apply to MA 15 lands that are classified as suitable for timber production where uneven-aged regeneration methods are used in meeting wildlife habitat objectives.

Timber

15-12. Uneven-aged management using group selection and individual tree selection harvest methods may occur in two areas as shown on the *Lands Suitable for Timber Production by Management Area* map.

15-13. Ten-year to 15-year cutting cycles are used for uneven-aged silvicultural systems.

15-14. Intermediate cuttings -- such as improvement, salvage, and sanitation cuttings -- will occur as long as progression toward the uneven-age character of the stand is maintained.

**Standards
Even-aged Mgmt.**

In addition to standards that apply to all Management Area 15 lands, the following apply to MA 15 lands that are classified as suitable for timber production where even-aged timber cutting methods are used in meeting wildlife habitat objectives.

15-15. Prescribed burning is allowed only with parameters identified in common standards for prescribed fire.

15-16. On areas suitable for timber production, even-aged regeneration harvest methods are used to meet wildlife habitat objectives. The decision on any specific timber harvest method is based on site-specific analysis.

15-17. The Forest strives to attain an overall average rotation of even-aged stands of 120+ years. Regeneration harvest levels should not exceed the maximum of 10 percent of the land base in any given compartment or groups of compartments and should be well dispersed throughout the management area. Rotation ages for even-aged systems are varied between the following range:

pine planting has occurred. Small stringers of southern yellow pine communities occur on very dry, exposed sites.

Where all even-aged harvest cutting methods are used, site-specific activities occur at the stand level. Stand sizes range from 10 acres to 40 acres each. Management activities in the stands are spatially distributed and timed to minimize adverse effects on wildlife, soil, water, recreation, and visual values in a cost efficient manner.

Where uneven-aged cutting methods are used, forest communities of large, contiguous blocks of gently sloping, roaded land are best suited to cost efficient management. Most likely, there is a gradual shift from intolerant to tolerant tree species within these forest communities.

Forest product commodity outputs contribute to the social and economic well-being of the people living in the area and help maintain a way of life long associated with those living within the area. Timber harvesting is apparent and uses sale layout and design to accommodate visual considerations through innovative harvesting techniques and sale layout.

Growth capability of suitable land is utilized at a high level, but well within the biological capabilities for sustained-yield production. Area regulation, or where identified, volume regulation, is eventually achieved with most of the area having stands with ages within prescribed rotation lengths.

Indigenous forest pests are kept within acceptable levels utilizing Integrated Forest Pest Management techniques. The gypsy moth is considered an exotic forest pest. Impacts on vegetation by Forest pests are minimized through judicious use of biological controls, silvicultural techniques, and timely salvage of damaged trees.

Motorized recreation opportunities for OHV and sedan travel are provided along arterial, collector, and local roads and trails. Existing trails are maintained. A variety of motorized and non-motorized recreation activities occur including hunting, fishing, hiking, bicycling, berry picking, dispersed camping, driving for pleasure, and viewing scenery and wildlife. Management activities may or may not be visually evident. Mineral activities may occur in a few locations. Maintenance and restoration of mineral developments provide for wildlife habitat.

Standards

Adherence to the following standards is required when implementing the Revised Plan on Management Area 17 lands. These standards are in addition to the applicable Common Standards listed at the end of this chapter.

- Aesthetics* 17-1. The area is managed to meet the visual quality objective of partial retention in the middleground as viewed from the Appalachian National Scenic Trail; of retention in the foreground of Jackson River; and modification elsewhere.
- Fire* 17-2. Prescribed burning would be utilized to meet specific resource needs within parameters identified in the *COMMON STANDARDS* for prescribed fire.
- Integrated Pest Management* 17-3. Control of insect and disease outbreaks may be considered to meet the objectives of this management area.
- Minerals* 17-4. The area is available for oil and gas leasing and development with standard stipulations. Other leasable minerals and common variety minerals are also available.
- Recreation* 17-5. Lands managed for timber production are managed under two recreation opportunity classes. All lands adopt a roaded modified recreation opportunity class except those viewed as middleground from the Appalachian National Scenic Trail which have an adopted roaded natural recreation opportunity class. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.
- Roads* 17-6. Roads constructed for timber harvesting may either be left open, closed, or closed seasonally, but in a manner that protects soil and water or meets the management objectives of the area.
- 17-7. Roads are designed to the lowest standard necessary to remove the timber. Connecting routes between timber roads may be designed and constructed to jointly meet needs of OHV and timber forwarding equipment.
- 17-8. Road locations and densities should meet timber access needs and provide opportunities for OHV use in some areas.
- Timber* 17-9. On lands with a site index of 70 or higher for oak or equivalent, the area is managed to provide the following species as high quality sawtimber: northern red oak, black oak, white oak, chestnut oak, scarlet oak, yellow poplar, basswood, cucumber, maple, ash, white pine.
- 17-10. Lands with the following site indices are managed for quality sawtimber:
- | | |
|------------------|----------------------------|
| Upland hardwoods | 70+ oak |
| Cove hardwoods | 70+ oak, 90+ yellow poplar |
| White pine | 60+ white pine |

- Aesthetics* 21-1. Special Management Areas are managed to meet a visual quality objective of retention.
- Fire* 21-2. Prescribed fire may be used to provide animal or plant habitat management and species maintenance or to reduce fuel loading or fuel continuity in areas heavily defoliated by gypsy moth.
- Land Exchange and Acquisition* 21-3. Inholdings and adjacent lands are acquired as opportunities arise or funding becomes available.
- Minerals* 21-4. The area is available for oil and gas leasing with surface occupancy highly restricted by using controlled surface use stipulations.
- 21-5. Reserved/outstanding minerals are acquired when available and subject to availability of acquisition funds.
- 21-6. Special Management Areas are available for other leasable minerals and common variety minerals on a case-by-case basis.
- Recreation* 21-7. Special Management Areas are managed under four recreation opportunity classes. Lands inventoried as roaded natural remain roaded natural. Lands inventoried as semi-primitive motorized adopt a recreation opportunity class of semi-primitive motorized (subclass 1) or semi-primitive motorized (subclass 2). Lands inventoried as semi-primitive non-motorized remain semi-primitive non-motorized. See the *Transportation Network and Recreational Opportunities* map accompanying the Revised Plan.
- 21-8. "No-trace" camping techniques are promoted.
- 21-9. Campsites and other areas of concentrated use are managed for a low level of change in natural conditions.
- 21-10. Where appropriate, interpretive services (trails, signs, viewing areas) are provided to enhance visitors' understanding and appreciation of the area's special values.
- 21-11. Trails and other recreation facilities are located so as to not disturb the sensitive or unique areas within the management area.
- Roads* 21-12. No new road construction is permitted except (1) to access approved mineral activities and (2) where the new road is the only prudent alternative to serve resource needs in other management areas and will minimally impact this management area and (3) relocation of existing roads and (4) provide access

to trailheads and (5) provide access to private land if no other route is feasible. Reconstruction is limited to protection of resource values. Existing system roads or those routes to access wildlife openings may continue to be used.

Soil and Water

21-13. Water quality is maintained at existing or higher levels. Erosion from either natural causes or human use that is contributing to degradation of water quality is controlled.

21-14. Watershed improvement projects are developed and implemented on:

- a. areas where erosion is due to man-caused activities;
- b. critical areas where erosion is due to natural causes.

Timber and Other

21-15. In Big Schloss, Laurel Fork and Little River SMAs: Salvage of dead or dying

Vegetation

trees can occur from existing roads using ground-based logging systems.

21-16. In Big Schloss and Little River SMAs: Salvage of high quality dead or dying timber (from broad scale mortality from gypsy moth or fire) is permitted with helicopter within one-half mile from perimeter of area only.

21-17. In Mt. Pleasant SMA: harvesting of firewood for personal use is permitted along perimeter roads.

Wildlife

21-18. Existing wildlife habitat improvements can be maintained. Additional improvements are permitted so long as they achieve overall wildlife objectives and do not require any additional road construction.

RECREATION
Trails

157. The trail system is managed to provide for a variety of trail users and experience levels.
158. Trails are closed to motorized recreation use unless designated otherwise.
159. The Share-the-Trail concept is actively promoted with hikers, horseback riders, and mountain bikers using the same trail unless resource damage or user safety prohibits.
160. Low standard roads and travelways may be used to augment horse, mountain bike, OHV and general hiking demands.
161. The trails Transportation Information System is periodically updated to document use and maintenance needs.
162. Rights-of-way across private land are secured when opportunities exist. Priority is given to existing system trails which cross private land without the benefit of a right-of-way.
163. Trail brochures are developed that depict, at a minimum, trailheads, trail locations, and private land boundaries.
164. To ensure the appropriate level and type of maintenance is performed on individual trails, a maintenance level is assigned as part of the Transportation Inventory System.
165. Motorized use of the trail system is permissible for administrative purposes, emergencies, at road crossings, when the trail is specifically designated for motorized use, or when the trail is on an existing open public road.
166. Management activities along system trails shall be implemented with sensitivity to the experience of the users. Appropriate techniques to mitigate the effects of management activities is addressed during site specific project analysis. Measures to mitigate the effects of activities might include vegetative screening; the temporary re-routing of trail segments; temporary trail closure, avoidance and reclamation; and timing of project implementation to reduce impacts during high use periods.
167. Trail maintenance activities are commensurate with the existing ground conditions and the level of use the trail receives. The priority for performing trail

maintenance activities is to: correct unsafe conditions, prevent resource and trail damage from occurring, and fully restore the trail to the planned design standard.

168. Volunteers, groups and individuals, are encouraged to help construct, maintain, and monitor the trail system.

169. Trail planning, construction and maintenance is consistent with the Trails Handbook (FSH 2309.18).

170. Information concerning trails and trail use opportunities is posted at campgrounds and picnic areas in the close vicinity of a system trail.

171. Trail signing is consistent with the Sign Handbook (FSH 7109.11) and EM-7100-15, Standards for Forest Service Signs and Posters.

172. Trail markers and/or blazes are maintained to provide the public with clear trail delineations. No more than one trail marker should be visible in either direction at one time during leaf-on seasons. Ninety degree or greater changes in direction should be indicated with two markers, one right above the other. This type marking does not apply to Wilderness. (Management Area 8).

173. Loop opportunities are emphasized when considering trail construction.

174. When feasible to do so, and consistent with other management activities, trailhead parking is provided where roads open to public vehicular travel intersect system trails. Trail/road intersections are adequately signed.

175. The first priority for the construction and maintenance of interpretive trails is near or adjacent to high use areas such as campgrounds, visitor centers, picnic areas, or District offices. Providing accessibility to persons with disabilities is considered when developing interpretive trails.

176. To the extent practical, combining interpretive trails with other trail uses such as general hiking, horse and ATV use is avoided.

177. Interpretive messages or themes for a trail are designed to achieve management objectives, develop user awareness, and promote enjoyment of the area.

Licensed OHV Use

178. OHV/ATV stream crossings are prohibited except at designated crossings where bridged or where approaches are graveled a minimum of 50 feet from edge of stream.

Designated Stream Crossings

201. Vehicles or equipment are allowed to cross streams at designated crossings only.

202. The use of construction equipment in streams is limited to the amount of time absolutely essential for completion of the project.

203. Protected streamcourses are designated in the timber sale contract.

204. Stream crossings are designed to allow upstream trout passage where potential upstream habitat exists. Passage is generally for a 5-inch trout (minimum spawning size).

205. Needs to provide fish passage for fish other than trout is determined on a case-by-case basis.

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Soil and Water Protection

206. In any project, water quality is protected from nonpoint-source pollution through use of standards that meet or exceed preventive "best management practices" (BMP's). Implementation of these standards, monitoring and evaluation of their application and effectiveness, and adjustment of practices as needed is done to protect beneficial water uses. These standards are applied to all activities.

207. The use of fescue for soil stabilization is avoided due to its detrimental effect on wildlife. Where use of fescue is considered necessary, endophyte-free seed will be planted.

208. The Forest stays current with Virginia and West Virginia "best management practices" (BMPs) and erosion and sediment control regulations and amends the Forest Plan if BMP modifications or regulation changes become more restrictive than Revised Plan standards.

209. The Forest complies with the state water quality standards and anti-degradation policies.

210. Impoundments are allowed on intermittent streams on a case-by-case, site-specific evaluation. Impoundments are designed to allow complete draining. A downstream catch basin is constructed for fish salvage.

211. To maintain soil productivity when managing forest resources, the organic or litter layer, topsoil, and root mat should be left in place over 85 percent of the area of the planned activity. This practice insures the protection of the physical, chemical, and biological needs of the soil to maintain and improve productivity.

212. Where soils are disturbed by management activities, appropriate revegetation measures are implemented within 14 days of termination of disturbance. When outside the seeding season, initial treatments may be of a temporary nature, e.g., armoring the exposed area against the impacts of raindrops and surface runoff.

Timber Harvesting

213. A dispersed skidding pattern is established that does not severely compact or erode the soil resource.

214. Soils with high compaction potential are not logged during wet weather to avoid rutting.

215. Whole tree harvest is not allowed.

216. Project plans and their environmental analyses which plan to conventionally harvest timber recognize and specifically analyze conditions and situations where soil productivity may be impaired long term. These conditions are listed as: soils less than 20 inches to bedrock, extremely stony surfaces, and conditions established by the soil inventory where K-value (soil erodibility factor) and continuous slope indicates the T-Factor (allowable soil loss) is exceeded.

Stream Protection

217. Logging and/or road construction operations are constructed in such a way as to prevent debris from entering protected streams. Prompt removal, within 48 hours, is equivalent to prevention except where specified otherwise (Title 62, Chapter 20, sections 62.1-194.2, Code of Virginia).

218. Roads are located outside riparian areas unless no alternative exists. Stream-crossings are allowed at designated crossings only.

219. Fords associated with new road construction are not used in any trout streams without site-specific environmental analysis. When fords are used, at least 50 feet of gravelled approaches are provided. Erosion stone or larger rock is used to increase road bearing strength at the water/land interface.

220. To prevent erosion, fill around road crossings and culverts is stabilized by riprapping, planting, mats, etc. Revegetation measures are implemented on fill slopes over culverts as soon as possible after completion. Artificial sediment trap buffers are created by installing barriers, fences, etc. as required.

221. Construction of permanent crossings is completed on all streams as soon as possible after work has started on the crossing. Portions of roads on either side of stream crossings that would potentially contribute sediment to the stream are gravelled. Special precautions are taken on Hayesville soils.

*Streamside
Management Zones*

222. Generally, permanent structures or temporary stringer bridges on permanent abutments are provided when crossing wild trout streams.

223. Ground-disturbing activities are allowed within the filter strips if the action alternative will cause more resource damage. These activities are minimized and effective sediment trapping structures such as silt fences, brush barriers, hay bale barriers, gravelling, etc. are required. Sediment control, prior to or simultaneous with the ground-disturbing activities, is provided.

224. Disturbance from vehicular use, campsites, parking areas and other use within the filter strip is limited so as to result in less than 5 percent of the area with bare soil exposed.

225. Precautions are used with any resource management activity to assure minimal soil disturbance.

226. Vehicle exclusion zones are provided to protect riparian areas from ground disturbance (Table 3-13).

227. Filter strips are left between areas of severe soil disturbance (roads, landings, and bladed skid trails) and all lakes, wetlands and perennial streams (Table 3-13).

228. Shade strips are left to maintain ambient water temperature regimes and maintain moist habitats. Up to 20% basal area removal of dominant and co-dominant trees is allowed if desired future conditions are maintained (Table 3-13).

Table 3-13.
Streamside Management Zones [Widths (in feet) required from each bank or edge of lakes, wetlands, and perennial streams] for Vehicle Exclusion Zones (VZ), Filter Strips (FS) and Shade Strips (SS).

Slope	0-10%	11-20%	21-45%	45%+
VZ	66	66	66	66
	66	66	100	200
	66	66	66	66

Intermittent
Streams →

229. Harvest along all intermittent streams is regulated by Streamside Management Zone standards (Table 3-14).

229a. Timber harvest can be conducted along intermittent tributaries that flow into wild trout streams if the desired future condition of the wild trout stream is not adversely affected.

230. Vehicle exclusion zones are designated along all intermittent streams to provide protection from disturbance by ground-skidding vehicles (Table 3-14).

231. Filter strips are left between areas of soil disturbance (roads, landings, and bladed skid trails) and all intermittent streams (Table 3-14).

Table 3-14.

Streamside Management Zones [Widths (in feet) from each bank of intermittent streams for Vehicle Exclusion Zones (VZ), Filter Strips (FS), and Shade Strips (SS).]

Slope	0-10%	11-20%	21-45%	
VZ	33	33	33	33
FS	33	33	50	
SS	33	33	33	33

232. Ground-disturbing activities are allowed within the filter strips if the alternative will cause more resource damage. These activities are minimized and effective sediment trapping structures such as silt fences, brush barriers, hay bale barriers, gravelling, etc. are required. Sediment control, prior to or simultaneous with the ground disturbing activities, is provided.

233. Up to 50 percent basal area removal of dominant and co-dominant trees is allowed on intermittent streams if desired future conditions are maintained. Retain all trees on the immediate lip of the stream bank where roots provide structural stability to the stream channel.

234. Springs or permanent seeps are protected from disturbance during management activities. Exact size and shape is determined by on-the-ground conditions, i.e., soils, vegetation, hydrology.

WEEDS

291. Weeds are managed under directions specified in FSM 2080.1-2082 describing noxious weed management.

WILDLIFE

292. Prescribed burns are allowed when meeting specific objectives such as restoration of habitat for threatened, endangered, and sensitive species, re-establishing natural ecosystems, site preparation, and wildlife habitat improvement.

293. Wildlife stand improvement (WSI) seeks to improve vegetation species composition in timber stands and to develop wildlife habitat areas for game and nongame species. A variety of woody and herbaceous species suited to site conditions and burning regime are maintained to assure year-round quality habitat.

294. Closed roads and wildlife habitat improvements are revegetated with non-invasive vegetation (preferably native to the mid-Appalachian area) for erosion control and wildlife habitat. Fescue is not used unless as a last resort in erosion control.

295. For understory species WSI, proper management allows full sunlight on 30 percent of the forest floor. For hardwood overstory WSI, thinning encourages full crown development, vigorous growth, and soft or hard mast production. When thinning stands older than 30 years, stems are favored which show positive indication of bearing soft or hard mast.

296. During TSI, WSI, and site preparation, selected groups of overstory and understory vegetation are protected and managed to assure a variety of soft mast, hard mast, and cover species. During site preparation, active and potential den trees are retained in clumps (at least 1/2 acre per 20 acres) if they are not provided in adjacent stands or inclusions. During TSI and WSI, all recognized den trees are protected. In addition, during TSI, WSI, and site preparation, an average of at least two standing dead snags are retained per acre in the form of large hardwood trees (greater than 12 inches) when possible. Appropriate treatments are used to create snags where natural snags are lacking.

297. Soft mast understory species such as dogwood and serviceberry over two inches DBH are retained where available and when their abundance does not inhibit adequate stand regeneration.

298. Out-year timber sale scheduling for timber sales located in Management Areas 14 and 15 is coordinated with VDGIF and WVDNR in order to provide the maximum degree of dispersion possible and minimize the degree of motorized disturbance.

299. To insure early input, wildlife and fisheries management activities (prescribed burning, wildlife opening management, roads management, etc.) are coordinated with VDGIF and WVDNR on an annual or an as-needed basis.

300. Multi-year wildlife/fisheries implementation plans are developed for each ranger district in cooperation with VDGIF and WVDNR.

Road Density

301. The road density goals for wildlife management areas are calculated as follows:

- a. Calculate the total area for the individual management area in question.
- b. Divide the total acres by the number of miles of open Forest Service system roads that penetrate the area. Boundary roads are not used in the calculation.
- c. Open roads are defined as any system road that is open for the general public to use anytime during the year. Roads temporarily opened to meet resource objectives, such as fuelwood gathering after a timber sale, are not defined as roads open to the general public.

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REPORTS

Two types of reports will be prepared.

Annual

Annual reports will summarize monitoring activities conducted during the year and the results obtained. They will address each of the monitoring questions listed in this chapter. Finally, the report will include any recommendations, if necessary, to make activities and their effects consistent with the Plan, including if Plan amendments are warranted.

Five-Year

Because some types of monitoring may not produce valid results in one year, the annual monitoring reports can at most present preliminary results of such studies, and may only summarize their status. Where preliminary results are available, they will be examined to determine if changes are needed in the data collection and storage procedures. Final results of these activities will be reported in an evaluation report to be prepared after the revised Plan has been in effect for five years. The five-year evaluation report will summarize the findings of all long-term monitoring activities, and include a comprehensive review of implementation of the Plan.

BUDGET

Monitoring is an integral part of the total management process. That means that a year's activities under the Forest Plan are not completed until the monitoring of the effects of those activities, as specified in this chapter, is completed. This has two implications for budgeting. First, the costs of monitoring and evaluation will be included in our annual requests. Second, if the Forest is not given sufficient dollars from Congress to complete all necessary monitoring and evaluation, then it will either (a) reduce its planned activities or (b) figure out a way to conduct monitoring in a more efficient manner.

The budget to implement the Forest Plan is found in Appendix F.

EXAMPLE

DETAILED IMPLEMENTATION SCHEDULE

<i>MONITORING ITEM</i>	TIMBER
<i>DESIRED FUTURE</i>	Lands harvested are adequately restocked.
<i>INDICATOR OF DESIRED FUTURE</i>	Timber harvesting on suitable lands must be done under a harvest cutting method where adequate stocking of desirable species is expected to occur within 5 years after the final harvest cut. The minimum number of stems per acre for each forest type are: 150 for White Pine and hardwoods, and 300 for Short-leaf Pine, Virginia Pine, and Mixed Pine - Hardwood. (Common Standard 262, pages 3-152 & 3-153).
<i>WHAT'S THE QUESTION(S)?</i>	<ol style="list-style-type: none"> 1. Are harvested Forest lands restocked within five years following final harvest? 2. Are modified shelterwood harvest cuts regenerating forests to desirable species?
<i>TYPE OF MONITORING</i>	Effectiveness
A. Management or Other Areas Where Question Applies	<ol style="list-style-type: none"> 1. Those management areas where it is permissible for the modified shelterwood harvest method to occur. 2. Only stands cut using the modified shelterwood harvest method. 3. Only stands with Site Index 60 or 70 for Upland Oak.
B. Risk Assessment	Because the amount of funding available for monitoring is presently uncertain, the Forest divided desirable monitoring into two funding levels. Priority will be given to monitor Site Index 70 stands first, if money is not available to monitor both Site Index 60 and 70 stands. This risk analysis places highest priority on monitoring Site Index 70 stands. They will have the highest likelihood and highest cost for committing management errors.
C. Sampling Methodology	All units cut using the modified shelterwood harvest method in the identified sales (See Item J.) will be measured using procedures that follow. Permanent plots will be established by District personnel right after site prep is finished. Following initial cutting the modified shelterwood stand will be examined to determine: (a) whether the area was restocked to an acceptable level of trees, (b) the proper (desirable) species, and (c) growth rates for the desirable species.

LOCATION OF LANDS SUITABLE FOR TIMBER PRODUCTION

→

Lands suitable for timber production are located in eight management areas. These management areas contain both suitable and unsuitable lands. Within the portions of these management areas identified as suitable for timber production on the 'Lands Suitable for Timber Production by Management Area' map, stands that meet the following criteria are suitable for timber production:

1. stands that contain white oak – red oak – hickory (on moist sites), yellow poplar, northern red oak, sugar maple – beech – yellow birch, upland hardwood – white pine or cove hardwoods – white pine – hemlock forest types regardless of site index and slope.;
2. stands that contain white pine, hemlock, white pine – hardwood, hemlock – hardwood or white pine – hemlock forest types regardless of site index and slope;
3. stands that contain white oak – red oak – hickory (on dry sites), chestnut oak, scarlet oak, white oak, chestnut oak – scarlet oak or upland hardwood – yellow pine forest types on lands that are site index 60 or better for oak regardless of slope;
4. stands that contain white oak – red oak – hickory (on dry sites), chestnut oak, scarlet oak, white oak, chestnut oak – scarlet oak or upland hardwood – yellow pine forest types on lands that are site index 50 for oak on slopes less than 55%.;
5. all plantations (regenerated stands);
6. portions of riparian areas more than 66 feet from the bank of the stream and adjacent to stands suitable for timber production in the adjoining management area.

During project level analysis, lands identified as suitable for timber production must be no more than 350,000 acres across the Forest. However, within each management area lands suitable for timber production may vary by \pm 10% of the acreage displayed as suitable for timber production in Table A-2. Chapter 5 discusses the procedure for monitoring the assignment of lands suitable for timber production in each management area containing such lands.

ALLOWABLE SALE QUANTITY

The allowable sale quantity is described in more detail in the process paper 'Incorporation of the NFMA Requirements for Silvicultural Practices into the Revision of the Land and Resource Management Plan for the George Washington National Forest'. The allowable sale quantity (ASQ) is defined as the quantity of timber *that may be sold* for a time period from the area of suitable land (FSH 2409.13 Zero Code).

Table A-5 displays a breakdown of the ASQ for the first decade of the Revised Plan. The ASQ is the amount of timber that may be sold for the first decade that the Revised Plan is in effect. During this decade, no more than the ASQ may be sold. There are no annual constraints on the amount of volume that may be sold on the Forest.

**Table A-5.
Allowable Sale Quantity and Timber Sale Program Quantity (Total Volume for the First Decade)**

Harvest Method	Sawtimber		Other Products	
	MMCF	MMBF	MMCF	MMBF
Clearcut ¹	4.1	28.9	11.8	82.6
Modified Shelterwood	8.6	59.7	21.2	148.1
Two-Stage Shelterwood	— ²	— ²	— ²	
Group Selection	.5	3.3	1.1	7.4
Intermediate Harvest	— ²			
Commercial Thinning	— ²	— ²	— ²	
Total	13.2	91.9	34.1	238.1
Total Allowable Sale Quantity:				330 MMBF
Total Non-Scheduled Volume:				5 MMBF
Total Timber Sale Program:				335 MMBF

¹Includes seedtree and removal harvests.

²None scheduled but some volume for other harvest methods may be substituted during implementation.

→

The projection in Table A-6 of timber harvests and growth over the next 140 years shows a slight decline in suitable inventory in decades 2 and 3 and then a continual build up in the following decades. Volume harvested stays the same for decades 1 to 5 and then increases in the following decades. The table shows little change in harvest as a percent of inventory. Growth continues to exceed removals by harvest.

Table A-6.
Projected Inventory, Harvest, Growth on Suitable Land (MMCF)

10-Year Periods	Inventory All	Inventory Suitable	Harvest-Average Annual	Harvest as % of Inventory Average Annual	Growth Average Annual	Growth as % of Previous Period Harvest
		562	5	.9		
2	1476	543	5	.9	3	60
3	1545	542	5	.9	5	100
4	1629	573	5	.9	8	160
5	1687	596	5	.8	7	140
10	1898	761	8	1.0	7	140
14	1973	829	9	1.1	8	100
					12	133

TIMBER SALE SCHEDULE

The timber sale schedule is described in more detail in the process paper "Incorporation of the NFMA Requirements for Silvicultural Practices Into the Revision of the Land and Resource Management Plan for the George Washington National Forest". The sales schedule is defined as the quantity of timber *planned for sale* for a time period from the area of suitable land. The sales schedule provides a quantity of timber planned for sale during the first period (10 years). It does not require a listing of individual timber sales (FSH 2409.13 Zero Code). Table A-7 displays the total allocation of timber volume to be offered (based on a proration of the allowable sale quantity) for each of the six ranger districts. The sale schedule does not represent an exact amount of volume that must be sold on each Ranger District, but merely an indication of the amount of volume that will be offered from each Ranger District.

TABLE A-7
Total Allocation First 10 Year Period MCF (MMBF)

Ranger District	Total	Even-Aged	Uneven-Aged
Deerfield	9170 (64)	9136 (62)	34 (2)
Dry River	5870 (41)	5841 (39)	
James River	8600 (60)	8571 (58)	29 (2)
Lee	8590 (60)	8590 (60)	
Pedlar	5870 (41)	5856 (40)	
Warm Springs	9170 (64)	9156 (63)	
TOTAL	47270 (330)	47,150 (322)	120 (8)

→ Sales will be located on lands that are suitable for timber production (portions of Management Areas 7, 11, 13, 14, 15, 16, 17 and 18). Documentation will be provided in site specific analysis. Volume from these lands will be part of the allowable sale quantity. Some sales may be located on unsuitable lands that allow such harvest to meet other resource needs. Volume from those lands will not be part of the allowable sale quantity.

Ranger districts will develop three year timber action plans from this list to locate sale opportunities to implement the schedule.

Table H-1.
Range of Silvicultural Practices

Forest Type	Even-aged Management				Uneven-aged Management	
	CC	MSW	SW	ST	GS	STS
Oak-Hickory	R	R	RC	NR	P	P
Pitch Pine	R	RC	NR	RC	P	NR
Virginia Pine	R	NR	NR	NR	NR	NR
Oak-Pine	RC	RC	RC	RC	P	NR
Northern Hardwoods	RC	RC	RC	NR	RC	RC
Eastern White Pine	RC	RC	R	NR	P	NR
Eastern Hemlock	NR	NR	RC	NR	P	R
Yellow Poplar	R	R	RC	NR	P	NR
Appalachian Mixed Hwd	R	R	RC	NR	P	P

Codes Used in Table

Silvicultural System

CC = clearcut; MSW = modified shelterwood; SW = shelterwood;
ST = seedtree; GS = group selection; STS = single tree selection

Range of Practices

R = recommended
RC = recommended with conditions
P = possible
NR = not recommended

RECOMMENDED (R) means that the silvicultural practice has been reliable in creating conditions favorable for establishing regeneration in the stand and to maintain growth of the desirable species using natural regeneration site preparation treatments.

RECOMMENDED WITH CONDITIONS (RC) means that for the silvicultural practice to be reliable, some specific condition must either exist prior to cutting, some limits will apply to the regenerated species, or some special treatment is needed after cutting to obtain and maintain desirable species.

POSSIBLE (P) means the silvicultural practice is not reliable in creating conditions favorable for regenerating the stand, unless significant alteration of the species composition, growth or sustainability is acceptable. For example, using single tree selection in the Oak-Hickory type will not perpetuate oaks or other intolerant species in the same proportion as currently exists in the even-aged forest stands of the Forest.

If the loss of oaks and the shift to a forest of more shade tolerant species is compatible with the Desired Future Condition of any management area, then single tree selection is a possible silvicultural practice.

NOT RECOMMENDED (NR) means the silvicultural system is not reliable in creating conditions favorable for establishing regeneration in the stand and to maintain growth of the desirable species using standard or special treatments.

JUSTIFICATION FOR CODES SELECTED IN SILVICULTURAL PRACTICES TABLE

The following summarizes the information presented in the two cited references.

1. For NR- not recommended, the reason for not recommending the method of cut (MOC).
2. For RC- recommended with conditions, the specific condition necessary that allows the method of cut to be recommended.
3. For P- possible, the likely alteration in species composition, growth or sustainability if the method of cut is applied.

Even-aged Management

1. NOT RECOMMENDED (NR)

<u>Forest Type</u>	<u>MOC</u>	<u>Reasons for Not Recommending is Because:</u>
Oak-Hickory	ST	Heavy seed is poorly distributed and slow growing seedlings are not able to compete with other vegetation; light seeded species have abundant seed on the site or available nearby.
Pitch Pine	SW	Does not provide sufficient sunlight to reach forest floor for seed germination and seedling development.
Viginia Pine	MSW/ SW/ST	Intolerance to shade prevents seedling development. Susceptibility to wind, ice and snow damage could cause rapid loss of retained trees, negating their usefulness for visual/wildlife habitat purposes.
Northern Hardwood	ST	Natural seeding ability produces sufficient seedlings for adequate advance reproduction; density of seed trees is not sufficient to affect proportioin of tolerant/intolerant species.
E. White Pine	ST	Good seed crops only occur infrequently on a 3-10 year cycle; remaining trees subject to windfall.

E. Hemlock	CC/ MSW/ST	Too much sunlight and dry conditions for seedling development; remaining Hemlock trees subject to windfall.
Yellow Poplar	ST	Plentiful seed is present on the site or will be blown in from adjacent stands.

2. RECOMMENDED WITH CONDITIONS (RC)

<u>Forest Type</u>	<u>MOC</u>	<u>Specific Condition is When:</u>
→ Oak-Hickory and Appalachian Mixed Hardwood	SW	Insufficient amounts of well distributed oak advance reproduction and stump sprout potential are present.
Pitch Pine	ST/MSW	Nonserotinous cones are present.
Oak-Pine	CC/MSW/ SW/ST	Have to use intensive control of hardwood competition after harvest to maintain pine component.
Northern Hardwood	CC/MSW	Size of cut will control proportion of tolerant and intolerant species that regenerate; pre-commercial treatments are needed to achieve desired species composition.
E. White Pine	CC/MSW	Sufficient white pine advance reproduction exists well distributed in the understory.
E. Hemlock	SW	Have old stands and/or drier sites, lacking sufficient hemlock advance reproduction; two or three cuts may be required to obtain adequate reproduction.
Yellow Poplar	SW	Will remove overstory within five years to prevent severe reduction in height and diameter growth.

Uneven-aged Management

1. NOT RECOMMENDED (NR)

<u>Forest Type</u>	<u>MOC</u>	<u>Reason for Not Recommending is Because:</u>
Pitch Pine	STS	Regeneration openings of at least one acre are required. Pitch Pine is intolerant of shade. Burning or scarification site preparation to obtain reproduction would damage remaining trees.

Virginia Pine	GS/STS	Even-aged structure of stands would deteriorate to a transition to hardwoods. Virginia Pine is intolerant of shade.
Oak-Pine	STS	Openings in crown canopy are too small to ensure adequate reproduction of yellow pines, yellow poplar and most oaks.
E. White Pine	STS	Method has not proven satisfactory and opening size is too small to maintain seedling development in all aged stands.
Yellow Poplar	STS	Reproduction will not develop satisfactorily under fully stocked stands.

2. RECOMMENDED WITH CONDITIONS (RC)

<u>Forest Type</u>	<u>MOC</u>	<u>Specific Conditions is When:</u>
Northern Hardwood	GS	Desirable reproduction is less tolerant species and larger openings are required. Desirable reproduction is tolerant species.

3. POSSIBLE (P)

<u>Forest Type</u>	<u>MOC</u>	<u>Alterations Expected are:</u>
→ Oak-Hickory and Appalachian Mixed Hardwood	STS	Gradual reduction of oak and intolerant species component and increase of more tolerant species such as blackgum, red maple, sugar maple and dogwood. Regulation of size classes and sustained yield may not be attained. Reproduction may be damaged by high deer populations. Growth will be less than that from even-aged management.
Pitch Pine	GS	Transition to hardwoods, unless intensive hardwood controls are used.
Oak-Pine	GS	Openings of at least 0.5 acre in combination with improvement, sanitation, salvage or thinning cuts between groups. Transition to hardwoods, unless intensive hardwood controls are used.